Rudolph Winslow
1930

Ex Libris

Nathan Winslow
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BULLETIN
OF THE
University of Maryland School of Medicine
AND
College of Physicians and Surgeons

Successor to THE HOSPITAL BULLETIN of the University of Maryland, BALTIMORE MEDICAL COLLEGE NEWS, and the JOURNAL of the Alumni Association of the College of Physicians and Surgeons.

VOL. XII        JULY, 1927        No. 1

ANNUAL ANNOUNCEMENT
SESSION 1927-1928
BALTIMORE SCHOOLS (PROFESSIONAL GROUP)
CALENDAR, 1927-1928
FIRST SEMESTER

1927

September 19—Registration begins.

September 26—Instruction begins with the first scheduled period.

October 3—Last day to register without paying fine of $5.00.

November 11—Holiday (Armistice Day).

November 23—Thanksgiving recess begins after the last scheduled period.

November 28—Instruction resumed with the first scheduled period.

December 21—Christmas recess begins after the last scheduled period.

1928

January 3—Instruction resumed with the first scheduled period.

January 16—Registration begins for second semester.

SECOND SEMESTER

January 30—Instruction begins with the first scheduled period.

February 4—Last day to register without paying fine of $5.00.

February 22—Holiday (Washington's Birthday).

April 5—Easter recess begins after the last scheduled period.

April 10—Instruction resumed with the first scheduled period.

June 2—Commencement Day.
THE UNIVERSITY OF MARYLAND

Control of the University of Maryland is vested in a Board of nine Regents, appointed by the Governor and confirmed by the Senate for terms of nine years each. The general administration of the University is vested in the President. The University Council is an advisory body, composed of the President, the Assistant to the President, the Director of the Agricultural Experiment Station, the Director of the Extension Service, and the Deans. The University Council acts upon all matters having relation to the University as a whole, or to co-operative work between the constituent groups. Each school has its own Faculty Council, composed of the Dean and members of its Faculty; each Faculty Council controls the internal affairs of the group it represents.

The University has the following educational organization:

The College of Agriculture,
The College of Engineering,
The College of Arts and Sciences,
The School of Medicine,
The School of Law,
The School of Dentistry,
The School of Pharmacy,
The College of Education,
The College of Home Economics,
The Graduate School,
The Summer School,
The Department of Physical Education and Recreation.

The Schools of Medicine, Law, Dentistry and Pharmacy are located in Baltimore; the others in College Park, Maryland.
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S. DEMARCO, M.D., Assistant in Surgery.
CLYDE N. MARVEL, M.D., Assistant in Surgery.
H. C. KNAPP, M.D., Assistant in Genito-Urinary Diseases.
H. T. COLLENBERG, M.D., Assistant in Genito-Urinary Surgery.
J. H. COLLINSON, M.D., Assistant in Genito-Urinary Diseases.
MILTON C. LANG, M.D., Assistant in Genito-Urinary Diseases.
J. G. ONNEN, M.D., Assistant in Surgery.
H. B. MCELWAIN, M.D., Assistant in Surgery.
I. O. RIDGLEY, M.D., Assistant in Surgery.
J. J. McGARRELL, M.D., Assistant in Pediatrics.
W. R. JOHNSON, M.D., Assistant in Anatomy and Surgery.
ROBERT W. JOHNSON, M.D., Assistant in Anatomy.
W. E. COLE, M.D., Assistant in Pediatrics.
A. C. MONNINGER, M.D., Assistant in Dermatology.
ISADOR A. SIEGEL, M.D., Assistant in Obstetrics.
JOHN A. O'CONNOR, M.D., Assistant in Surgery.
JAMES BROWN, M.D., Assistant in Surgery.
E. M. HANRAHAN, A.B., M.D., Assistant in Surgery.
A. V. BUCHNESS, M.D., Assistant in Surgery.
KARL J. STEINMULLER, A.B., M.D., Assistant in Surgery.
R. M. HENNING, M.D., Assistant in Pediatrics.
MARIE KOVNER, M.D., Assistant in Pediatrics.
ELIZABETH B. SHERMAN, M.D., Assistant in Pediatrics.
L. J. MILLAN, M.D., Assistant in Genito-Urinary Surgery.
WILLIAM EMBRICH, M.D., Assistant in Genito-Urinary Surgery.
W. H. WOODY, M.D., Assistant in Medicine.
JOSEPH POKorny, M.D., Assistant in Anatomy.
J. S. EASTLAND, M.D., Assistant in Medicine.
LEO T. BROWN, M.D., Assistant in Gastro-Enterology.
C. V. HOOPER, Assistant in Gastro-Enterology.
SAMUEL WOLFE, M.D., Assistant in Pediatrics.
SAMUEL GLICK, M.D., Assistant in Pediatrics and Pathology.
M. N. PUTTERMAN, M.D., Assistant in Pediatrics.
CLEWELL HOWELL, M.D., Assistant in Pediatrics.
A. H. FINKELSTEIN, M.D., Assistant in Pediatrics.
ROBERT HODES, M.D., Assistant in Neurology.
JAMES W. NELSON, M.D., Assistant in Histology.
J. HULLA, M.D., Assistant in Histology.
RUTH MUSHER, A.B., Assistant in Pharmacology.
VERNON NORWOOD, M.D., Assistant in Pathology.
HENRY WASSERMAN, M.D., Assistant in Dermatology.
K. B. LEGGE, M.D., Assistant in Genito-Urinary Surgery.
T. B. AYCOCK, M.D., Assistant in Surgery.
F. A. SIGRIST, M.D., Assistant in Surgery.
H. F. BONGARDT, M.D., Assistant in Surgery.
R. HOOPER SMITH, M.D., Assistant in Medicine.
BENJAMIN ABESHOUSE, M.D., Assistant in Pathology.
University of Maryland School of Medicine AND
College of Physicians and Surgeons

As a result of the merger accomplished in 1915 the combined schools offer the student the abundant resources of both institutions, and, in addition, by earlier combination with the Baltimore Medical College, the entire equipment of three large medical colleges.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. It was chartered in 1807, under the name of the College of Medicine of Maryland, and its first class was graduated in 1810. In 1812 the College was empowered by the Legislature to annex three other colleges or faculties, of Divinity, of Law, and of Arts and Sciences, and the four colleges thus united were "constituted an University by the name and under the title of the University of Maryland."

Established thus for more than a century, the School of Medicine of the University of Maryland has always been a leading medical college, especially prominent in the South and widely known and highly honored throughout the country.

The beautiful college building at Lombard and Greene Streets, erected in 1812, is the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837), and here were first installed independent chairs for the teaching of Diseases of Women and Children (1867), and of Eye and Ear Diseases (1873).
The School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for the senior student was first established.

In 1913, juncture was brought about with the Baltimore Medical College, an institution of 32 years' growth. By this association the facilities of the School of Medicine were enlarged in faculty, equipment and hospital connection.

The College of Physicians and Surgeons was incorporated under Legislative enactment in 1872, and established on Hanover Street in a building afterwards known as the Maternite, the first obstetrical hospital in Maryland. In 1878 union was affected with the Washington University School of Medicine, in existence since 1827, and the college was removed to its present location at Calvert and Saratoga Streets. By this arrangement medical control of the City Hospital, now the Mercy Hospital, was obtained, and on this foundation in 1899 the present admirable college building was erected.

ORGANIZATION OF THE SCHOOL OF MEDICINE

LABORATORY AND CLINICAL FACILITIES

The Laboratories

The laboratories are located at two centers, the group of buildings at Greene and Lombard Streets, and the building at Calvert and Saratoga Streets. The schedule is so adjusted that the laboratory periods are placed with a view of obviating unnecessary movement on the part of the classes. The building known as Gray Laboratory, at Greene and Lombard Streets, houses three departments. The Anatomical Laboratory is placed upon the top floor, where skylights and an auxiliary modern system of electric lighting gives adequate illumination of the subjects. On this floor are the office of the department and the necessary preparation rooms. The Department of Pharmacology occupies the second floor. There is a large room for the general student laboratory, which is thor-
oughly equipped with apparatus of recent acquisition, and in addition contains many instruments of unique and original design. With office and stock-room adjoining, this laboratory is complete for student experimentation. On the first floor of Gray Laboratory is the Department of Physiology. In addition to the large student laboratory, which is constructed for sections of forty-five students, there are rooms for the departmental office, preparation of material, and storage of apparatus. An additional room is devoted exclusively to mammalian experiments. In this building there is maintained an animal room where is kept an abundance of material for experimental purposes. The embalming and storage plant for the Department of Anatomy is in physical connection with the building and its special departments. The laboratories of physiology and pharmacology are completely equipped with apparatus lockers so that in accord with the best ideas of instruction, the students work in groups of two each, and each group has sufficient apparatus so that the experimental work can be carried on without delay or recourse to a general stock-room.

The laboratories of Pathology and Biochemistry are located on the third floor of the Dental Building. The former department has a large student laboratory with a capacity of ninety; the tables are so placed as to secure the most satisfactory illumination for microscopic work, in addition, all of the tables are electrically equipped for substage illumination. This equipment is also provided for all laboratories where microscopic work obtains. The museum of the Department of Pathology adjoins the student laboratory. Here are available for demonstration about fifteen hundred carefully prepared and mounted specimens, and for laboratory instruction and study, an abundance of autopsy material with complete clinical histories. Several preparation, research, and office rooms communicate with the other rooms of this department. The laboratory of Biochemistry is constructed and equipped for sections of fifty. The laboratory is completely equipped for the facilitation of work. The office and stock-room adjoin. In the Main Building is the Museum of Anatomy, where are arranged for student reference, specimens which represent the careful selection of material over a period of many years. In the
University Hospital is the Student Laboratory for the analytical studies of those students who are serving as clinical clerks on the wards. A similar laboratory is maintained in the building at the N. W. corner of Saratoga and Calvert Streets, for the student work on the wards of the Mercy Hospital.

In this latter building are two laboratories for Bacteriology, Histology, and Clinical Pathology, and an additional dissecting room which is used for the course of Topographical Anatomy. The two laboratories accommodate one hundred students or the full class, and are equipped with necessary lockers for microscopes and apparatus. Each of the departments housed in this building are provided with their individual offices, preparation, and stockrooms.

Clinical Facilities
UNIVERSITY HOSPITAL

The University Hospital which is the property of the University of Maryland, is the oldest institution for the care of the sick in the State of Maryland. It was opened in September, 1823, under the name of the Baltimore Infirmary, and at that time consisted of but four wards, one of which was reserved for the eye cases.

The present hospital has a capacity of 275 beds devoted to general medicine, surgery, obstetrics and the various medical and surgical specialties. It is equipped with a thoroughly modern X-ray department and clinical laboratory, and a postmortem building which is constructed with special reference to the instruction of students in pathological anatomy.

The hospital is situated opposite the medical school buildings so that the students lose no time in passing from the lecture halls and laboratories to the clinical amphitheater, dispensary and wards.

Owing to its situation, being adjacent to the largest manufacturing district of the city and the shipping district, large numbers of accident cases are received. These combined with the cases of many sick seamen and with patients from our own city furnish a large amount of clinical material. Accommodations for thirty obstetrical patients are provided in the hospital for the purpose of furnishing actual obstetrical experience to each member of the graduating class.
In connection with the University Hospital an outdoor obstetrical clinic is conducted, in which every case has careful pre-natal supervision, is attended during labor by a senior student, supervised by a hospital physician and assisted by a graduate nurse, and is visited during the puerperium by the attending student and graduate nurse. Careful pre-natal, labor and puerperal records are kept, making this work of extreme value to the medical student, not only from the obstetrical standpoint, but in making him appreciate the value of social service and public health work.

During the year ending December 31, 1926, 386 cases were delivered in the hospital and 987 cases in the outdoor department. Students in the graduating class delivered an average of fourteen cases, each student being required to deliver twelve cases.

The dispensaries associated with the University Hospital and the Mercy Hospital are organized upon a uniform plan in order that the teaching may be the same in each. Each dispensary has the following departments: Medicine, Surgery, Obstetrics, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopaedics, Proctology, Dermatology, Throat and Nose, Tuberculosis and Psychiatry.

All students in their junior year work in the departments of Medicine and Surgery each day in one of the dispensaries.

All students in their senior year work in the special departments one hour each day.
HOSPITAL COUNCIL

RAYMOND A. PEARSON, M.S., D.Agt., LL.D., President.
J. M. H. ROWLAND, M.D., Dean.
M. C. PINCOFFS, S.B., M.D., Head of the Department of Medicine.
A. M. SHIPLEY, M.D., Sc.D., Head of the Department of Surgery.
SAMUEL M. SHOEMAKER, President of the Board of Regents.
A. J. LOMAS, M.D., Superintendent of the Hospital.
MISS ANNIE CRIGHTON, R.N., Superintendent of Nurses.
J. ALLISON MUIR,
G. M. SHRIVER,
W. B. BROOKS,
MISS FLORENCE SADTLER, Representing Woman's Auxiliary Board.

Representing Hospital Staff

PAGE EDMUNDS, M.D.  C. REID EDWARDS, M.D.

Representing Medical Alumni

S. G. DAVIS, M.D.  G. MILTON LINTHICUM, M.D.

UNIVERSITY HOSPITAL STAFF

Superintendent of the Hospital, A. J. LOMAS, M.D.

Physicians

GORDON WILSON, M.D.  MAURICE C. PINCOFFS, M.D.
CHARLES W. MCELFRESH, M.D.  G. CARROLL LOCKARD, M.D.
ROSCOE C. METZEL, M.D.  JOS. E. GICHNER, M.D.
PAUL W. CLOUGH, M.D.  WM. H. SMITH, M.D.

Gastro-Enterologist

JULIUS FRIEDENWALD, A.M., M.D.

Neurologist

IRVING J. SPEAR, M.D.

Psychiatrist

R. M. CHAPMAN, M.D.

Pediatrician

CHARLES L. SUMMERS, M.D.
UNIVERSITY HOSPITAL STAFF

Pathologists
Hugh R. Spencer, M.D.          S. Lloyd Johnson, M.D.
Reed Rockwood, M.D.

Surgeons
Joseph W. Holland, M.D.          Page Edmunds, M.D.
Nathan Winslow, M.D.             Frank S. Lynn, M.D.
Charles Reid Edwards, M.D.

Laryngologist
Edward A. Looper, M.D.

Proctologists
G. Milton Linthicum, A.M., M.D.      J. Dawson Reeder, M.D.

Orthopaedic Surgeons
R. Tunstall Taylor, A.B., M.D.       Compton Riely, M.D.

Genito-Urinary Surgeon
W. H. Toulson, A.B., M.Sc., M.D.

Roentgenologists
Henry J. Walton, M.D.                 Howard E. Ashbury, M.D.

Dermatologist
Henry M. Robinson, M.D.

Anaesthetists
S. Griffith Davis, M.D.            Samuel W. Moore, D.D.S.
W. G. Queen, M.D.

Obstetricians
J. M. H. Rowland, M.D.            L. H. Douglass, M.D.
M. A. Novey, A.B., M.D.            J. G. M. Reese, M.D.
Dudley Pleasants Bowe, A.B., M.D.  Isador H. Siegel, A.B., M.D.

Ophthalmologists and Otologists
Harry Friedenwald, M.D.          Hiram Woods, A.M., M.D.
William Tarun, M.D.              J. W. Downey, M.D.

Gynecologists
J. Mason Hundley, M.D.          W. S. Gardner, M.D.
Hugh Brent, M.D.                R. G. Willse, M.D.
### UNIVERSITY HOSPITAL DISPENSARY STAFF

**Resident Staff 1927-28**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
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<tbody>
<tr>
<td>Resident Surgeon</td>
<td>Dr. R. S. Anderson</td>
</tr>
<tr>
<td>Assistant Resident Surgeons</td>
<td>Dr. J. E. Elliott and Dr. L. U. Lumpkin</td>
</tr>
<tr>
<td>Resident Physician</td>
<td>Dr. F. F. Lusby</td>
</tr>
<tr>
<td>Assistant Resident Physician</td>
<td>Dr. L. O. Tayuton</td>
</tr>
<tr>
<td>Resident Gynecologist</td>
<td>Dr. Walter C. Merkel</td>
</tr>
<tr>
<td>Resident Obstetrician</td>
<td>Dr. Knight Reynolds</td>
</tr>
<tr>
<td>Assistant Resident Obstetrician</td>
<td>Dr. J. T. Hibbitts</td>
</tr>
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<table>
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<tr>
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<tbody>
<tr>
<td>Interns</td>
<td></td>
</tr>
<tr>
<td>Dr. Helen Strayer</td>
<td>Dr. James L. Swank</td>
</tr>
<tr>
<td>Dr. Charles H. Stonesifer</td>
<td>Dr. Francis B. Teague</td>
</tr>
<tr>
<td>Dr. Charles E. Gill</td>
<td>Dr. Henry Davis</td>
</tr>
<tr>
<td>Dr. John R. Phillips</td>
<td>Dr. Herbert E. Reifschneider</td>
</tr>
<tr>
<td>Dr. H. V. Staton</td>
<td>Dr. Elijah Covington</td>
</tr>
<tr>
<td>Dr. C. F. Karns</td>
<td>Dr. J. M. Brice</td>
</tr>
<tr>
<td>Dr. C. W. Peake</td>
<td></td>
</tr>
<tr>
<td>Dr. A. H. Finkelstein</td>
<td>— Interne on Pediatrics</td>
</tr>
<tr>
<td>Dr. James G. Saffel</td>
<td>— Interne on B. &amp; O. Service</td>
</tr>
</tbody>
</table>

### UNIVERSITY HOSPITAL DISPENSARY STAFF

**Medicine**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. M. Stein, M.D., Chief of Clinic</td>
<td></td>
</tr>
<tr>
<td>Roscoe C. Metzel, M.D.</td>
<td>W. H. Triplett, M.D.</td>
</tr>
<tr>
<td>William Michel, M.D.</td>
<td>Joseph Rosenblatt, M.D.</td>
</tr>
<tr>
<td>H. M. Bubert, M.D.</td>
<td>Leo Lally, M.D.</td>
</tr>
<tr>
<td>A. L. Fehsenfeld, M.D.</td>
<td>Thomas Coonan, M.D.</td>
</tr>
</tbody>
</table>

**Diseases of the Stomach and Intestines**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
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<tbody>
<tr>
<td>J. H. Ullrich, M.D., Chief of Clinic</td>
<td></td>
</tr>
<tr>
<td>Joseph Sindler, M.D.</td>
<td>M. S. Koppelman, M.D.</td>
</tr>
<tr>
<td>Z. Morgan, M.D.</td>
<td>N. J. Davidov, M.D.</td>
</tr>
<tr>
<td>Leo T. Brown, M.D.</td>
<td>C. Vance Hooper, M.D.</td>
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</tbody>
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**Neurology**

<table>
<thead>
<tr>
<th>Position</th>
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<tbody>
<tr>
<td>Irving J. Spear, M.D., Professor of Neurology</td>
<td></td>
</tr>
<tr>
<td>G. M. Settle, M.D., Chief of Clinic</td>
<td></td>
</tr>
<tr>
<td>Benjamin Pushkin, M.D.</td>
<td>Milford Levy, M.D.</td>
</tr>
<tr>
<td>Robert Hodes, M.D.</td>
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</table>

**Psychiatry**

<table>
<thead>
<tr>
<th>Position</th>
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<tbody>
<tr>
<td>R. M. Chapman, M.D., Professor of Psychiatry</td>
<td></td>
</tr>
<tr>
<td>Harry Goldsmith, M.D., Chief of Clinic</td>
<td></td>
</tr>
<tr>
<td>Nicholas W. Pinto, M.D.</td>
<td>Morris L. Scheindlinger, M.D.</td>
</tr>
<tr>
<td>Harry W. Rosenthal, M.D.</td>
<td></td>
</tr>
</tbody>
</table>
# Diseases of the Lungs
**C. C. Haliston, M.D., Chief of Clinic**

# Diseases of Metabolism
**H. M. Stin, M.D., Chief of Clinic**

# Cardiovascular Diseases
**William S. Low, Jr., M.D., Chief of Clinic**

# Pediatrics
**Charles L. Summers, M.D., Professor of Pediatrics**
**C. Loring Joslin, M.D., Chief of Clinic**
**John H. Traband, M.D., Chief of Clinic**
- William J. Todd, M.D.
- Clarence Macke, M.D.
- Albert Jaffe, M.D.
- Bernard J. Ferry, M.D.
- Marie Kovner, M.D.
- Clewell Howell, M.D.
- M. N. Puttermann, M.D.
- Samuel Glick, M.D.
- F. Stratner Orem, M.D.
- William G. Geyer, M.D.
- George A. Knipp, M.D.
- R. M. Hening, M.D.
- J. J. McGarrell, M.D.
- Elizabeth Sherman, M.D.
- Samuel Wolfe, M.D.
- A. H. Finkelstein, M.D.

# Surgery
**Charles Reid Edwards, M.D. Chief of Clinic**
- H. M. Foster, M.D.
- C. A. Reifschneider, M.D.
- E. S. Perkins, M.D.
- F. A. Sigrist, M.D.
- R. H. Wiggins, M.D.
- E. S. Johnson, M.D.
- W. R. Johnson, M.D.
- James Brown, M.D.
- S. H. Culver, M.D.

# Orthopaedic Surgery
**R. Tunstall Taylor, A.B., M.D., Professor of Orthopaedic Surgery**
**Compton Riely, M.D., Chief of Clinic**
- W. H. Daniels, M.D.
- H. L. Wheeler, M.D.

# Genito-Urinary
**W. H. Toulson, M.D., Chief of Clinic**
- Harris Goldman, M.D.
- J. H. Collinson, M.D.
- H. T. Collenberg, M.D.
- Malton C. Lang, M.D.
- H. C. Knapp, M.D.
- L. K. Fargo, M.D.

# X-Ray
**Henry J. Walton, M.D., Roentgenologist**

# Dermatology
**H. M. Robinson, M.D., Chief of Clinic**
**J. E. Gately, M.D.**
Nose and Throat
E. A. Looper, M.D., Clinical Professor of Diseases of Throat and Nose
FRANK B. ANDERSON, Chief of Clinic
F. A. HOLDEN, M.D. CHARLES CAHN, M.D.

Gynecology
J. M. HUNDLEY, JR., M.D. A. V. BUCHNESS, M.D.
LEO BRADY, M.D. GEORGE L. WISSIG, M.D.
WILLIAM J. FULTON, M.D.

Obstetrics
L. H. DOUGLASS, M.D., Chief of Clinic
DUDLEY PLEASANTS BOWE, B.A., M.D. M. ALEXANDER NOVEY, M.D.
J. G. M. REESE, M.D. ISADORE A. SIEGEL, M.D.
MAXWELL MAZER, M.D.

Eye and Ear
HARRY FREIDENWALD, M.D., Professor of Ophthalmology and Otology
J. W. DOWNEY, M.D.
H. L. SINSKY, M.D., Chief of Clinic
CHARLES CAHN, M.D. JOHN G. RUNKEL, M.D.

Social Service
MISS GRACE PEARSON, Directress

UNIVERSITY HOSPITAL DISPENSARY REPORT
October 1, 1925, to September 30, 1926

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>CASES—</th>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEW</td>
<td>OLD</td>
<td></td>
</tr>
<tr>
<td>Pediatrics</td>
<td>2,192</td>
<td>17,535</td>
<td>19,727</td>
</tr>
<tr>
<td>Dermatology</td>
<td>3,864</td>
<td>7,761</td>
<td>11,625</td>
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<tr>
<td>Surgery</td>
<td>1,921</td>
<td>6,740</td>
<td>8,661</td>
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<tr>
<td>Obstetrics</td>
<td>1,526</td>
<td>4,457</td>
<td>5,983</td>
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<tr>
<td>Eye and Ear</td>
<td>1,704</td>
<td>3,765</td>
<td>5,469</td>
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<tr>
<td>Genito-Urinary</td>
<td>838</td>
<td>4,392</td>
<td>5,230</td>
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<tr>
<td>Medicine</td>
<td>1,067</td>
<td>3,805</td>
<td>4,872</td>
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<tr>
<td>Gynecology</td>
<td>1,047</td>
<td>2,025</td>
<td>3,072</td>
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<tr>
<td>Orthopedic</td>
<td>308</td>
<td>1,873</td>
<td>2,181</td>
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<tr>
<td>Nose and Throat</td>
<td>930</td>
<td>803</td>
<td>1,733</td>
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<tr>
<td>Neurology</td>
<td>419</td>
<td>948</td>
<td>1,367</td>
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<tr>
<td>Gastro-Intestinal</td>
<td>247</td>
<td>744</td>
<td>991</td>
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<td>Tuberculosis</td>
<td>260</td>
<td>198</td>
<td>458</td>
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<tr>
<td>Psychiatry</td>
<td>184</td>
<td>272</td>
<td>456</td>
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<tr>
<td>Cystoscopy</td>
<td>52</td>
<td>225</td>
<td>277</td>
</tr>
<tr>
<td>Total</td>
<td>16,559</td>
<td>55,543</td>
<td>72,102</td>
</tr>
</tbody>
</table>

In addition to the above there were treated in the State Veneral Clinic 20,355 patients.
MERCY HOSPITAL

The Sisters of Mercy first assumed charge of the Hospital at the corner of Calvert and Saratoga Streets, then owned by the Washington University, in 1874. By the merger of 1878 the Hospital came under the control of the College of Physicians and Surgeons, but the Sisters continued their work of administering to the patients.

In a very few years it became apparent that the City Hospital, as it was then called, was much too small to accommodate the rapidly-growing demands upon it. However, it was not until 1888 that the Sisters of Mercy, with the assistance of the Faculty of the College of Physicians and Surgeons, were able to lay the cornerstone of the present Hospital. This building was completed and occupied late in 1889. Since then the growing demands for more space has compelled the erection of additions, until now there are accommodations for 351 patients.

In 1909 the name was changed from The Baltimore City Hospital to Mercy Hospital.

Mercy Hospital is located in the center of a city of 800,000 inhabitants.

The clinical material in the free wards is under the exclusive control of the Faculty of the University of Maryland School of Medicine and College of Physicians and Surgeons.

It adjoins the College building, and all surgical patients from the public wards are operated upon in the College operating rooms. This union of the Hospital and College buildings greatly facilitates the clinical teaching, as there is no time lost in passing from one to the other.

Mercy Hospital is the hospital of the United Railways and Electric Company of Baltimore City, and receives patients from the Baltimore and Ohio Railroad Company and from the Pennsylvania Railroad Company and its branches.
MERCY HOSPITAL STAFF

BOARD OF GOVERNORS

SAMUEL S. SHOEMAKER, ESQ., CHAIRMAN

Sister M. Carmelita
Sister M. Sienna
Sister M. Hildegarde
Sister M. Anita
Sister M. Geraldine
Sister M. Fabian

ALEXIUS McGlannan, A.M., M.D., LL.D.
W. D. Wise, M.D.
H. G. Beck, M.D.
F. D. SANGER, M.D.
T. K. Galvin, M.D.

MERCY HOSPITAL STAFF

SURGICAL DIVISION

ALEXIUS McGlannan, A.M., M.D., LL.D.
W. D. Wise, M.D.
C. F. Blake, M.D.

Elliott Hutchins, M.D.
A. M. Evans, M.D.
F. L. Jennings, M.D.

Associate Surgeons

R. H. Locher, M.D.
T. R. Chambers, M.D.
F. X. Kearney, M.D.

I. O. Ridgley, M.D.
Everard Briscoe, M.D.
N. C. Marvel, M.D.

D. J. Pessagno, M.D.

Assistant Surgeons

Charles Maxson, M.D.
A. B. McElwain, M.D.

Dwight Mohr, M.D.
H. F. Bongardt, M.D.

T. J. Touhey, M.D.

Ophthalmologist and Otologist

HARRY FRIEDENWALD, M.D.

Associates

H. K. Fleck, M.D.

J. W. Downey, M.D.

Rhinologists and Laryngologists

FRANK D. SANGER, M.D.
W. F. ZINN, M.D.

GEORGE W. MITCHELL, M.D.
RAYMOND MCKENZIE, M.D.

Associate

F. A. Pacienza, M.D.

Proctologist

CHARLES F. BLAKE, M.D.

Associate

L. J. Rosenthal, M.D.

Orthopedic Surgeon

ALBERTUS COTTON, M.D.
MERCY HOSPITAL STAFF

Associate
H. L. Rogers, M.D.

Assistant
K. W. Golley, M.D.

Urologist
ALEXANDER J. GILLIS, M.D.

Assistant
KENNETH B. LEGGE, M.D.

MEDICAL DIVISION

Physicians
MAURICE C. PINCOFFS, M.D.
William F. Lockwood, M.D.
Standish McCleary, M.D.

CARY B. GAMBLE, M.D.
HARVEY G. BECK, M.D.

ASSOCIATES
HUBERT C. KNAPP, M.D.
C. C. W. JUDD, M.D.
F. T. KYFER, M.D.
H. R. PETERS, M.D.
E. E. MAYER, M.D.

BARTUS T. BAGGOTT, M.D.
GEORGE MCLEAN, M.D.
A. A. SUSSMAN, M.D.
L. A. M. KRAUSE

Gastro-Enterologist
JULIUS FRIEDENWALD, M.D.

ASSOCIATES
T. FREDERICK LEITZ, M.D.

THEODORE MORRISON, M.D.

ASSISTANTS
MAURICE FELDMAN, M.D.

JOSEPH SINDLER, M.D.

Pediatricians
JOHN RUHRAH, M.D.

EDGAR B. FRIEDENWALD, M.D.

Assistant
F. B. SMITH, M.D.

Neurologist and Psychiatrist
ANDREW C. GILLIS, M.D.

Assistant
MILFORD LEVY, M.D.
MERCY HOSPITAL STAFF

Dermatologist
MELVIN ROSENTHAL, M.D.

OBSTETRICAL DIVISION

CHARLES E. BRACK, M.D.
A. SAMUELS, M.D.
W. S. GARDNER, M.D.
G. A. STRAUSS, M.D.
E. P. SMITH, M.D.
J. J. ERWIN, M.D.
T. K. GALVIN, M.D.
E. S. ELDAVITCH, M.D.

GYNECOLOGICAL DIVISION

Gynecologists

WILLIAM S. GARDNER, M.D.
GEORGE A. STRAUSS, M.D.
E. P. SMITH, M.D.
ABRAHAM SAMUELS, M.D.
T. K. GALVIN, M.D.
J. J. ERWIN, M.D.
E. S. ELDAVITCH, M.D.

PATHOLOGICAL DIVISION

STANDISH MCCLEARY, M.D.
H. R. PETERS, M.D.
H. T. COLLENBERG

Clinical Pathologists

Hugh R. Spencer, M.D.
Emil G. Schmidt, Ph.D.

Technicians

SISTER M. JOAN, PH.G., R.N.
ANNA CHENOWETH, R.N.,
FRANCES DONOVAN, R.N.

X-RAY DEPARTMENT

Radiographers

ALBERTUS COTTON, M.D.
HARRY L. ROGERS, M.D.
K. W. GOLLEY, M.D.

Technician—SISTER M. DE SALES, R.N.
MERCY HOSPITAL RESIDENT STAFF

Resident Physician
J. E. Eastland, M.D.

Assistant Resident Physician
Wm. C. Polsue, M.D.

Resident Surgeon
E. M. Robertson, M.D.

Assistant Resident Surgeons
J. L. Winstead, M.D.  W. H. Lawson, M.D.
C. Y. Graves, M.D.   V. K. Young, M.D.

Resident Gynecologist
E. B. Wallace, M.D.

Internes
T. N. Carey, M.D.  J. G. Benesunes, M.D.
H. W. Ellias, M.D.  S. A. Tumminello, M.D.
F. W. Gillis, M.D.  G. P. Lilly, M.D.
J. J. Leyko, M.D.   Ira Branfield, M.D.
Dispensary Staff of Mercy Hospital

Surgery Supervisors
Alexius McGlannan, M.D. W. D. Wise, M.D.

Attending Surgeons
D. H. Mohr, M.D. D. J. Pessagno, M.D.
I. O. Ridgley, M.D. H. F. Bongardt, M.D.
John O'Conn or, M.D. T. J. Touhey, M.D.
J. W. Nelson, M.D.

Genito-Urinary Surgery
A. J. Gillis, M.D. K. B. Legge, M.D.

Orthopedic Surgery
Albertus Cotton, M.D. Harry L. Rogers, M.D.
K. W. Golley, M.D.

Medicine Supervisors
W. F. Lockwood, M.D. M. C. Pincoffs, M.D.

Attending Physicians
B. T. Baggott, M.D. F. T. Kyper, M.D.
J. M. Miller, M.D. Albert Scagnetti, M.D.
A. A. Sussman, M.D.

Cardiovascular Diseases
A. A. Sussman, M.D., Chief of Clinic

Diseases of the Lungs
B. T. Baggott, M.D., Chief of Clinic
Diseases of Stomach
Supervisor, Julius Friedenwald, M.D.

Attending Physicians
T. Frederick Leitz, M.D.  S. Zinberg, M.D.
M. Feldman, M.D.  A. Eisenberg, M.D.
Theodore H. Morrison, M.D.  J. N. Zierler, M.D.
Joseph Sindler, M.D.  I. I. Levy, M.D.
W. F. Zinn, M.D., Esophagoscopist

Nervous Diseases
Supervisor, A. C. Gillis, M.D.

Attending Physicians
Milford Levy, M.D.  R. A. Warner, M.D.

Diseases of Women
Supervisors
W. S. Gardner, M.D.  A. Samuels, M.D.

Attending Surgeons
E. P. Smith, M.D.  T. K. Galvin, M.D.
J. J. Erwin, M.D.  C. F. J. Coughlin, M.D.
E. Edlavitch, M.D.

Diseases of Nose and Throat
W. F. Zinn, M.D.  R. F. McKenzie, M.D.
F. A. Pacienza, M.D.

Diseases of Eye and Ear
H. F. Fleck, M.D.  M. Raskin, M.D.
J. I. Kemler, M.D.  F. A. Pacienza, M.D.

Proctology
L. J. Rosenthal, M.D.

Dermatology
Melvin Rosenthal, M.D.

Assistant
William G. Coppage, M.D.

Social Service Department
Sister M. Helen, R.N.  Catherine Campbell, R.N.
MERCY HOSPITAL DISPENSARY

<table>
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<th>Department</th>
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<td>Genito-Urinary</td>
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OTHER CLINICAL FACILITIES

THE BALTIMORE CITY HOSPITALS

The clinical advantages of the University have been largely increased by the liberal decision of the Board of Supervisors of City Charities to allow the immense material of these hospitals to be used for the purpose of medical education. There are daily visits and clinics in medicine and surgery by the Staff of the Hospitals. The autopsy material is unsurpassed in this country in amount, thoroughness in study, and the use made of it in medical teaching.

The Baltimore City Hospitals consist of the following separate hospitals:

The General Hospital, 160 beds.
The Hospital for Chronic Cases, 180 beds.
The Hospital for Tuberculosis, 190 beds.
The Detention Hospital for Insane, 450 beds.
STAFF OF THE BALTIMORE CITY HOSPITALS

VISITING STAFF

ARTHUR M. SHIPLEY, Sc.D., M.D., Surgeon-in-Chief.
C. C. HABLISTON, M.D., Physician-in-Chief to the Tuberculosis Hospital.
HARRY GOLDSMITH, M.D., Physician-in-Charge of the Detention Hospital for the Insane.
WILEY D. FORBUS, A.B., M.D., Visiting Pathologist.
VERNON H. NORWOOD, A.B., M.D., Resident Pathologist.

CONSULTING STAFF

**Otologist**
WILLIAM TARUN, M.D.

**Gynecologists**
R. G. WILLSE, M.D.
J. MASON HUNDLEY, JR., M.A., M.D.

**Urologist**
W. H. TOULSON, A.B., M.D.

**Laryngologists**
H. R. SLACK, M.D.
FRANKLIN B. ANDERSON, M.D.

**Pediatrician**
JOHN RUHRAH, M.D.

**Neurologist**
OLIVER SMITH, A.B., M.D.

**Psychiatrists**
HENRY J. BERKLEY, M.D.
ADOLPH MEYER, M.D.

**Orthopedist**
H. L. WHEELER, M.D.

**Proctologist**
G. MILTON LINTHICUM, A.B., M.D.

Assisting Visiting Physician
CHARLES R. AUSTRIAN, M.D.

Assistant Visiting Surgeons
FRANK S. LYNN, M.D.
C. A. REIFSCHEIDER, M.D.
E. M. HANRAHAN, A.B., M.D.
THE JAMES LAWRENCE KERNAN HOSPITAL AND
INDUSTRIAL SCHOOL OF MARYLAND
FOR CRIPPLED CHILDREN

This institution contains 100 beds for the active treatment of deformities, a new fire-proof building having been recently added, with every possible facility for the operative and physical treatment of these cases. It owns an estate known as "Radnor Park," of colonial origin, comprising 75 acres, at Hillsdale, within the northwestern city limits, and may be reached by trolley.

This institution has city, state, endowed and private beds and rooms with private baths and terraces adjacent, overlooking a beautiful park-like environment, especially adapted for heliotherapy in tuberculosis, rhachitic, osteomyelitic and arthritic conditions. A dairy and farm are maintained in connection with this hospital. The dispensary of this hospital is maintained across the street from the University Hospital, with which this institution is in close affiliation, for didactic, clinical, dispensary and bedside instruction. It is the Orthopaedic Department of the University of Maryland, and maintained in connection with it is a well-equipped Physiotherapy branch, affording the student an opportunity to familiarize himself with the newer methods in the application of actinotherapy, diathermy, thermotherapy, electricity and hydrotherapy.

STAFF

Surgeon-in-Chief and Medical Director
R. Tunstall Taylor, A.B., M.D.

Associate Surgeons
Albertus Cotton, A.M., M.D.          Clement R. Monroe, M.D.
Harry L. Rogers, M.D.
Assistant and Dispensary Surgeons
Compton Riely, M.D.  Arnold Lawson Jensen, B.Sc., M.D.
Moses Gellman, A.B., M.D.

Consulting Surgeons
Randolph Winslow, A.B., M.A., M.D., LL.D.

Surgeon
Arthur M. Shipley, Sc.D., M.D.

Plastic Surgeon
John Staige Davis, B.Sc., M.D.

Neuro-Surgeon
Charles Bagley, Jr., A.B., M.D.

Consulting Oculist and Aurist
Hiram Woods, A.B., M.D., LL.D.

Oculist and Aurist
William Tarun, M.D.,

Laryngologist
Edward A. Looper, M.D.

Assistant Laryngologists
F. B. Anderson, M.D.  Allen Holden, M.D.
Everett L. Bishop, M.D.  Marshall T. Bylerly, M.D.

Dentists

Consulting Physicians
Lewellys F. Barker, A.B., M.D.  Thomas R. Brown, A.B., M.D.
Thomas B. Futcher, A.B., M.D.  William S. Thayer, A.B., M.D.

Pediatrist
Benjamin Tappan, A.B., M.D.

Dermatologist
John R. Abercrombie, A.B., M.D.

Pathologist
Sydney M. Cone, A.B., M.D.

Attending Pathologist
Howard J. Maldeis, M.D.
Neurologist
Irving J. Spear, M.D.

Resident Surgeon
Clement R. Monroe, M.D.

Assistant Resident Surgeon
Arnold Lawson Jensen, B.Sc., M.D.

Resident Student Intern
Samuel Philip Sardo

Head Nurse
Miss Grace Lovell Elgin, R.N.

Dispensary and Social Service Nurse
Miss Mabel S. Brown, R.N.

Physiotherapists, Masseuses and Instructors in Corrective Gymnastics
Miss Anita Renshaw Presstman
Miss Elizabeth Emory

Roentgenologists
Albertus Cotton, A.M., M.D.
Mrs. Georgiana Wisong

Instructors in Grammar School
Miss Mary H. Lee, Principal
Miss Mary Sampson, Assistant

Superintendent and Business Manager
Mrs. M. E. Lane
The facilities of this institution, containing 250 infants and children, have been kindly extended to the University of Maryland by the Sisters of Charity. This large clinic enables this school to present to its students liberal opportunities for the study of diseases of infants and children.

**STAFF**

*Obstetrician*

**Dr. L. H. Douglass**

*Pediatricians*

**Dr. W. C. Bacon**  
**Dr. C. R. Goldsborough**  
**Dr. W. H. Ingeam**  
**Dr. C. L. Joslin**

*Surgeon*

**Dr. N. Winslow**

*Dermatologist*

**Dr. J. A. Buchness**

*Oculists*

**Dr. C. A. Clapp**  
**Dr. F. B. Anderson**

*Orthopedic Surgeon*

**Dr. W. H. Daniels**

*Physician*

**Dr. C. P. Clautice**

*Epidemiologist*

**Dr. Samuel Glick**
INSTITUTIONS FOR THE TREATMENT OF THE INSANE
AND FEEBLE-MINDED

The Sheppard and Enoch Pratt Hospital. This institution is one of the most modern hospitals for the treatment and care of the insane in this country. It is well endowed and its superintendent is R. M. Chapman, M.D., Professor of Psychiatry at the University of Maryland. In this hospital intensive treatment and study of mental diseases is carried on, a large number of the patients entering voluntary. The students under the direction of Dr. Chapman and his assistants in a series of clinics are shown the early manifestations and the various stages of mental diseases, the methods of treatment, and their effect. Special attention is given to etiological factors and the discussion of prevention.

Spring Grove Hospital. Through the courtesy of the Superintendent of this institution, the Professor of Psychiatry is enabled to present to the weekly clinics to the fourth-year class the different types of psychoses and psycho-neuroses.

LIBRARIES

The University Library, founded in 1813 by the purchase of the collection of Dr. John Crawford, now contains 24,601 volumes, a file of 70 current (medical) journals, and several thousand pamphlets and reprints. It is well stocked with recent literature, including books and periodicals of general interest. The home of the Library is Davidge Hall, a comfortable and commodious building in close proximity to the classrooms and the Laboratories of the Medical Department. The Library is open daily during the year, except in August, for use of members of the Faculty, the students, and the profession generally.

The Library of the Medical and Chirurgical Faculty of Maryland, containing 50,000 volumes, is open to the students of the school. The leading medical publications of the world are received by the Library, and complete sets of many journals are available. Other Libraries of Baltimore are the Peabody (215,000 volumes) and the Enoch Pratt Free Library (497,901 volumes).

All these Libraries are open to the students of the school without charge.
ORGANIZATION OF THE CURRICULUM

The following curriculum is the result of a thorough revision of teaching in this school in order to meet modern requirements. The multiplication of specialties in medicine and surgery necessitates a very crowded course and the introduction of electives will very soon be depended on to solve some of the difficulties.

The curriculum is organized under eleven departments:

1. Anatomy (including Histology and Embryology).
2. Physiology.
3. Bacteriology and Immunology.
4. Biological Chemistry.
5. Pharmacology and Materia Medica.
6. Pathology.
7. Medicine (including Medical Specialties).
8. Surgery (including Surgical Specialties).

The instruction is given in four years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

The first and second years are devoted largely to the study of the structures and functions of the normal body. Laboratory work occupies most of the student's time during these two years.

Some introductory instruction in Medicine and Surgery is given in the second year. The third and fourth years are almost entirely clinical.

A special feature of instruction in the school is the attempt to bring together teacher and student in close personal relationship. In many courses of instruction the classes are divided into small groups and a large number of instructors insures attention to the needs of each student.
In most courses the final examination as the sole test of proficiency has disappeared and the student's final grade is determined largely by partial examinations, recitations and assigned work carried on throughout the course.

DEPARTMENT OF ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY

C. L. Davis, M.D.------------------------------------------Professor of Anatomy
Eduard Uhlenhuth, Ph.D.-----------------Associate Professor of Anatomy
John F. Lutz, M.D.-----------------------------------Instructor in Histology
Wm. R. Johnson, M.D.-----------------------------------Assistant in Anatomy
Robt. W. Johnson, M.D.-------------------------------Assistant in Anatomy
Joseph Pokorny, M.D.-----------------------------------Assistant in Anatomy
Jas. W. Nelson, M.D.-----------------------------------Assistant in Histology
J. Hulla, M.D.------------------------------------------Assistant in Histology

First Year. Didactic. Five hours each week for thirty-two weeks. Each day, preceding the laboratory period, a quiz and demonstration of from forty to fifty minutes is held, covering the laboratory work for the day.

Laboratory. Eighteen hours each week for thirty-two weeks. This course includes a complete dissection of the human body, including the central nervous system. Abundance of good material is furnished and the student is aided in his work by competent demonstrators. Practical examinations are held at frequent intervals throughout the session, and each student will be held to strict account for material furnished him. Each student is furnished a skeleton, and a deposit is required to insure its return in good condition at the end of the session.

The last six weeks of this course is devoted to a dissection of the brain and a study of the structure of the central nervous system.

Histology and Embryology

First Year. Lectures, recitations and laboratory work, eight hours each week for thirty-two weeks. Histology and embryology are taught as a common subject, the histogenesis of a part preceding its histological study.
The most important part of the work will be done in the laboratory, where each student will be provided with apparatus, staining fluids and material necessary for the preparation of specimens for microscopical examination. An important aid to the course is the projection microscope and balopticon which are used for the projection upon a screen of magnified images of the specimens actually used in the laboratory, and of illustrations from standard text-books.

DEPARTMENT OF PHYSIOLOGY
A. H. Ryan, M.D.-------------------Professor of Physiology
Charles C. Conser, M.D.--------Associate Professor of Physiology
Ferdinand A. Ries, M.D.--------Associate in Physiology
George A. Knipp, M.D.-------------------Instructor in Physiology

1. PHYSIOLOGY. The required course consists of lectures, recitations, laboratory work, demonstrations and conferences in the first and second years.

First Year. Two periods weekly of one hour each are given during the second half of the first year. These lectures are devoted to a general survey of the subject; the application of physical and physico-chemical methods to experimental physiology; the application of statistical methods and the presentation of results. The physiology of vision is also covered in lectures, the laboratory work being given in the second year.

Second Year. Three one-hour periods weekly throughout the year are devoted to lectures and recitations. At these lectures charts, lantern slides and demonstrations are used. Three hours weekly during the first semester and six hours per week during the second semester are spent in the laboratory.

The laboratory work of the second year begins with a study of irritability and contractility and with methods of making precise quantitative physiological observations and controls, curve plotting, interpretation of data and the use of physiological apparatus. Students work in groups of two at completely equipped desks, and the material consists largely of the frog and turtle.

This is followed by experiments in which the students work in groups of four to six, largely upon mammals as well as
themselves, and includes the subjects circulation and body fluids, respiration, digestion, secretion, metabolism, internal secretion, central nervous system and special senses. Certain experiments are performed aseptically upon the internal secretions and nervous system, the students themselves presenting their cases along with their study of the literature to the remainder of the class. Specially equipped laboratories are used for certain parts of the work. Students are taught to treat animals with the same consideration and interest as patients.

The work is arranged to illustrate fundamental principles of physiology and at the same time familiarize the students in methods of thought and technique essential to diagnosis and directly applicable to the clinic and bedside.

2. **Clinical Physiology.** During the second semester of the second year a one-hour clinic is held each week by the Department of Medicine to correlate physiology and medicine and serve as an introduction to the work of the clinical years.

3. **Elective Work.** This is offered to students of the third and fourth years, without credit, in the following subjects: basal metabolism, internal secretions and central nervous system.

4. **Research.** Hours to be arranged. The facilities of the laboratory are available to qualified persons to undertake original investigation, the laboratory bearing all reasonable expense for material.

**DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY**

**Frank W. Hachtel, M.D.** Professor of Bacteriology  
**William Royal Stokes, M.D., Sc.D.** Professor of Bacteriology  
**Louis F. Krumrein, M.D.** Instructor in Bacteriology  
**J. A. F. Pfeiffer, M.D.** Instructor in Bacteriology  
**Henry F. Buettner, M.D.** Instructor in Bacteriology

Instruction in bacteriology is given in the laboratory to the students of the second year during the first semester. This includes the various methods of preparation and sterilization of culture media, the study of pathogenic bacteria and the bacteriological examination of water and milk. The bacteriolog-
ical diagnosis of the communicable diseases is also included in this course. Animal inoculations are made in connection with the bacteria studied. The most important protozoa are also studied in the laboratory. The principles of general bacteriology are taught by quiz, conference and lecture.

The principles of immunology are presented by means of quizzes, conferences and lectures to the second-year class throughout the second semester, and practical experiments are carried out by the class in laboratory sessions of three hours each, held twice weekly during the semester.

**DEPARTMENT OF BIOLOGICAL CHEMISTRY**

H. BOYD WYLIE, M.D.---------Professor of Biological Chemistry
FRANK N. OGDEN, M.D.---------Associate in Biological Chemistry
EMIL G. SCHMIDT, Ph.D.-------Instructor in Biological Chemistry

Instruction in biological chemistry comprises laboratory work, lectures and conferences.

The laboratory work consists in the study of important indicators, volumetric solutions, buffer solutions, colloids and membrane phenomena followed by experiments illustrating the physical and chemical properties of carbohydrates, proteins and lipins. Subsequently, the examination of hydrolytic and oxidative enzymes, gastric contents, tissues of the body, bile, milk and the investigations of blood and urine chemistry conclude the assigned experimental work.

The lectures treat of laboratory technic, the chemistry of indicators, hydrogen-ion concentration, the physical chemistry of the cell, osmosis, diffusion, dialysis, the law of mass action, reversible reactions, catalysis and enzymes. The following lectures refer to the metabolism of water, salts, other inorganic substances, carbohydrates, proteins and lipins, vitamins and deficiency diseases, dietary requirements, basal metabolism, acid-base balance and, finally, the secretions and excretions.

The conferences are conducted by one of the instructors and take the form of short, written examinations and informal oral quizzes.
1. **Materia Medica and Pharmacology.** 56 hours required.

The methods now used in presenting the subject-matter of Materia Medica and Prescription Writing have evolved as a result of some years of practical teaching. The science of Pharmacology has introduced methods of critical analysis in the choice of drugs proposed for use as medicine. As aids in determining the particular drugs chosen for study, use is made of the "United States Pharmacopoeia" and "New and Non-Official Remedies."

Official titles, whenever practicable, are expressed in English and all quantities are stated in terms of the metric system. The only way to get away from the unscientific system of English weights and measures, and from a Latin system which few ever learn correctly is to refuse to teach either one of them.

When possible, drugs are grouped according to their chemical composition and the influence of various radicals and side chains emphasized, whereas drugs, the chemistry of which is not definitely established, are grouped according to their dominant physiological action. Following the Pharmacology of a given group, their place in practical medicine is indicated, and the student is requested to prescribe same in suitable form. Thus a Materia Medica is developed throughout the course, based upon Pharmacological action of drugs.

2. **Systematic Pharmacology.** 96 hours required. Second year. In this portion of the course the student is taught Pharmacology as a pure science. The aim is to attain a mean between that which has a purely scientific bearing and that dominantly practical, so that both a critical attitude toward drugs and an understanding of the principles of dosage may be acquired. This is accomplished by lectures, quiz, conference and the following course of laboratory exercises.

3. **Pharmacodynamics.** 96 hours. Second year. This laboratory course runs parallel with Pharmacology 2. Many of
the most important problems of Immunology, Parasitic intoxications, and of Chemotherapy are essentially Pharmacological. In the first part of the course the experiments are upon normal animals, hence primarily toxocolical in character. In the latter part of the course more and more emphasis is laid upon what is now designated as chemo-therapeutic index of drugs.

4. Pharmacology of General and Local Anesthetics and Soporifics. Four weeks, 3 lectures, 3 laboratory periods a week. This is a special course designed to meet the needs of physician and graduate nurse who wish to acquire a knowledge of the more recent developments in the pharmacology of depressant and sleep-producing drugs. The course is so arranged that those properly qualified may continue the work under expert anesthetists in the wards of the hospitals connected with the university. Professor Schultz.

5. Research in Pharmacology and Chemo-Therapy. Properly qualified students are admitted to the laboratory with a view to their carrying on original investigations in drug action. Thoroughly equipped laboratories are well adapted for post-graduate study and research in Pharmacology. Hours will be arranged to suit the applicant. Professor Schultz.

DEPARTMENT OF PATHOLOGY

HUGH R. SPENCER, M.D.---------------------Professor of Pathology
STANDISH MCCLEARY, M.D.------------------Professor of Pathology
SYDNEY M. CONE, M.D.----------------------Associate Professor of Pathology
ALBERT E. GOLDSCHMIDT, M.D.-------------Associate in Pathology
ROBERT B. WRIGHT, M.D.-------------------Associate in Pathology
EMILE DUSKES, M.D.------------------------Associate in Pathology
M. ALEXANDER NOVEY, M.D.----------------Instructor in Pathology
MONTE EDWARDS, M.D.----------------------Instructor in Pathology
WM. S. LOVE, M.D.--------------------------Instructor in Pathology
A. A. SUSSMAN, M.D.-----------------------Instructor in Pathology
HOWARD M. BUBERT, M.D.-------------------Instructor in Pathology
LEON FREEDOM, M.D.------------------------Instructor in Pathology
SAMUEL GLICK, M.D.------------------------Assistant in Pathology
VERNON L. NORWOOD, M.D.-----------------Assistant in Pathology
BENJAMIN ABESHOUSE, M.D.----------------Assistant in Pathology

Courses of instruction in Pathology are given during the second and third years. These courses are based on previous study of normal structure and function and aim to outline the
natural history of disease. Instruction is made as practical as possible that the student may become familiar with the appearance of tissues in disease and may be able to correlate anatomical lesions with clinical symptoms and signs.

1. General Pathology and Histo-Pathology. This course is given to second-year students. It includes the study and demonstration of disturbances of the body fluids, disturbances of structure, nutrition and metabolism of cells, disturbances of fat, carbohydrate and protein metabolism, disturbances in pigment metabolism, inflammation and tumors. The laboratory course consists in a daily preliminary talk on the subject for study, following which the student takes up the study of microscopical sections. Gross material from autopsy and from the museum is demonstrated in conjunction with the microscopical sections.

2. Applied Pathology, Including Gross Morbid Anatomy and Morbid Physiology. Third-year student: In this course the special relationship of the gross and microscopical lesions to clinical symptoms and signs is emphasized. Fresh material from autopsy collected at the various hospitals is demonstrated and supplemented by a study of the respective autopsy protocols.

3. Autopsies. Third Year. Autopsy technic is taught to small groups of students by special instruction at autopsies performed at the various hospitals. Students are required to assist at the autopsy, study the organs, examine the microscopical sections, make cultures and prepare autopsy protocols.

4. Clinical Pathology Conference. Fourth Year. In collaboration with the Department of Medicine. Material from autopsies is studied with reference to the correlation of the clinical aspects with the pathological findings.

5. Advanced Work in Pathology. Properly qualified students will be permitted to carry out advanced or research work along the lines of experimental pathology.
ORGANIZATION OF THE CURRICULUM

DEPARTMENT OF MEDICINE

Maurice C. Pincoffs, B.S., M.D. Professor of Medicine
Gordon Wilson, M.D. Professor of Medicine
Standish McCleary, M.D., Professor of Pathology and Clinical Medicine

Jos. E. Gicner, M.D.,
Professor of Clinical Medicine and Physical Therapeutics

Charles W. McElfresh, M.D. Professor of Clinical Medicine
G. Carroll Lockard, M.D. Professor of Clinical Medicine
Harvey G. Beck, Sc.D., M.D. Professor of Clinical Medicine
Paul W. Clough, B.S., M.D. Associate Professor of Medicine

C. C. W. Judd, A.B., M.D. Associate Professor of Medicine
Sydney R. Miller, M.D. Associate Professor of Medicine

Walter A. Baetjer, A.B., M.D. Associate Professor of Medicine
Harry M. Stein, M.D. Associate Professor of Medicine

H. D. McCarty, M.D. Associate Professor of Clinical Medicine

Wm. H. Smith, M.D. Associate Professor of Clinical Medicine

H. J. Maldeis, M.D. Associate Professor of Medical Jurisprudence

S. Lloyd Johnson, M.D. Assistant Professor of Medicine
John G. Huck, M.D. Assistant Professor of Medicine
George McLean, M.D. Assistant Professor of Medicine

C. C. Habliston, M.D. Assistant Professor of Medicine

Reed Rockwood, A.B., M.S., M.D. Assistant Professor of Medicine

L. A. M. Krause, M.D. Associate in Medicine

Bartus T. Baggott, M.D. Associate in Medicine

H. R. Peters, M.D. Associate in Medicine

H. M. Bubert, M.D. Associate in Medicine

R. C. Metzel, M.D. Associate in Clinical Medicine

W. I. Messick, M.D. Associate in Clinical Medicine

William Michel, M.D. Instructor in Medicine

Edward Novak, M.D. Instructor in Medicine

W. S. Love, Jr., A.B., M.D. Instructor in Medicine

A. A. Sussman, M.D. Instructor in Medicine

Wetherbee Fort, M.D. Instructor in Medicine

F. T. Kyper, M.D. Instructor in Medicine

M. G. Gicner, M.D. Instructor in Medicine

William A. Strauss Instructor in Medicine

Septima C. Smith, A.M., Sc.D. Instructor in Medicine

W. H. Woody, M.D. Assistant in Medicine

J. S. Eastland, M.D. Assistant in Medicine

R. Hooper Smith, M.D. Assistant in Medicine
GENERAL OUTLINE

SECOND YEAR

Introduction to clinical medicine.
(a) Introductory physical diagnosis.
   (1 hour a week, first semester.)
   (2 hours a week, second semester.)
(b) Medical clinics.
   (1 hour a week, second semester.)

THIRD YEAR

I. The methods of examination (13 hours a week).
   (a) History taking.
   (b) Physical diagnosis.
   (c) Clinical pathology.

These subjects are taught and practiced in the out-patient department and in the clinical laboratory.

II. The principles of medicine (7 hours a week).
   (a) Lectures, clinics and demonstrations in general medicine, neurology, pediatrics and preventive medicine.

III. The principles of therapeutics (2 hours a week).

Lectures and demonstrations in general therapeutics, physical therapeutics and materia medica.

FOURTH YEAR

The practice of medicine.

I. Clinical clerkship on the medical wards.
   (26 hours a week for ten weeks.)
   (a) Responsibility, under supervision, for the history, physical examination, laboratory examinations and progress notes of assigned cases.
   (b) Ward classes in general medicine, the medical specialties, and therapeutics.

II. Clinics in general medicine and the medical specialties.
   (6 hours a week.)

III. Dispensary work in the medical specialties.

IV. Clinical pathological conferences (1 hour a week.)

Medical Dispensary Work

The medical dispensaries of both the Mercy and the University Hospitals are utilized for teaching in the third year. Each student spends two periods a week of two hours each in dis-
pensary work. The work is done in groups of four to six students under an instructor. Systematic history-taking is especially stressed. Physical findings are demonstrated. The student becomes familiar with the commoner acute and chronic disease processes.

**Physical Diagnosis**

**SECOND YEAR.** Didactic lectures and practical demonstrations in topographical anatomy and normal physical signs.

**THIRD YEAR.** The class is divided into small groups, and each section receives instruction for four hours a week for the entire session in the medical dispensaries of the hospitals. The large clinical material of the dispensaries and hospitals is utilized to give each student the opportunity to familiarize himself with the common types of bodily structure, with the normal variations in physical signs and with the physical signs of the chief pulmonary, circulatory and abdominal diseases.

**Therapeutics**

**THIRD YEAR.** General therapeutics and materia medica are taken up and an effort is made to familiarize the student with the practical treatment of disease. The special therapy of the chief diseases is then reviewed. Two hours a week. Dr. Lockard.

The principles of physical therapy are taught in a special lecture and demonstration course consisting of six one-hour periods. Dr. Gichner.

**FOURTH YEAR.** Special consideration is given to the practical application of therapeutic principles in bedside teaching and the chief therapeutic methods are demonstrated.

**Tuberculosis**

During the third year in connection with the instruction in physical diagnosis a practical course is given weekly to sections of the class at the Municipal Tuberculosis Hospital. Stress is laid upon the recognition of the physical signs of the disease, as well as upon its symptomatology and gross pathology.
Syphilis

THIRD YEAR. During the third year the subject of syphilis will be dealt with in the lecture course.

FOURTH YEAR. An elective course in the therapeutic management of syphilis will be offered in the dispensary.

CLINICAL PATHOLOGY

John G. Huck, M.D.____________________Assistant Professor of Medicine
Head of Department of Clinical Pathology

H. J. Maldeis, M.D.____________________Associate Professor of Medical Jurisprudence

M. G. Gichner, M.D.____________________Instructor in Medicine

William A. Strauss, M.D.________________Instructor in Medicine

Septima C. Smith, A.M., Sc.D.__________Instructor in Medicine

R. Hooper Smith, M.D.__________________Assistant in Medicine

During the third year the student is thoroughly drilled in the technique of the usual clinical laboratory work, so that he is able to perform all routine examination which may be called for during his fourth year, in connection with the work in the wards and dispensary.

The practical work is supplemented by a series of didactic lectures and demonstrations in which the entire teaching staff of the department takes an active part. The microscopical and chemical study of blood, exudates and transudates, gastric juice, spinal fluid, feces and urine are successively taken up, and special attention directed to the clinical significance of the findings.

Clinical parasitology from the standpoint of the infecting agent and the carrier is given careful consideration.

The entire course is thoroughly practical. Each student is provided with a microscope, blood counters and hemoglobinometer for his exclusive use, and every two students with a special laboratory outfit for all routine purposes.

During the fourth year the student applies what he has learned during the preceding year in the laboratories of the various affiliated hospitals. He is also supplied with a laboratory outfit which is sufficiently complete to enable him to work independently of the general equipment. Special instructors are available during certain hours to give necessary assistance and advice.
ORGANIZATION OF THE CURRICULUM

GASTRO-ENTEROLOGY

JULIUS FRIEDENWALD, A.M., M.D.-------------Professor of Gastro-Enterology
T. FRED LEITZ, M.D.-------------Clinical Professor of Gastro-Enterology
J. HARRY ULLRICH, M.D.-------------Assistant Professor of Gastro-Enterology
THEODORE H. MORRISON, M.D.-------------Assistant Professor of Gastro-Enterology
MAURICE FELDMAN, M.D.-------------Associate in Gastro-Enterology
ZACHARIAH MORGAN, M.D.-------------Associate in Gastro-Enterology
JOSEPH SINDLER, M.D.-------------Instructor in Gastro-Enterology
M. S. KOPPELMAN, M.D.-------------Instructor in Gastro-Enterology
N. J. DAVIDOV, M.D.-------------Instructor in Gastro-Enterology
ALBERT EISENBERG, M.D.-------------Instructor in Gastro-Enterology
I. S. ZINBERG, M.D.-------------Instructor in Gastro-Enterology
JOSEPH N. ZIELER, M.D.-------------Instructor in Gastro-Enterology
ISIDORE I. LEVY, M.D.-------------Instructor in Gastro-Enterology
LEO T. BROWN, M.D.-------------Assistant in Gastro-Enterology
C. VANCE HOOPER, M.D.-------------Assistant in Gastro-Enterology

FOURTH YEAR. Clinics, recitations and demonstrations to the class for one hour a week throughout the session. Dispensary instruction to small groups throughout the entire session. Practical instruction in the differential and clinical diagnosis and demonstrations of the newer methods of diagnosis in gastro-intestinal affections.

PSYCHIATRY

R. M. CHAPMAN, M.D.-------------Professor of Psychiatry
H. S. SULLIVAN, M.D.-------------Associate Professor of Psychiatry
HARRY GOLDSMITH, M.D.-------------Instructor in Psychiatry

THIRD YEAR. In the third year the student attends fifteen clinical lectures and five clinics which are designed to be introductory to the more intensive work in psychiatry in the fourth year.

FOURTH YEAR. The class is divided into sections for clinical conferences on selected groups of cases. Each student works for a short period as assistant in the Mental Hygiene Clinic, and thus gains practical experience of the problems of history-taking, examination, and the care of psychiatric patients.
ORGANIZATION OF THE CURRICULUM

PEDIATRICS

Charles L. Summers, M.D.-------------------------------Professor of Pediatrics
Edgar B. Friedenwald, M.D.-------------------Professor of Clinical Pediatrics
C. Loring Joslin, M.D.----------------------Associate Professor of Pediatrics
John H. Traband, M.D.-----------------------------Associate in Pediatrics
William J. Todd, M.D.---------------------Instructor in Pediatrics
Clarence E. Macke, M.D.----------------------Instructor in Pediatrics
F. Stratner Orem, M.D.----------------------Instructor in Pediatrics
William G. Geyer, M.D.----------------------Instructor in Pediatrics
Albert Jaffe, M.D.-------------------------------Instructor in Pediatrics
George A. Knipp, M.D.---------------------Instructor in Pediatrics
Bernard J. Ferry, M.D.----------------------Instructor in Pediatrics
I. J. Feinglos, M.D.-----------------------------Instructor in Pediatrics
Frederick B. Dart, M.D.---------------------Instructor in Pediatrics
R. M. Hening, M.D.-----------------------------Assistant in Pediatrics
Marie Kovner, M.D.-----------------------------Assistant in Pediatrics
J. J. McGarrell, M.D.-----------------------------Assistant in Pediatrics
Clewell Howell, M.D.----------------------------Assistant in Pediatrics
Samuel Wolfe, M.D.-----------------------------Assistant in Pediatrics
Samuel Glick, M.D.-----------------------------Assistant in Pediatrics
Elizabeth Sherman, M.D.------------------------Assistant in Pediatrics
M. N. Putterman, M.D.-----------------------------Assistant in Pediatrics
A. H. Finkelstein, M.D.-------------------------Assistant in Pediatrics

Third Year: Instruction during the third year consists of
one lecture each week in which infant feeding and the most
important diseases of infancy and childhood are especially
emphasized. Drs. Sumners and Friedenwald.

Fourth Year. During this year a weekly clinical lecture is
given where the character of disease is fully demonstrated and
the students are afforded an opportunity for personal exam-
ination of all cases. In addition, ward classes are held weekly
where bedside instruction is given. A section of the class also
works daily at the Babies’ and Children’s Clinic. This clinic,
which is under the direction of Dr. Summers, has a yearly at-
tendance of more than twenty thousand, and offers an excel-
ent opportunity for study and observation of a wide variety
of cases under competent instructors.

Instruction is also given on the Children’s Ward at the
Mercy Hospital.
NEUROLOGY

Irving J. Spear, M.D.--------------------------Professor of Neurology
Andrew C. Gillis, A.M., M.D., LL.D.----------Professor of Neurology
G. M. Settle, A.B., M.D.--------------------------Associate Professor on Neurology and Clinical Medicine
Benjamin Pushkin, M.D.--------------------------Associate Professor of Clinical Neurology
Milford Levy, M.D.-----------------------------Associate in Neurology
Robert Hodes, M.D.-----------------------------Assistant in Neurology

Third Year. Lectures and recitations one hour each week to the entire class. Instruction in clinical neurology two hours a week at the City Hospital to small groups. By means of didactic lectures and clinical conferences, there are considered the commoner types of diseases of the nervous system, the methods of neurological examination, and the relationship of signs and symptoms to pathological conditions. The material at University and Mercy Hospitals is available.

Fourth Year. Clinical Conference, one hour each week to the entire class. This subject is taught at the University and Mercy Hospitals. All cases presented at these clinics are carefully examined; complete written records are made by the students who demonstrate the cases before the class. The cases are usually assigned one or two weeks before they are presented, and each student in the class must prepare one or more cases during the year.

Ward Class Instruction. In small sections at the University and Mercy Hospitals. In these classes the students come in close personal contact with the cases in the wards under the supervision of the instructor.

Dispensary Instruction. Small sections are instructed in the dispensaries of the University and Mercy Hospitals four afternoons each week. In this way students are brought into contact with nervous diseases in their earlier as well as later manifestations.

HYGIENE AND PREVENTIVE MEDICINE

C. Hampson Jones, M.D., C.M.,
Professor of Hygiene and Public Health
V. L. Elliott, M.D.---------------------------Instructor in Hygiene and Public Health
M. G. Tull, M.D.-----------------------------Instructor in Hygiene and Public Health
THIRD YEAR. Two lectures a week throughout the session. The lectures will encompass the fundamental subjects: Air, Water, Soil, Food, Disposal of Wastes, Communicable Diseases, State and Federal Public Health Laws, and Industrial Diseases. Small groups visit the Sydenham Hospital weekly and are given practical instruction in the diagnosis, treatment and isolation of the contagious diseases.

FOURTH YEAR. Small groups visit the City Board of Health Laboratories for practical instruction in the laboratory field and administrative aspects of public health work.

MEDICAL JURISPRUDENCE

H. J. Maldeis, M.D.________Associate Professor of Medical Jurisprudence
   Baltimore City Post Mortem Physician

FOURTH YEAR. One hour each week for one semester.

Inasmuch as Medical Jurisprudence teaches the application of every branch of medical knowledge to the needs of the law, civil or criminal, this course embraces the following: Proceedings in criminal and civil prosecution; medical evidence and testimony; identity in its general relations; sexual abnormalities; personal identity; impotence and sterility; rape; criminal abortions; signs of death; wounds in their medico-legal relations; death, natural and homicidal; malpractice; insanity and medico-legal autopsies.

DEPARTMENT OF SURGERY

Arthur M. Shipley, Sc.D., M.D.__________Professor of Surgery
Alexius McGlannan, A.M., M.D.__________Professor of Surgery
Joseph H. Branham, M.D.__________Professor of Clinical Surgery
Nathan Winslow, A.M., M.D.__________Clinical Professor of Surgery
Page Edmunds, M.D.__________Clinical Professor of Industrial Surgery
Walter D. Wise, M.D.__________Clinical Professor of Surgery
Joseph W. Holland, M.D.__________Clinical Professor of Surgery
Frank S. Lynn, M.D.__________Clinical Professor of Surgery
Elliot H. Hutchins, A.M., M.D.__________Clinical Professor of Surgery
Thomas R. Chambers, A.M., M.D.______Associate Professor of Surgery
R. W. Locher, M.D.,
   Associate Professor of Operative and Clinical Surgery
Charles Reid Edwards, M.D.__________Associate Professor of Surgery
A. M. Evans, M.D.__________Associate Professor of Surgery
F. L. Jennings, M.D. -------------- Associate Professor of Surgery
E. H. Hayward, M.D. -------------- Associate in Surgery
E. S. Johnson, M.D. -------------- Associate in Surgery
C. A. Reifschneider, M.D. -------- Associate in Surgery
M. J. Hanna, M.D. -------------- Associate in Surgery
H. M. Foster, M.D. -------------- Instructor in Surgery
F. X. Kearney, M.D. -------------- Instructor in Surgery
Charles W. Maxson, M.D. -------- Instructor in Surgery
C. F. Horine, M.D. -------------- Instructor in Surgery
Monte Edwards, M.D. -------------- Instructor in Surgery
D. J. Passagno, M.D. -------------- Instructor in Surgery
Dwight Mohr, M.D. -------------- Assistant in Surgery
Wm. R. Geraghty, M.D. ------------ Assistant in Surgery
S. Demarco, M.D. -------------- Assistant in Surgery
Clyde Marvel, M.D. -------------- Assistant in Surgery
I. O. Ridgely, M.D. -------------- Assistant in Surgery
H. M. McElwain, M.D. ------------ Assistant in Surgery
J. G. Onnen, M.D. -------------- Assistant in Surgery
W. R. Johnson, M.D. -------------- Assistant in Surgery
James Brown, M.D. -------------- Assistant in Surgery
E. W. Hanrahan, A.B., M.D.------ Assistant in Surgery
A. V. Buchness, M.D. ------------ Assistant in Surgery
Karl J. Steinmuller, A.B., M.D.---- Assistant in Surgery
H. F. Bongardt, M.D. -------------- Assistant in Surgery

The teaching is done in the Anatomical Laboratory and the dispensaries, wards, clinical laboratories and operating rooms of the University and Mercy Hospitals, and in the wards and dead-house of the Baltimore City Hospital.

Instruction is given by means of lectures, recitations, dispensary work, bedside instruction, ward classes, and clinics. The work begins in the second year, and continues throughout the third and fourth years.

**Second Year**

*Topographic and Surgical Anatomy.* 10 hours a week for the first semester. The course is designed to bridge the gap between anatomy in the abstract, and clinical anatomy as applied to the study and practice of medicine and surgery.

The teaching is done in the anatomical laboratory, and students are required to demonstrate all points, outlines, and regions on the cadaver. Underlying regions are dissected when necessary to bring out outlines and relations of structures.

*Didactic Lectures.* Two hours a week for one semester, augmented by demonstrations with specimens, charts, and cross section. Dr. Holland.
Laboratory. Eight hours a week for the first semester. Dr. Hanna, assisted by Drs. Brady, Hundley, Warfield, Boyd and Mr. Clark.

Principles of Surgery. This course includes history taking, records of physical examinations and of operations and progress notes; the preparation of surgical dressings, suture materials and solutions. It includes inflammation, infections, ulcers, gangrene, fistulae and sinuses, hemorrhage and shock; the use of splints, bed frames, bone plates, bone grafts, etc., local anaesthesia and the preparation of patients for operations. Lectures and conferences. Two hours per week for one semester to the entire class. Dr. Edwards.

Third Year

General and Regional Surgery. Principles of surgery and general surgery, three hours a week throughout the year to the entire class, lectures, recitations and clinics. Dr. Shipley.

The class is divided into groups and receives instruction in history-taking, gross pathology, and surgical diagnosis—at the bedside and in the dead-house of the Baltimore City Hospital. Drs. Shipley, Lynn and Reifschneider.

Operative Surgery. Instruction is given in operative surgery upon the cavader and on dogs. The class is divided into sections, and each section is given practical and individual work under the supervision of the instructors. Dr. Frank S. Lynn, assisted by Drs. Nathan Winslow, Hayward, E. S. Johnson, Foster, Geraghty, Demarco, Horine, Pessagno, Onnen, Maxson, W. R. Johnson, Buchness, Hanrahan, Brown, Steinmueller and Segrist.

Fractures and Dislocations. Twenty-four hours to the entire class. This course consists of instruction in the various forms of fractures and dislocations and their treatment, and serves as a preparatory course for clinical work. Drs. Wise and Jennings.

Surgical Dispensary. Under supervision, the student takes the history, makes the physical examinations, attempts the diagnosis, and, as far as possible, carries out the treatment of the ambulatory surgical cases in the University and in the Mercy Hospitals. Mercy Hospital—Drs. Dwight Mohr, Ridg-
ley, Passagno, Bongardt and McElwain. University Hospital—
Drs. Holland, Lynn, Nathan Winslow, Edwards, E. S. Johnson
and Foster.

Fourth Year

Clinics. A weekly clinic will be given at the Mercy and at
the University Hospitals to one-half the class throughout the
year. As far as possible this is a diagnostic clinic. Mercy
Hospital—Dr. McGlannan. University Hospital—Dr. Shipley.

Surgical Pathology. A weekly exercise of one hour at Mercy
Hospital for one semester, at which specimens from the oper-
ating-room and museum are studied in the gross and micro-
scopically, in relation with the case history. Dr. McGlannan.

Industrial Surgery. Operative and post-operative treat-
ment of accident cases, with instructions as to the relationship
between the state, the employee, the employer, and the physi-
cian's duty to each. One hour a week to sections of the class
throughout the year. Dr. Edmunds.

Clinical Clerkship. The personal study of assigned hospital
patients, under supervision of the staffs of University and of
Mercy Hospitals, history-taken, and physical examination of
patients, laboratory examinations, attendance at operations and
observation of post-operative treatment.

Ward Classes. Ward class instruction in small groups will
consist of ward rounds, surgical diagnosis, treatment and the
after-care of operative cases. Mercy Hospital—Drs. McGlan-
nan, Wise, Elliot Hutchins, Evans and Jennings. University
Hospital—Drs. Shipley, Holland, Edmunds, Lynn and Edwards.

ANAESTHESIA

Second Year

Lectures on history of anaesthesia: Ancient and Modern.
General physiology of anaesthesia. Special physiology of each
anaesthetic agent. Different methods for producing general
anaesthesia, with a detailed description of each. The selection
of the anaesthetic and method best suited for its administra-
tion in particular cases. Difficulties and accidents during and
following anaesthesia, their causes, prevention and control.
Different methods of resuscitation. Blood pressure: Its sig-
nificance and bearing on selection of the anaesthetic and use as a guide during anaesthesia.

Eight hours to the entire class. Drs. S. Griffith Davis and W. G. Queen.

**Fourth Year**

During the clinics and operations before small groups, each student will be required to observe the administration of anaesthetics and to keep a chart recording blood pressure, pulse and respiration under the direction of an instructor.

**DERMATOLOGY**

T. Caspar Gilchrist, M.R.C.S., M.D.----------Professor of Dermatology
Melvin Rosenthal, M.D.----------Associate Professor of Dermatology
Harry M. Robinson, M.D.----------Associate Professor in Dermatology
John R. Abercrombie, A.B., M.D.----------Associate in Dermatology
A. C. Monninger, M.D.----------Assistant in Dermatology

Clinical conferences one hour each week to entire class. This course will consist of demonstrations of the common diseases of the skin. Dr. Gilchrist.

Dispensary instruction, University Hospital, Mondays, Wednesdays and Fridays in the diagnosis and treatment of the common skin diseases. Drs. Abercrombie, Robinson and Gately. Dispensary instruction, Mercy Hospital. Dr. Rosenthal.

**ORTHOPEDIC SURGERY**

R. Tunstall Taylor, A.B., M.D.----------Professor of Orthopaedic Surgery
Albertus Cotton, A.M., M.D.----------Professor of Orthopaedic Surgery
Compton Riely, M.D.----------Clinical Professor of Orthopaedic Surgery
Harry L. Rogers, M.D.----------Associate in Orthopaedic Surgery
Clement R. Monroe, M.D.----------Associate in Orthopaedic Surgery
Clifford Lee Wilmoth, A.B., M.D.----------Associate in Orthopaedic Surgery
Harry L. Wheeler, M.D.----------Instructor in Orthopaedic Surgery
Moses Gellman, M.D.----------Instructor in Orthopaedic Surgery
Arnold Lawson Jensen, B.Sc., M.D.----------Instructor in Orthopaedic Surgery

In this course didactic, clinical, bedside and out-patient instruction will be given. This instruction is provided in the University Hospital Amphitheatre, Mercy Hospital and Dispensary and Kernan Hospital and Industrial School for Crippled Children at "Radnor Park" and in the Dispensary of same at 620 West Lombard Street.
Lectures or clinics will be held at each of the hospitals named in town once a week. In addition, a weekly bedside clinic will be held for small sections of the class at "Radnor Park" and Mercy Hospital. Sectional quizzes are held at stated intervals with mid-year and final examinations.

The course will cover instruction in the special methods of examination, pathology, diagnosis and treatment in this specialty. X-ray interpretation will be stressed. The lectures will cover:


A brief outline and demonstration will also be given of the apparatus employed in Physiotherapy in using Actinotherapy, Thermotherapy, Electrotherapy, Hydrotherapy, Massage and Corrective Gymnastics in treating bone, joint and muscular disabilities.

**ROENTGENOLOGY AND RADIOTHERAPY**

**Henry J. Walton, M.D.** Professor of Roentgenology
**Albertus Cotton, M.D.** Professor of Roentgenology
**Charles Reid Edwards, A.B., M.D.** Associate in Radio Therapy
**Howard E. Ashbury, M.D.** Associate in Roentgenology

Instruction is given in the history, physics, and practical application of Roentgen Rays and Radium. Especial effort is made to demonstrate the use of the Roentgen Ray in diagnosis by instruction in both fluroscopy and plate reading. The sections of the fourth-year class receive two hours' instruction each week.

The student is also taught the practical application of Radium and Roentgen Rays as therapeutic agents. In the X-Ray laboratory and in the hospital wards students are shown the use of these agents in the treatment of disease.
DISEASES OF THE THROAT AND NOSE

EDW. A. LOOPER, M.D.—Clinical Prof. of Diseases of the Throat and Nose
W. F. ZINN, M.D.—Associate Professor of Diseases of Throat and Nose
FRANK B. ANDERSON, M.D.—Associate in Diseases of the Throat and Nose
R. F. MCKENZIE, M.D.—Instructor in Diseases of the Throat and Nose

THIRD YEAR. Instruction to entire class is given in the common diseases of the nose and throat, attention being especially directed to infections of the accessory sinuses, the importance of focal infections in the etiology of general diseases and modern methods of diagnosis. Lectures are illustrated by lantern slides. Dr. Looper.

FOURTH YEAR. Dispensary instruction daily to small sections at the University and the Mercy Hospitals. The student is given opportunity to study, diagnose and treat practical cases under an instructor. Ward classes and clinical demonstrations are given one and one-half hours weekly throughout the session in the University and the Mercy Hospitals.

GENITO-URINARY DISEASES

ANTON G. RYTINA, A.B., M.D.—Professor of Genito-Urinary Diseases
W. H. TOULSON, A.B., M.Sc., M.D.,
Associate Professor of Genito-Urinary Diseases
HARRIS GOLDMAN, M.D.—Associate in Genito-Urinary Diseases
AUSTIN H. WOOD, M.D.—Associate in Genito-Urinary Diseases
A. J. GILLIS, M.D.—Associate in Genito-Urinary Diseases
L. K. FARGO, M.D.—Instructor in Genito-Urinary Diseases
MONTE EDWARDS, M.D.—Instructor in Genito-Urinary Diseases
H. C. KNAPP, M.D.—Assistant in Genito-Urinary Diseases
H. T. COLLENBERG, M.D.—Assistant in Genito-Urinary Diseases
J. H. COLLISON, M.D.—Assistant in Genito-Urinary Diseases
L. J. MILLAN, M.D.—Assistant in Genito-Urinary Diseases
WILLIAM EMRICH, M.D.—Assistant in Genito-Urinary Diseases
T. WILLIS GUYTON, M.D.—Assistant in Genito-Urinary Diseases
K. D. LEGGE, M.D.—Assistant in Genito-Urinary Diseases

THIRD YEAR. 8 hours to the entire class. This course is a didactic one in the principles of Genito-Urinary Surgery. Dr. Toulson.
Fourth Year. The course includes urethroscopy, cystoscopy, ureter catheterization, renal functional tests, urography, urine cultures, etc. The teaching consists of clinics in the amphitheater, ward rounds, and attendance by members of the Senior class upon our patients in the dispensary. The dispensary classes are carried on both at the Mercy and the University Hospital dispensaries. In the latter institution the Maryland State Department of Health conducts a venereal-disease clinic, in which 20,133 visits were paid last year. Every variety of venereal disease is here encountered, and this rich wealth of material is available for teaching purposes. In addition to this, a cystoscopic clinic is conducted in another part of the dispensary, where the students are given practical instruction in the modern diagnostic methods.

DISEASES OF THE COLON AND RECTUM

G. Milton Linthicum, A.M., M.D.,
Professor of Diseases of Rectum and Colon
Charles F. Blake, M.D.—Professor of Diseases of Rectum and Colon
J. Dawson Reeder, M.D.,
Associate Professor of Diseases of Rectum and Colon
L. J. Rosenthal, M.D.,
Associate Professor of Diseases of Rectum and Colon
Monte Edwards, M.D.—Instructor in Diseases of Rectum and Colon

Third Year. 6 hours to the entire class. This course is for instruction in the diseases of the colon, sigmoid flexure, rectum and anus, and will cover the essential features of the anatomy and physiology of the large intestine as well as the various diseases to which it is subject. Dr. Linthicum.

The class is divided into sections for clinical instruction in the Baltimore City Hospital. Dr. Linthicum.

Fourth Year. Ward and Dispensary instruction is given in the University and Mercy Hospitals, where different phases of the various diseases are taught by direct observation and examination. The use of the proctoscope and sigmoidoscope and examination of the rectum and sigmoid is made familiar to each student. Mercy Hospital—Drs. Blake and Rosenthal. University Hospital—Drs. Linthicum and Reeder.
BRONCHOSCOPY AND ESOPHAGOSCOPY

WAITMAN F. ZINN, M.D.
'Associate Professor of Diseases of Throat and Nose

1. Clinical Lectures and Demonstrations once weekly at University and Mercy Hospitals.

Etiology, symptomatology, diagnosis and prophylaxis of foreign bodies in the air and food passages. Bronchoscopy as an aid in the diagnosis and treatment of diseases of the lungs. Bronchoscopy as an aid to the surgeon. Diseases of the trachea. Diseases of the esophagus. All the phases of these subjects that the general practitioner should know are demonstrated clinically.

DEPARTMENT OF OBSTETRICS

J. M. H. ROWLAND, M.D.---------------------Professor of Obstetrics
GEORGE W. DOBBIN, M.D.---------------------Professor of Obstetrics
L. H. DOUGLASS, M.D.------------------------Professor of Clinical Obstetrics
BERNARD PURCELL MUSE, M.D.----------------Professor of Clinical Obstetrics
CHARLES E. BRACK, M.D.----------------------Clinical Professor of Obstetrics
J. McF. BERGLAND, M.D.----------------------Associate Professor of Obstetrics
E. P. SMITH, M.D.-----------------------------Associate in Obstetrics
EMIL NOVAK, M.D.-----------------------------Associate in Obstetrics
J. G. M. REESE, M.D.--------------------------Instructor in Obstetrics
DUDLEY PLEASANTS BOWE, M.D.----------------Instructor in Obstetrics
J. G. MURRAY, JR., A.B., M.D.----------------Instructor in Obstetrics
M. A. NOVEY, A.B., M.D.----------------------Instructor in Obstetrics
MAURICE LAZENBY, M.D.-----------------------Instructor in Obstetrics
J. J. ERWIN, M.D.-----------------------------Instructor in Obstetrics
ISADORE H. SIEGEL, A.B., M.D.---------------Instructor in Obstetrics

THIRD YEAR. Three lectures and recitations each week by Drs. Dobbin, Bergland, Novak, Murray, Douglass and Rowland to entire class. Manikin Work, Drs. Brack, Smith and Erwin to sections of class at Mercy Hospital, and Drs. Douglass, Reese, Bowe, Novak and Rowland at University Hospital.

FOURTH YEAR. Clinical Conference. One hour each week. Drs. Rowland, Douglass, Murray and Lazenby.

Ward Classes. Six hours per week for five weeks to sections of class at University Hospital. Drs. Douglass, Reese, Bowe, Novak and Rowland at University Hospital.
DEPARTMENT OF GYNECOLOGY

WILLIAM S. GARDNER, M.D.---------------------Professor of Gynecology
J. MASON HUNDLEY, M.D.---------------------Professor of Clinical Gynecology
HUGH BRENT, M.D.-----------------------------Associate Professor of Gynecology
ABRAHAM SAMUELS, M.D.----------------------Associate Professor of Gynecology
GEO. A. STRAUSS, M.D.--------------------------Associate in Gynecology
R. G. WILLS, M.D.-----------------------------Associate in Gynecology
T. K. GALVIN, M.D.-----------------------------Associate in Gynecology
J. M. HUNDLEY, JR., M.D.-----------------------Associate in Gynecology
LEO. BRADY, M.D.-----------------------------Associate in Gynecology

THIRD YEAR. Didactic Work. A course of thirty lectures and recitations.

Clinical Work. Six hours weekly for one trimester. In this course the student writes the clinical history of each patient in the ward, makes a general physical examination, including the blood and urine, before the patient is brought before the class. One student under supervision gives the anaesthetic, a pelvic examination is made by six students, and any operation required is then done before a section of the class small enough to see clearly what is being done and how it is done. On a subsequent day the whole group examine microscopically sections prepared from material removed from patients that have been before them.

DEPARTMENT OF OPHTHALMOLOGY AND OTOTOLOGY

HARRY FRIEDENWALD, A.B., M.D.----------Prof. of Ophthalmology and Otology
J. W. DOWNEY, M.D.-----------------------Clinical Professor of Otology
M. RANDOLPH ZAHN, M.D.-------------------Clinical Professor of Ophthalmology
H. K. FLECK, M.D.--------------------------Associate in Ophthalmology
JOSEPH I. KEMLER, M.D.---------------------Associate in Ophthalmology

THIRD YEAR. First semester, Course in Diseases of the Eye. September 28th to January 23rd. Dr. Randolph Kahn.

Course in Diseases of the Ear, second semester. Dr. Downey.

Practical Course in Ophthalmoscopy, once weekly, in sections. Dr. Kemler.

FOURTH YEAR. Clinics in Diseases of the Eye and Ear, weekly. Drs. Harry Friedenwald and Downey.
Ward Studies of ocular and aural lesions associated with general medical diseases, once weekly in sections. Dr. Friedenwald.

Dispensary Instruction, daily to small sections. Drs. Downey, Kahn, Fleck and Kemler.

The courses in Ophthalmology and Otology are designed to familiarize the students with the common diseases of the eye and ear, their recognition and treatment, with a view to meet the needs of the general practitioner. Special emphasis is laid upon the relation between diseases of the eye and the ear and systematic diseases and diseases of other organs.

THE HISTORY OF MEDICINE

John Rathbone Oliver, A.B., M.D., Ph.D.

Professor of the History of Medicine

The general lectures on the History of Medicine which were given last year and which ended with Vesalius and the revival of learning will be continued at dates and hours to be announced later. The lectures this year will cover the 17th, 18th and part of the 19th Century. They will be illustrated, as heretofore, by lantern slides made especially for the lectures and by the showing of all important books connected with the subjects mentioned by the Lecturer. It is also proposed to form, if possible, a small group of students who will be willing to give an hour a week to a deeper study of some period in the History of Medicine, probably the Middle Ages. It is hoped that this group, if formed, may be able to meet in one of the rooms of the Medical and Chirurgical Library, where the members of the group can be brought into immediate contact with all the literature available for the period to be studied. This group will, therefore, constitute a sort of pre-seminary and will be open only to men who have attended the lectures already given. The time and the place of meeting of this group will be determined upon after the group itself has been formed.
# FIRST YEAR SCHEDULE—First Semester, 1927-1928

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<th>Hours</th>
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<tr>
<td>A. M. 9 to 10</td>
<td>Biological Chemistry C. H.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Biological Chemistry C. H.</td>
<td>Anatomy</td>
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<td>10 to 11</td>
<td>Laboratory</td>
<td>Histology &amp; Embryology</td>
<td>Histology &amp; Embryology</td>
<td>P. &amp; S. 32</td>
<td>Laboratory</td>
<td>Laboratory &amp; C. H.</td>
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<tr>
<td>11 to 12.00</td>
<td>Biological Chemistry Section B</td>
<td>P. &amp; S. 32</td>
<td>P. &amp; S. 32</td>
<td>Lunch and Transfer</td>
<td>Laboratory</td>
<td>Section A</td>
</tr>
<tr>
<td>12 M. to 1 P. M.</td>
<td>Lunch and Transfer</td>
<td>Lunch and Transfer</td>
<td>Biological Chemistry A. H.</td>
<td>Anatomy</td>
<td>C. H., A. H., &amp; Laboratory</td>
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<tr>
<td>1 to 1.30</td>
<td>C. H., A. H., &amp; Laboratory</td>
<td>C. H., A. H., &amp; Laboratory</td>
<td>C. H., A. H., &amp; Laboratory</td>
<td>C. H., A. H., &amp; Laboratory</td>
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<td>4.30 to 5</td>
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**FIRST YEAR SCHEDULE—Second Semester, 1927-1928**

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<tr>
<td>A. M. 8.30 to 9.30</td>
<td>Biological Chemistry C. H.</td>
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<td>Laboratory</td>
<td>Laboratory</td>
<td>Biological Chemistry C. H.</td>
<td>Anatomy</td>
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<tr>
<td>9.30 to 10.30</td>
<td>Laboratory</td>
<td>Histology &amp; Embryology</td>
<td>Histology &amp; Embryology</td>
<td>P. &amp; S. 32</td>
<td>Laboratory</td>
<td>Laboratory &amp; C. H.</td>
</tr>
<tr>
<td>10.30 to 11.30</td>
<td>Biological Chemistry Section B</td>
<td>P. &amp; S. 32</td>
<td>P. &amp; S. 32</td>
<td>Transfer</td>
<td>Laboratory</td>
<td>Section A</td>
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<tr>
<td>11.30 to 12.30 P. M.</td>
<td>Physiology P. &amp; S. 34</td>
<td>Lunch and Transfer</td>
<td>Lunch and Transfer</td>
<td>Lunch</td>
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<tr>
<td>12.30 to 1</td>
<td>Lunch</td>
<td>Lunch and Transfer</td>
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<td>1.30 to 2</td>
<td>*Anatomy</td>
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<td>C. H., A. H., &amp; Laboratory</td>
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<tr>
<td>2 to 4.30</td>
<td>C. H., A. H., &amp; Laboratory</td>
<td>A. H., &amp; Laboratory</td>
<td>C. H., A. H., &amp; Laboratory</td>
<td>C. H., A. H., &amp; Laboratory</td>
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A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.
C. H.—Chemical Hall—Lower Hall, N. E. Cor. Lombard and Greene Streets.
Anatomy Laboratory—Third Floor, Gray Laboratory, Lombard and Greene Streets.
Biological Chemistry Laboratory—Third Floor, Dental Building, Lombard and Greene Streets.
* Neural Anatomy after April 9, 1928.
### SECOND YEAR SCHEDULE—First Semester, 1927-1928

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<th>Hours</th>
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<td>A. M.</td>
<td>Biological Chemistry C. H.</td>
<td>Physiology A. H.</td>
<td>Physiology A. H.</td>
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<td>10 to 11</td>
<td>Physical Chemistry C. H.</td>
<td>Biological Chemistry Section B</td>
<td>Biological Chemistry A. H.</td>
<td>Physical Chemistry B</td>
<td>Pharmacology C. H.</td>
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<tr>
<td>11 to 12</td>
<td>Pathology C. H.</td>
<td>Physiology Section A</td>
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<td>Pathology C. H.</td>
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<td>12 M. to</td>
<td>Lunch and Transfer</td>
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<td>Surgery C. H.</td>
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<td>12.30 P. M.</td>
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<td>1.30 to 2.30</td>
<td>Immunology &amp; Serology</td>
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<td>2.30 to 3.30</td>
<td>Pharmacology Section A</td>
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<td>P. &amp; S. 33</td>
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<td>3.30 to 4</td>
<td>Laboratory</td>
<td>Laboratory &amp; P. &amp; S.</td>
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<td>4 to 5.30</td>
<td>Surgical Anatomy</td>
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### SECOND YEAR SCHEDULE—Second Semester, 1927-1928

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<td>A. M.</td>
<td>Biological Chemistry C. H.</td>
<td>Laboratory</td>
<td>Physiology A. H.</td>
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<tr>
<td>8.30 to 9.30</td>
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<td>9.30 to 10.30</td>
<td>Physical Chemistry C. H.</td>
<td>Biological Chemistry Section B</td>
<td>Biological Chemistry A. H.</td>
<td>Physical Chemistry B</td>
<td>Pharmacology C. H.</td>
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<tr>
<td>10.30 to 11.30</td>
<td>Pathology C. H.</td>
<td>Physiology Section A</td>
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<td>Pathology C. H.</td>
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<td>11.30 to 12.00</td>
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<td>P. M.</td>
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<td>1 to 2</td>
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<td>2 to 3</td>
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<td>Physical Diagnosis</td>
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<td>Pharmacology Section A</td>
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<td>Univ. Hosp. Disp.</td>
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<td>4 to 5</td>
<td>Pharmacology Section A</td>
<td>Physiology Section B</td>
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A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.  
C. H.—Chemical Hall—Lower Hall, N. E. Cor. Lombard and Greene Streets.  
Laboratories: Biological Chemistry—Third Floor, Dental Building, Lombard and Greene Streets.  
Pathology—Third Floor, Dental Building, Lombard and Greene Streets.  
Pharmacology—Second Floor, Gray Laboratory, Lombard and Greene Streets.  
Physiology—First Floor, Gray Laboratory, Lombard and Greene Streets.  
Amp.—Amphitheatre—University Hospital, S. W. Cor. Lombard and Greene Streets.  
Rooms indicated on Second and Fourth Floors.
### SCHEDULE

#### THIRD YEAR SCHEDULE

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<th>Hours</th>
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<td>10.30 to</td>
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<td>1 P. M.</td>
<td>Operative Surgery</td>
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<td>Lunch and Transfer</td>
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<tr>
<td>1 to 2</td>
<td>Medical Clinic Amp.</td>
<td>Surgery C. H.</td>
<td>Neurology P. &amp; S. 33</td>
<td>Gynecology P. &amp; S. 34</td>
<td>1.15 to 4.15</td>
<td>Transfer</td>
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<td>2.15 to</td>
<td>Pathology Laboratory</td>
<td>Pathology Laboratory</td>
<td>2.30-4.30 Section A</td>
<td>2 to 3.15 Eye</td>
<td>Clinical Pathology</td>
<td>2-4</td>
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<td>3.15</td>
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<td>Clinical Medicine</td>
<td>P. &amp; S. 34</td>
<td>Laboratory P. &amp; S. 32</td>
<td>Section B</td>
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<tr>
<td>3.15 to</td>
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<td>Surgery Gross</td>
<td>Clinical Pathology</td>
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<td>Medicine</td>
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<td>Pathology at Bay View</td>
<td>P. &amp; S. 34</td>
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<td>Gross Pathology</td>
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<td>Pediatrics A. H.</td>
<td>* Obstetrics C. H.</td>
<td>2.15-4.15 Section B</td>
<td>Preventive Medicine</td>
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<td>to 5.15</td>
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<td>** Ear C. H.</td>
<td>Group Work Ophthalmos-</td>
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<td>Practical Obstetrics</td>
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<td></td>
<td>Univ. Hosp. P. &amp; S. 34</td>
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</tbody>
</table>

From 10.30 A. M. to 1.00 P. M. the class is divided into two sections, one section reporting at Calvert and Saratoga Streets, the other at Lombard and Greene Streets.
C. H.—Chemical Hall—N. E. Cor. Lombard and Greene Streets.
A. H.—Anatomical Hall—N. E. Cor. Lombard and Greene Streets.
Amp.—Amphitheatre—University Hospital, S. W. Cor. Lombard and Greene Streets.
At the beginning of the second semester Section "A" at Bay View on Saturdays, 2-4 P. M., and University Hospital on Wednesdays, 2.15-4.15 P. M.; Section "B" at Bay View on Wednesdays, 2.30-4.30 P. M.
* First Semester.
** Second Semester.
<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Medicine</td>
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<tr>
<td></td>
<td>Surgery</td>
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<tr>
<td></td>
<td>Obstetrics</td>
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<td>Obstetrics</td>
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<tr>
<td></td>
<td>Orthopaedic Surgery</td>
<td>Medical Clinic</td>
<td>Clinical Pathological Conference</td>
<td>Surgical Clinic</td>
<td>Medical Clinic</td>
<td>Pediatrics Clinic</td>
</tr>
<tr>
<td></td>
<td>P. &amp; S. Sec. 51</td>
<td>P. &amp; S. Sec. 40</td>
<td>P. &amp; S. Sec. 33</td>
<td>P. &amp; S. Sec. 51</td>
<td>P. &amp; S. Sec. 51</td>
<td>P. &amp; S. Sec. 33</td>
</tr>
<tr>
<td>P.M.</td>
<td>Dispensary Lunch and Transfer</td>
<td>Dispensary Lunch and-transfer</td>
<td>Dispensary Lunch and-transfer</td>
<td>Dispensary Lunch and-transfer</td>
<td>Dispensary Lunch and-transfer</td>
<td>Dispensary Lunch and-transfer</td>
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<tr>
<td></td>
<td>Dermatology Clinic</td>
<td>Neurology Clinic</td>
<td>Eye and Ear Clinic</td>
<td>Obstetrical Clinic</td>
<td>Gastro-Enterology Clinic</td>
<td>Genito-Urinary Clinic</td>
</tr>
<tr>
<td></td>
<td>(Full Class at Univ. Hosp.) Amp.</td>
<td>(Univ. Sec. Amp. P. &amp; S. Sec. 33)</td>
<td>(Univ. Sec. Amp. P. &amp; S. Sec. 33)</td>
<td>(Full Class at Univ. Hosp.) Amp.</td>
<td>(Full Class at Univ. Hosp.) Amp.</td>
<td>(Full Class at Univ. Hosp.) Amp.</td>
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<tr>
<td>3.30 to 5.00</td>
<td>Ward Classes</td>
<td>Ward Classes</td>
<td>P. &amp; S. Sec. Ward Classes</td>
<td>Ward Classes</td>
<td>Ward Classes</td>
<td>Ward Classes</td>
</tr>
<tr>
<td></td>
<td>Medicine</td>
<td>Therapeutics</td>
<td>Medicine</td>
<td>Medicine</td>
<td>Roentgenology Preventive Medicine</td>
<td>Medicine</td>
</tr>
<tr>
<td></td>
<td>Urology</td>
<td>Proctology</td>
<td>Urology</td>
<td>Urology</td>
<td>Eye and Ear</td>
<td>Urology</td>
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<tr>
<td></td>
<td>Eye and Ear</td>
<td>Radiotherapy</td>
<td>Eye and Ear</td>
<td>Eye and Ear</td>
<td>Eye and Ear</td>
<td>Eye and Ear</td>
</tr>
<tr>
<td>3.30 to 5.00</td>
<td>Univ. Sec. Ward Classes</td>
<td>Univ. Sec. Ward Classes</td>
<td>5 to 6 P. M. March, April and May</td>
<td>History of Medicine C.H.</td>
<td>Ward Classes</td>
<td>Orthopaedic Surgery</td>
</tr>
<tr>
<td></td>
<td>Medicine</td>
<td>Medicine</td>
<td>Ward Classes</td>
<td>Ward Classes</td>
<td>Medicine</td>
<td>Psychiatry</td>
</tr>
<tr>
<td></td>
<td>Urology</td>
<td>Roentgenology</td>
<td>Medicine</td>
<td>Medicine</td>
<td>Nose &amp; Throat</td>
<td>Neurology</td>
</tr>
<tr>
<td></td>
<td>Eye and Ear</td>
<td>Eye and Ear</td>
<td>Eye and Ear</td>
<td>Eye and Ear</td>
<td>Physical Therapeutics</td>
<td>Psychiatry</td>
</tr>
</tbody>
</table>

The Senior Class is divided into two sections, which report, one at Lombard and Greene Streets, the other at Calvert and Saratoga Streets, for one semester each, then rotate.

Each section of the class is divided into three groups—Medical, Surgical, and Special. These groups will rotate on the following dates:

**FIRST SEMESTER**

1st period, Sept. 26—Oct. 29.
2nd period, Oct. 31—Dec. 3.

**SECOND SEMESTER**

1st period, Jan. 23—Feb. 25.
2nd period, Feb. 27—April 8.
3rd period, April 10—May 13.

C. H.—Chemical Hall—N. E. Cor. Lombard and Greene Streets.
Amp.—Amphitheatre—University Hospital.
P. & S., 35, 34—Second Floor, Calvert and Saratoga Streets.
P. & S., 40, 51—Fourth Floor, Calvert and Saratoga Streets.
REQUIREMENTS FOR MATRICULATION

Admission to the course in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland. This certificate is obtained from the Registrar on the basis of satisfactory educational credentials, and is essential for admission to any class.

The minimum requirements for the issuance of the Medical Student Certificate are:

(a) The completion of a standard four-year high school course or the equivalent, and, in addition, at least

(b) Two years or sixty semester hours of college credits, including chemistry, biology, physics and English.

Women are admitted to the School of Medicine of this University.

(A) HIGH SCHOOL REQUIREMENTS

Graduation from an accredited high or preparatory school, after pursuing a four-year course based upon an eight-year elementary course, or its full equivalent as demonstrated by entrance examinations.

At least fifteen units must be offered‡.

SCHEDULE OF SUBJECTS REQUIRED OR ACCEPTED FOR ENTRANCE TO THE PREMEDICAL COLLEGE COURSE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units* Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROUP I, ENGLISH—(I—II—III—IV)</strong>—</td>
<td></td>
</tr>
<tr>
<td>Literature and Composition</td>
<td>3 3</td>
</tr>
<tr>
<td><strong>GROUP II, FOREIGN LANGUAGES—</strong></td>
<td></td>
</tr>
<tr>
<td>Latin</td>
<td>2-4</td>
</tr>
<tr>
<td>Greek</td>
<td>2-3</td>
</tr>
<tr>
<td>French or German</td>
<td>2-4</td>
</tr>
<tr>
<td>Other foreign languages</td>
<td>2-4</td>
</tr>
<tr>
<td><strong>GROUP III, MATHEMATICS—</strong></td>
<td></td>
</tr>
<tr>
<td>Elementary algebra</td>
<td>1 1</td>
</tr>
<tr>
<td>Advanced algebra</td>
<td>½-1</td>
</tr>
<tr>
<td>Plane geometry</td>
<td>1 1</td>
</tr>
<tr>
<td>Solid geometry</td>
<td>½</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>½</td>
</tr>
</tbody>
</table>
### REQUIREMENTS FOR MATRICULATION

**Group IV, History—**
- Ancient history ........................... 1
- Medieval and modern history .......... 1
- English history .......................... 1
- American history ........................ ½-1
- Civil government ......................... ½-1

**Group V, Science—**
- Botany ..................................... ½-1
- Zoology .................................... ½-1
- Chemistry ................................ 1
- Physics ................................... 1
- Physiography .............................. ½-1
- Physiology ................................ ½-1
- Astronomy ................................ ½
- Geology ................................... ½-1

**Group VI, Miscellaneous—**
- Agriculture ................................ 1-2
- Bookkeeping ................................ ½-1
- Business law ................................ ½
- Commercial geography .................... ½-1
- Domestic science ......................... 1-2
- Drawing, freehand and mechanical ...... ½-2
- Economics and economic history .......... ½-1
- Manual training ......................... 1-2
- Music: Appreciation or harmony ........ 1-2

*A unit is the credit value of at least thirty-six weeks' work of four or five recitation periods per week, each recitation period to be not less than forty minutes. In other words, a unit represents a year's study in any subject in a secondary school constituting approximately a quarter of a full year's work. A satisfactory year's work in any subject cannot be accomplished under ordinary circumstances in less than 120 sixty-minute hours, or their equivalent.

†Both of the required units of foreign language must be of the same language, but the two units may be presented in any one of the languages specified.

‡Of the fifteen units of high school work, nine units are required, as indicated in the foregoing schedule; the remainder may be made up from any of the other subjects in the schedule, provided that at least eleven units must be offered in Group I-V.

**(B) DETAILS OF THE COLLEGE REQUIREMENT**

a. The preliminary college course shall extend through two college sessions of at least thirty-two weeks each of actual instruction, including final examinations.

b. In excellence of teaching and in content, the work of this preliminary college course shall be equal to the work done in
the freshman and sophomore years in standard colleges and universities.

c. This preliminary college course shall include courses in physics, chemistry, biology and English, each course to embrace at least six, eight or twelve hours of work in each subject, as shown in the schedule following:

**SCHEDULE OF SUBJECTS OF THE TWO-YEAR PREMEDICAL COLLEGE COURSE**

*Sixty Semester Hours Required*

<table>
<thead>
<tr>
<th>Required Courses:</th>
<th>Semester Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry (a)</td>
<td>12</td>
</tr>
<tr>
<td>Physics (b)</td>
<td>8</td>
</tr>
<tr>
<td>Biology (c)</td>
<td>8</td>
</tr>
<tr>
<td>English Composition and Literature (d)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Courses Strongly Urged:**
- A modern foreign language
- Comparative vertebrate anatomy
- Psychology
- Social science

A semester hour is the credit value of sixteen weeks' work consisting of one lecture or recitation period per week, each period to be of not less than fifty minutes' duration net, at least two hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

(a) **Chemistry.** Twelve semester hours required of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work, and four semester hours in organic chemistry, including two semester hours of laboratory work. In the interpretation of this rule, work in qualitative analysis may be counted as general inorganic chemistry.

(b) **Physics.** Eight semester hours required, of which at least two must be laboratory work. This course presupposes a knowledge of plane trigonometry.

(c) **Biology.** Eight semester hours required, of which four must be laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone.

(d) **English Composition and Literature.** The usual introductory college course of six semester hours, or its equivalent, is required.
COMBINED COURSE IN ARTS AND MEDICINE

A combined seven years' curriculum is offered, leading to the degrees of Bachelor of Science and Doctor of Medicine. The first three years are taken in residence at College Park, and the last four years in Baltimore, at the School of Medicine. The premedical curriculum constitutes the first two years' work, and the third year follows a general outline of prescribed and elective courses approved by the chairman of the premedical committee and the dean of the College of Arts and Sciences.

Upon the successful completion of the first year in the School of Medicine, and upon the recommendation of the dean, the degree of Bachelor of Science may be conferred by the College of Arts and Sciences at College Park.

Students are urged to consider carefully the advantages this combination course offers over the minimum requirements of the two years. By completing three years the training may be gradually broadened by a wider latitude in the election of courses in the arts subjects.

POST-GRADUATE STUDENTS

Graduates in medicine desiring to take the work of the senior year without being candidates for the degree, and, therefore, without examination, may receive a certificate of attendance on completing the full course satisfactorily.

The requirements for graduates in medicine admitted to the fourth-year class as candidates for the degree of Doctor of Medicine are the same as those enforced against undergraduates admitted to advanced standing.

Summer Post-Graduate Courses—In the April number of the Bulletin detailed announcement will be made of the Postgraduate Summer Courses.

RULES

1. All students are required to take the spring examinations unless excused by the Dean. No student will be permitted to advance from a lower to a higher class with conditions.

2. Should a student be required to repeat any year in the course, he must pay regular fees.
3. A student failing in final examinations for graduation at the end of the fourth year will be required to repeat the entire course of the fourth year and to take examination in such other branches as may be required should he again be permitted to enter the school as a candidate for graduation.

4. The general fitness of a candidate for graduation will be taken into consideration by the Faculty as well as the results of his examination.

5. All students entering the School of Medicine of the University of Maryland are required to provide themselves with microscopes of a satisfactory type.

A standard microscope of either Bausch & Lomb, Leitz, Spencer Lens or Zeiss make, fitted with the following attachments, will fill the requirements:

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple nose piece</td>
<td>10 x and 5 x Oculars</td>
</tr>
<tr>
<td>Wide aperture stage</td>
<td>16mm. and 4mm. Objectives</td>
</tr>
<tr>
<td>Quick screw condenser (Abbe)</td>
<td>1.9mm. 1.25 N.A. Oil Immersion Lens</td>
</tr>
</tbody>
</table>

All the above rules, as well as the fees stated below, relate to the year ending June 2, 1928, only. The right is reserved to make changes in the curriculum, the requirements for graduation, the fees and in any of the regulations whenever the Faculty deem it expedient.

**FEES**

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculation fee (paid once)</td>
<td>$10.00</td>
</tr>
<tr>
<td>Tuition fee (each year) for residents of Maryland</td>
<td>300.00</td>
</tr>
<tr>
<td>Tuition fee (each year) for non-residents</td>
<td>400.00</td>
</tr>
<tr>
<td>Laboratory fee (each year)</td>
<td>20.00</td>
</tr>
<tr>
<td>Special and re-examination fee</td>
<td>5.00</td>
</tr>
<tr>
<td>Graduation fee</td>
<td>10.00</td>
</tr>
</tbody>
</table>

No fees are returnable.

The above fees apply to all students who matriculate in this institution in any class for the session beginning September 26th, 1927.

All students, after proper certification, are required to register at the Registrar's Office. The last date of registration is October 3rd, 1927.
Matriculation, laboratory and tuition fees for the first semester shall be paid at the time of registration, and for the second semester on or before February 4th, 1928.

Failure to meet these conditions will automatically debar the student from attendance on classes and other privileges of the University.

Students who fail to pay the tuition and other fees on or before the last day of registration for each term or semester, as stated in the catalogue, will be required to pay as an addition to the fees required the sum of Five ($5.00) Dollars, and if the payment so required shall not be paid before twenty (20) days from the beginning of said term or semester, the student's name shall be stricken from the rolls.

Students who are minors are considered to be resident students, if at the time of their registration their parents or guardians have been residents of this state for at least one year.

Adult students are considered to be resident students, if at the time of their first registration they have been residents of this state for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents or guardians move to and become legal residents of this state.
PRIZES AND SCHOLARSHIPS

FACULTY PRIZE

To stimulate study among the candidates for graduation, the Faculty offers a Gold Medal to the candidate who secures the highest average during the four years of his course. Certificates of Honor are awarded to the five candidates standing next highest.

DR. JOSE L. HIRSH MEMORIAL PRIZE

A prize of $50.00 is given each year by Mrs. David Myers as a memorial to the late Dr. Jose L. Hirsh, formerly Professor of Pathology in this School, to the student in the third year who has done the most satisfactory work in Pathology during his second and third years.

SCHOLARSHIPS

The Dr. Samuel Leon Frank Scholarship

(Value, $125.00)

This scholarship was established by Mrs. Bertha Rayner Frank as a memorial to the late Dr. Samuel Leon Frank, an alumnus of this University.

It is awarded by the Trustees of the Endowment Fund of the University each year upon nomination by the Medical Council "to a medical student of the University of Maryland, who in the judgment of said Faculty, is of good character and in need of pecuniary assistance to continue his medical course."

This scholarship is awarded to a second, third or fourth year student who has successfully completed one year's work in this school, and no student may hold such scholarship for more than two years.

The Charles M. Hitchcock Scholarships

(Value, $125.00 each)

Two scholarships were established from a bequest to the School of Medicine by the late Charles M. Hitchcock, M.D., an alumnus of the University.

These scholarships are awarded annually by the Trustees of the Endowment Fund of the University upon nomination by
the Medical Council to students who have meritoriously completed the work of at least the first year of the course in medicine, and who present to the Faculty satisfactory evidence of a good moral character and of inability to continue the course without pecuniary assistance.

The Randolph Winslow Scholarship
(Value, $125.00)

This scholarship was established by Prof. Randolph Winslow, M.D., LL.D.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination by the Medical Council, to a “needy student of the Senior, Junior, or Sophomore Class of the Medical School.”

“He must have maintained an average grade of 85% in all his work up to the time of awarding the scholarship.”

“He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance.”

The Dr. Leo Karlinsky Scholarship
(Value, $200.00)

This scholarship was established by Mrs. Ray Mintz Karlinsky as a memorial to her husband, the late Dr. Leo Karlinsky, an alumnus of this University.

The scholarship is awarded to a second-year student who at the end of the first year passes the best examination in Anatomy, Histology, Embryology and Bacteriology.

The University Scholarships

Two scholarships are awarded by the University. One to a student of the College of Arts and Sciences appointed by the President, to be held for only one year; the other, which entitles the holder to exemption from payment of the tuition fee of the year, is awarded annually by the Medical Council to a student of the Senior Class who presents to the Medical Council satisfactory evidence that he is of good moral character and is worthy of and in need of assistance to complete the course.
Frederica Gehrmann Scholarship

This scholarship was established by the bequest of the late Mrs. Frederica Gehrmann and entitles the holder to exemption from payment of tuition fees. The scholarship is awarded to a third-year student who at the end of the second year passes the best practical examination in Anatomy, Physiology, Biological Chemistry, Pharmacology, Pathology, Immunology and Serology.

The Clarence and Genevra Warfield Scholarships

(Valuation, $300.00 each)

There are five scholarships established by the Regents from the income of the fund bequeathed by the will of Dr. Clarence Warfield.

Terms and Conditions: These scholarships will be available to students of any of the classes of the course in medicine. Preference is given to students from the counties of the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners.

Any student receiving one of these scholarships must, after graduation and a year’s interneship, agree to undertake the practice of medicine, for a term of two years, in the county to which the student is accredited or in a county selected by the Council. In the event that a student is not able to comply with the condition requiring him to practice in the county to which he is accredited by the Council, the money advanced by the Regents shall be refunded. A bond in the amount of $1,200, the expense of which is borne by the Fund, must be filed by the student accepting one of these scholarships for faithful performance of the conditions imposed.

Israel and Cecilia E. Cohen Scholarship

(Value, $250.00)

This scholarship was established by Miss Eleanor S. Cohen in memory of her parents, Israel and Cecilia E. Cohen. Terms and conditions:

This scholarship will be available to students of any one of the classes of the course in Medicine; preference is given to students of the counties of the State of Maryland which the
Medical Council may from time to time determine to be most in need of medical practitioners. Any student receiving one of these scholarships must, after graduation and a year’s internship, agree to undertake the practice of medicine for a term of two years in the county to which the student is accredited, or in a county selected by the Council.

ANNUAL HOSPITAL APPOINTMENTS

On February 1st of each session the following annual appointments are made from among the graduates of the school:

TO THE UNIVERSITY HOSPITAL

Two Resident Surgeons
Two Resident Physicians
One Resident Gynecologist

Two Resident Obstetricians
Thirteen Junior Residents on a Rotating Service

A number of students are appointed each year, at the close of the session, as Clinical Assistants in the University Hospital for the summer months.

TO THE MERCY HOSPITAL

Chief Resident Physician
One Assistant Resident Physician
Chief Resident Surgeon
Five Assistant Resident Surgeons

One Resident Gynecologist
One Resident Obstetrician
Eight Junior Residents on a Rotating Service
NOTICE TO STUDENTS

The personal expenses of the students are at least as low in Baltimore as in any large city in the United States. The following estimates of a student's personal expenses for the academic year of eight months have been prepared by students, and are based upon actual experience:

<table>
<thead>
<tr>
<th>Items</th>
<th>Low</th>
<th>Average</th>
<th>Liberal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>$50</td>
<td>$75</td>
<td>$100</td>
</tr>
<tr>
<td>College Incidental</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Board, eight months</td>
<td>200</td>
<td>250</td>
<td>275</td>
</tr>
<tr>
<td>Room rent</td>
<td>64</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Clothing and laundry</td>
<td>50</td>
<td>80</td>
<td>150</td>
</tr>
<tr>
<td>All other expenses</td>
<td>25</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>$409</td>
<td>$556</td>
<td>$720</td>
</tr>
</tbody>
</table>

Students will save time and expense upon their arrival in the city by going direct to the School of Medicine on the University grounds, N. E. corner of Lombard and Greene Streets, where the Secretary of Student Y. M. C. A., who may be found at his office on the premises, will furnish them with a list of comfortable and convenient boarding-houses suitable to their means and wishes.

The Dean will, if desired, attend to the collection of checks and drafts for students.

For further information, apply to

J. M. H. Rowland, M.D., Dean,
Lombard and Greene Streets.
MATRICULATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, 1926-1927

FOURTH-YEAR CLASS

Adzima, Joseph Matthew Connecticu
Aptaker, Albert Jack New York
Armacost, Joshua Harper Maryland
Ball, Claude Russell, B.S. West Virginia
Bankhead, John Marion, B.S.

South Carolina
Basil, George Chester, Ph.G. Maryland
Belsky, Hyman New York
Benesunes, Joseph George, A.B. Maryland
Bialostosky, Julius, B.S. Maryland
Birnbaum, Joseph Osius New York
Cadden, John Francis, Jr. West Virginia
Carey, Thomas Nelson Maryland

Georgia
Chase, William Wiley, A.B. Maryland
Cohen, Bernard Julius, Ph.G. Maryland
Cohen, Morris Daniel New York

North Carolina
Condry, Raphael Joseph, B.S. West Virginia
Covington, Elijah Eugene North Carolina
Davis, Henry Vincent Maryland
Donchi, Sol Marvin, B.S. New Jersey
Ellason, Harold William West Virginia
Feldman, Jacob New York

Pennsylvania
Fidler, Kemp Arven, B.S. West Virginia
Finkelstein, Abraham Harry New York
Friedman, Meyer Henry New Jersey

South Carolina
Garner, Wade Hampton, B.S. Alabama
Gellar, Abraham, B.S. New York

Delaware
Gill, Charles Edward Delaware
Gillis, Francis Winfred Maryland

Maryland
Ginsberg, Henry Maryland

Maryland
Glick, Bernard New Jersey
Goldberg, Isidore New Jersey
Goldstein, Milton Joseph New York

New Jersey
Heisley, Rowland S. Maryland
Hewitt, John Frank, A.B. Maryland
Hoke, Dwight Moody, B.S. West Virginia
Hummel, Ira Lee Cottrell New Jersey
Johnson, Jesse Raymond, B.S.

New York
Kahan, Philip J. New York
Karns, Clyde Fillmore, B.S. Maryland
Kayser, Payne Albert, B.S. West Virginia
Klawans, Maurice Francis Maryland
Kutner, Charles New Jersey

North Carolina
Lazow, Sol M. New York

North Carolina
Lenson, Byruth King Maryland
Leyko, Julius Joseph, A.B. Maryland
Lily, Goff Platt West Virginia

Ohio
Mattikow, Bernard, B.S. New York
MiIhoan, Asa Wade, B.S. West Virginia

Pennsylvania
Misenheimer, Edd Alexander North Carolina
Moran, John Edward, Ph.G. Massachusetts
Morris, Francis Kaler, A.B. Maryland

Rhode Island
Nussbaum, Samuel New York

Kentucky
Peake, Clarence William Kentucky

Maryland
Phillips, John Roberts, A.B. Maryland
Reifschneider, Herbert Ellert, A.B.

Tennessee
Saffell, James Glenn Maryland
Schnierer, Samuel Benjamin New York

Tennessee
Schwedel, John Bernard Maryland
Sparta, Anthony Joseph Pennsylvania
Staton, Hilliard Vincent North Carolina

Virginia
Stonecipher, Charles Hiram, A.B. Maryland
Strayer, Helen Clymer, A.B. Maryland
Swank, James Levy, B.S. Pennsylvania

West Virginia
Swartzwelder, Wallace Ray Pennsylvania

Alabama
Talbot Henry Pierce Alabama

North Carolina
Tayloe, Gordon Bennett, A.B.

Virginia
Teague, Francis Bailey Virginia
Thompson, Thomas Payne, A.B. Maryland

New Jersey
Tollin, Louis New Jersey
Totterdale, William Grainger, A.B.

New Jersey
Tumminello, Salvatore Anthony Maryland
Upton, Hiram Eugene, B.S. Vermont

New York
Voigt, Herman Albert, Ph.G. Maryland
Von Schulz, Augustine Paul Maryland

New York
Wack, Frederic Van Deursen, B.S.

New York
Waesche, Frederick Seton, A.B. Maryland
Whittington, Claude Thomas

Maryland
Williams, Palmer Francis C., B.S.

Maryland
Wilner, Joseph Walter New York
!Yarborough, Oscar D. Alabama

Zinn, Ralph Howard, B.S. West Virginia

*Deceased.
†Did not complete year.
THIRD-YEAR CLASS, 1926-1927

Baer, Adolph.---------------------New York
Bailey, Hugh Alvin, A.B.------South Carolina
Bedir, Marcel Rechtman.----------Palestine
Berger, William Adolph, B.S.----New Jersey
Bernhard, Robert.----------------New York
Blancher, Irving Ezra.-----------New York
Bonelli, Nicholas William-------New Jersey
Brager, Simon.-------------------Maryland
Chor, Herman, A.B.---------------Maryland
Christian, William.--------------Pennsylvania
Clemson, Earle Princeton.--------Maryland
Duckwall, Frederick Mocman.------West Virginia
Duncan, George Andrew, B.S.-----West Virginia
Friedman, Bernard.---------------New York
Garred, Herbert William. B.S.----

West Virginia
Gelber, Jacob Saul.---------------Rhode Island
George, Jesse Ethelwyn, B.S.----West Virginia
Goldberg, Victor, Ph.G.----------Maryland
Goodman, Jerome Edward, Ph.G.----Maryland
Greer, Creed Collins, B.S.-------West Virginia
Grollman, Aaron Isaac, B.S.-----Maryland
Guile, George Krohn, B.S.--------Denmark
Gundry, Lewis Perkins, A.B.-----Maryland
Hankin, Samuel Jacob.------------Maryland
Hayes, Paul.---------------------Maryland
Herold, Lewis Jacob, Ph.G.------New York
Johnson, Walter Breneman, A.B.---Maryland
Jones, Henry Alvan, Ph.G.-------Maryland
Kaminsky, Philip.----------------New York
Kaufman, Israel, B.S.------------New York
Kohn, Theodore, B.S.-------------South Carolina
Lampert, Hyman.-----------------New York
Lamstein, Jacob Irving, B.S.-----New York
Laukatis, Joseph George.---------Maryland
Lerner, Morris.------------------New York
Levinsky, Maurice.---------------Connecticut
Levinson, Louis Jack.------------New York
Levy, Walter Howard.-------------New York
Limbach, Earl Frederick, A.B.----Ohio
Litsinger, Edward Andrew, B.S.---

West Virginia
Little, Luther Emmanuel, Ph.G.---Maryland
Littman, Irving Isaacs.----------Maryland
Lyon, Isadore Bernard, A.B.-----Maryland
Mace, John, Jr., B.S.-----------Maryland
Maddi, Vincent Michael, A.B.---New York
Maged, Alan John, A.B.---------New York
McCenney, Robert Sadler, A.B.---Maryland
McDowell, Roy Hendrix, A.B.----

North Carolina
McPheer, William Neal, Jr., A.B. Maryland
McGee, William Buster, B.S.------West Virginia
Mee, Robert Amos, A.B., B.S.----

New Hampshire
Meister, Aaron.-----------------New York
Merkser, David, A.B.------------New York
Merlino, Frank Anthony.--------New Jersey
Messina, Vincent Michael.-------Maryland
Mostwill, Ralph.----------------New Jersey
Neuman, Finley Frederick, A.B.---Ohio
Piacentini, Pasquale Anthony.----New York
Pileggi, Peter.------------------New Jersey
Rascoff, Henry.------------------New York
Rich, Benjamin Sanderland, A.B.---Maryland
Roetling, Carl Paul.------------Maryland
Rosen, Marks Julius.------------New York
Rubenstein, Hyman Solomon, Ph.G.---Maryland

Pennsylvania
Rutter, Joseph Howard.----------Florida
Saffron, Morris Harold, A.B.----New Jersey
Sardo, Samuel Philip, B.S.------Pennsylvania
Shaw, Cecil Curry, A. B.--------Alabama
Silver, Abraham Alfred.---------Connecticut
Singer, Jack Jerome.------------Maryland
Smoot, Aubrey Cannon, A.B.-----Maryland
Smoot, Merrill Clayville, B.S.---Maryland
Stacy, Theodore Edwin, Jr., Ph.G.----------

Pennsylvania
Tannenbaum, Morris, B.S.-------New York
Taylor, Charles Vivian, A.B.----Maryland
Temple, Levi Wade, Jr., B.S.----

South Carolina
Tenner, David, Ph.G.------------Maryland
Tkach, Nathan Hersh.------------Maryland
Varney, William Henry.---------Maryland
Vernaglia, Anthony Paul Joseph.---New York
Vogel, S. Zachary.-------------New York
Volencek, Leo Joseph.---------New York
*Walter, Frank Pierce.---------Maryland
Warner, Carroll Gardner, A.B.---Maryland
Weintraub, Fred Siegfried, B.S.---

Pennsylvania
Weisenfeld, Nathan, B.S.--------Connecticut
Weiss, Aaron.------------------New York
Wells, Samuel Robert, B.S.------West Virginia
Wilkinson, Albert Russell, Ph.G.---Maryland
Wolf, Frederick Samuel.--------Maryland
Wurzel, Milton.----------------New Jersey
Zimmerman, Frederick Thomas, A.B.---

*Deceased.
SECOND-YEAR CLASS, 1926-1927

Abramowitz, Max, B.S.________New York
Ackerman, Jacob Harold, A.B.________New York
Alessi, Silvio A., Ph.G.________Maryland
Anderson, Walter Anders, D.D.S., Ph.G.________Maryland

Bardfield, Benjamin________New Jersey
Barland, Samuel, Jr., B.S.________New York
Benson, Alvan Homer________Maryland
Birely, Morris Franklin, A.B.________Maryland
Bongiorno, Henry Domenic, Ph.G.________New Jersey

Botsch, Bernard, B.S.________Ohio
Bowen, James Poore, B.S.________South Carolina
Brauer, Selig Leo________New Jersey
Calas, Andres Eladi________Cuba
Chambers, Earl LeRoy________Maryland
Chapman, William Hardee________Maryland
Ciccone, Arnold William________Rhode Island
Cohen, Herman________New Jersey
Cohen, Jacob Harry, A.B.________Maryland
Cohen, Paul Henry, A.B.________Maryland
Coppola, Matthew Joseph, B.S.________New York
Corsello, Joseph Nicholas, B.S.________New York
Dalley, William Paul________Pennsylvania
DeBarbieri, Fred Louis, A.B.________Pennsylvania
Draper, William Bateman________Maryland
Farbman, Meyer David, B.S.________New York
Fargo, William Russell, A.B.________Maryland
Fatt, Henry Charles, B.S.________New Jersey
Feingold, Charles, B.S.________New York
Feit, Emanuel, B.S.________New York
Fifer, Jesse Showalter, A.B.________Delaware
Fiocco, Vincent James, B.S.________New York
Garber, Jacob S.________New York
Givner, David, A.B.________Maryland

Gouldman, Edwin Foster, B.S.________Virginia
Guiglia, Sascha Facchetti________New York
Haney, John James________New Jersey
Heck, Leroy Savin, B.S., Ph.G.________Maryland
Horowitz, Morris, A.B.________Massachusetts
Husted, Samuel Harley________New Jersey
Jackson, Murray Elliot, B.S.________New York
Jacobs, Abraham, B.S.________New York
Kelly, Clyde Ernest, A.B.________Pennsylvania
Kirschner, Abe Edward, A.B.________New York
Knight, Walter Philip________Pennsylvania
Levi, Ernest, Ph.G.________Maryland

Lukesh, Stephen Michael________Pennsylvania
Lynn, Irving, B.S.________New Jersey
Lynn, John Galloway 3rd, B.S.________Maryland
McAndrew, Joseph Theodore________West Virginia
McGowan, Joseph Francis________Pennsylvania
Matsumura, Junichi________Hawaii
Meranski, Israel, B.S.________Connecticut
Morgan, Isaac J.________Pennsylvania
Murphy, John Edward________Pennsylvania
Neistadt, Isidore Irving, A.B.________Maryland
Newman, Saul Charles, B.S.________Connecticut
Nickman, Emanuel Harrison________New Jersey
O’Dea, John Francis, A.B.________New York
Osborn, Adam Downey________New Jersey
Overton, Lewis Marvin, A.B.________North Carolina

Penchansky, Samuel Joseph, B.S.________New Jersey
Porterfield, Maurice Coleman________Maryland
Prager, Benjamin, B.S.________New York
Quinn, Thomas Francis________Pennsylvania
Reeder, Paul Arlington, B.S.________West Virginia
Reilly, John Vincent________New Jersey
Roberts, Eldred, B.S.________Maryland
Safer, Jake Victor________Florida
Safford, Henry Towne, Jr.________Texas
Schreiber, Morris Bernard________New York
Schwartzbach, Saul, A.B.________New York
Seibel, Jack, B.S.________New York
Sekerak, Raymond Andrew________Connecticut
Serra, Lawrence Mario, Ph.G.________Maryland
Silkorsky, Albert Edward, A.B.________Maryland
Silver, Mabel Irene, B.S.________Maryland
Soffer, Albert Alexander, B.S.________Maryland
Solomon, Milton, B.S.________New York
Spelcher, Wilbur Glenn________Maryland
Spencer, Ernest________Maryland

Spurrier, Oliver Walter, A.B.________Maryland
Staton, Leon Raphael, A.B.________North Carolina
Stevenson, Charles Calvert________Utah
Sullivan, William Joseph________Rhode Island
Ulrich, Henry Franz________Maryland
Vann, Homer King________Florida
Wallack, Charles Albert, B.S.________New Jersey
Ward, Hugh Walter, A.B.________Maryland
Yudkoff, William, B.S.________New Jersey

MATRICULATES 1926-27 79
Aiau, Chadwick Kanekoa.................Hawaii
Alexander, Hattie Elizabeth, A.B.......Maryland
Anderson, Lucile Russell, A.B.........Tennessee
Aronofsky, Milton Robert, Ph.B.
Connecticut
Ashman, Harry, B.S......................New York
Bamberger, Beatrice, A.B.................Maryland
Bauergardner, George Martin..........Maryland
Bauergartner, Eugene Irving..........Maryland
Baylue, Meyer Milby, Ph.G.............Maryland
Belinkin, William, B.S....................New York
Benfer, Kenneth Louis, A.B.............Maryland
Berkowitz, Rudolph.....................New York
Berman, Henry Irving..................Maryland
Blum, Joseph Sydney, Ph.G.............Maryland
*Brannan, Francis Carroll, B.S........Maryland
Brayshaw, Thomas Henry...............Maryland
Burns, John Howard...................Maryland
*Cerrilli, Guido James, Ph.B..........Rhode Island
Chenitz, William, B.S...............New Jersey
*Clayman, David Stanford, Ph.G.......Maryland
Cohen, Archie Robert, Ph.G...........Maryland
Cohen, Irvin Joseph, Ph.G...........Maryland
Cohen, Max Hurston, Ph.G.............Maryland
*Cohen, Paul, A.B......................New Jersey
Demarco, Salvatore Joseph, A.B.....Maryland
Di Paula, Robert Salvatore, A.B.....Maryland
Donohue, Bernard Walker, A.B.......Maryland
Durrett, Clay Earl, B.S..............Maryland
Faw, Wylie Melvin, Jr................Maryland
Feman, Jacob George, A.B............New York
Fisher, Samuel........................New Jersey
Flescher, Julius, Ph.G.................Maryland
*Friedman, Reuben Abe................Maryland
*Fuhrman, William Nelson..............Maryland
Garey, James Lyman................Pennsylvania
Garfinkel, Abraham, B.S..............New York
Gerner, Harry Ezekiel, B.S..........New Jersey
Gersten, Paul Francis................New York
Ginsberg, Leon, Ph.D., M.A., A.B.
New York
Goldman, Lester Milton, B.S........New Jersey
Goldstein, Jacob Everett, B.S.........New York
Goodman, Julius Henry, Ph.G........Maryland
Grove, Donald Birtner................Maryland
Hildenbrand, Emil John Christopher, B.S.
Maryland
Hornbaker, John Harlan.................Maryland
Hudson, Rollin Carl, A.B..............Maryland
Jaklitach, Frank Henry, B.S.........New York
Johnson, Marius Pitkin................Connecticut
Kaufman, Max, Ph.G....................New York
Kermische, Albert, Ph.G..............Maryland
Kleinman, Abraham Morris, B.S........New York
Kovarsky, Albert Elias, A.B.........New Jersey
Kraemer, Samuel Harry, B.S...........New Jersey
Kremen, Abraham, A.B................Maryland
Kuhn, Esther Frances, A.B...........Maryland
Lang, Abraham, B.S...................New York
Levin, Morton Loeb, Ph.G.............Maryland
Levy, Solomon, A.B................Palestine
Lewingdolski, Henry Charles...........Maryland
Lewis, Frank Russell................Maryland
*McDonald, Thomas Kenneth, B.S.
Maryland
McDowell, Harold Clyde, B.S.
North Carolina
McElwee, Murray James................Pennsylvania
McGreevy, Joan Frances................District of Columbia
Magovern, Thomas Francis.............New Jersey
Mansdorfer, George Bowers, B.S.......Maryland
*Marianetti, Amerigo Lawrence........Rhode Island
Mednick, Benjamin William............New York
Miller, Benjamin Herman, A.B........Maryland
Miller, Isaac................................New Jersey
Miller, James Alton....................Maryland
Montilla, Victor Jose................Porto Rico
Mortimer, Eghbert Laird, Jr.........Maryland
Needle, Nathan E........................Maryland
Nocera, Francisco Paolo, Jr..........Porto Rico
Palmer, Thomas Valentine.........North Carolina
Perlman, Robert, B.S..................New York
Post, Charles Gordon, Jr., A.B.......New York
Powell, Joseph Lawrence..............Pennsylvania
*Rehmeyer, Walter Owen, B.S.
Pennsylvania
Reid, Francis Fielding, A.B........Maryland
Rigdon, Wilson O., B.S..............Maryland
Rineberg, Irving Edward, B.S........New Jersey
*Robr, John Ambrose................Pennsylvania
Romano, Nicholas Michael............Pennsylvania
Rosenthal, Abner Herman, B.S.........New York
Rozum, John Charles...................New York
Sanehes, Robert Louis, A.B...........New York
Sassee, Buchanan Beale...............Maryland
Schimunek, Emmanuel Aloysius, A.B.....Maryland
Schnabel, William Thomas, Ph.G.......Maryland
Sears, Joseph Everett, Ph.G........Maryland
*Segal, Samuel Michael, A.B.........Pennsylvania
Shelley, Harry Sandberg, B.S.........Maryland
Shill, Benjamin, A.B................New Jersey
Shulman, Louis Robert................Maryland
Smith, Joseph Jacob, A.B............Connecticut
Snoops, George John, Jr., A.B.......Maryland
Snyder, Nathan, Ph.G..................Maryland
Soltroff, Jack Gerson, B.S...........Pennsylvania
Sperling, Nathaniel Mortimer, B.S.
New York
*Strezelecki, Edward Aloysius........New Jersey
Topehik, Irving, Ph.G................New Jersey
*Wattenmaker, Hymen, Ph.G........Pennsylvania
Weinsten, Jack, B.S...................New York
Werner, Aaron Seth....................New York
Young, Ralph Funk.....................Maryland
Zeigler, Samuel, B.S..................New York
*Did not complete the year.
<table>
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<th>Department</th>
<th>Total</th>
<th>Regular</th>
<th>Extension</th>
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<td>College of Agriculture</td>
<td>123</td>
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<td>College of Arts and Sciences</td>
<td>516</td>
<td>506</td>
<td>10</td>
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<td>School of Dentistry</td>
<td>395</td>
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<td>College of Education</td>
<td>273</td>
<td>131</td>
<td>142</td>
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<tr>
<td>College of Engineering</td>
<td>441</td>
<td>234</td>
<td>207</td>
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<td>Graduate School</td>
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<td>College of Home Economics</td>
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<tr>
<td>School of Law</td>
<td>452</td>
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<tr>
<td>School of Medicine</td>
<td>371</td>
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<tr>
<td>School of Nursing</td>
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<tr>
<td>School of Pharmacy</td>
<td>277</td>
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<td>Summer School, 1926, College Park</td>
<td>477</td>
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<tr>
<td><strong>Total</strong></td>
<td>3,577</td>
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<tr>
<td><strong>Duplications</strong></td>
<td>65</td>
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<tr>
<td><strong>Net Total</strong></td>
<td>3,512</td>
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</tr>
</tbody>
</table>
GRADUATES

GRADUATES OF UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, JUNE 4, 1927

Adzima, Joseph MatthewConnecticut
Aptaker, Albert JackNew York
Armacost, Joshua HarperMaryland
Ball, Claude Russell, B.S.West Virginia
Bankhead, John Marion, B.S.

South Carolina
Basil, George Chester, Ph.G.Maryland
Belsky, HymanNew York
Benesu, Joseph George, A.B.Maryland
Bialostosky, Julius, B.S.New York
Birnbaum, Joseph OsiasNew York
Cadden, John Francis, Jr.West Virginia
Carey, Thomas NelsonMaryland
Chase, William Wiley, A.B.Maryland
Cohen, Bernard Julius, Ph.G.Maryland
Cohen, Morris DanielNew York

Condry, Raphael Joseph, B.S.West Virginia
Covington, Elijah EugeneNorth Carolina
Davis, Henry VincentMaryland
Donchi, Sol Marvin, B.S.New Jersey
Ellason, Harold WilliamWest Virginia
Feldman, JacobNew York
Fidler, Kemp Arveren, B.S.West Virginia
Finkelstein, Abraham HarryNew York
Friedman, Meyer HenryNew Jersey
Garner, Wade Hampton, B.S.Alabama
Geller, Abraham, B.S.New York
Gill, Charles EdwardDelaware
Gillia, Francis WinfredMaryland
Ginsberg, HenryMaryland
Glick, BernardNew York
Goldberg, IsidoreNew Jersey
Goldstein, Milton JosephNew York
Heisley, Rowland S.Maryland
Hewitt, John Frank, A.B.Maryland
Hoke, Dwight Moody, B.S.West Virginia
Hummel, Ira Lee CottrellNew Jersey
Johnson, Jesse Raymond, B.S.

West Virginia

Kahan, Philip J.Maryland
Karns, Clyde Filmore, B.S.Maryland
Kayser, Fayne Albert, B.S.West Virginia
Klawans, Maurice FrancisMaryland

Kutner, CharlesNew Jersey
Lassman, Samuel, B.S.New York
Lazow, Sol M.New York
Lenson, Bryuth KingMaryland
Levy, Julius Joseph, A.B.Maryland
Lilly, Goff PlattWest Virginia
Shattikow, Bernard, B.S.New York
Milloan, Asa Wade, B.S.West Virginia
Misenheimer, Edd AlexanderNew York
Moran, John Edward, Ph.G.Massachusetts
Morris, Francis Kailer, A.B.Maryland
Nussbaum, SamuelNew York
Peake, Clarence WilliamKentucky
Phillips, John Roberts, A.B.Maryland
Reifschneider, Herbert Ellert, A.B.

Maryland

Saffell, James GlennMaryland
Schwedel, John BernardMaryland
Sparta, Anthony JosephPennsylvania
Staton, Hilliard VincentNorth Carolina
Stonesifer Charles Hiram, A.B., B.S.Maryland
Strayer, Helen Clymer, A.B., B.S.Maryland
Swank, James Levy, B.S.Pennsylvania
Swartzwelder, Wallace RayPennsylvania
Talbot, Henry PierceAlabama
Taylor, Gordon Bennett, A.B.

North Carolina

Teague, Francis BaileyVirginia
Thompson, Thomas Payne, A.B., A.B.Maryland
Tollin, LouisNew Jersey
Tottenham, William Grainger, A.B., B.S.Maryland
Tumminello, Salvatore AnthonyNorth Carolina
Upton, Hiram Eugene, B.S.Vermont
Voigt, Herman Albert, Ph.G.Maryland
von Schulz, Augustine PaulMaryland
Williams, Palmer Francis C., B.S.Maryland
Waesche, Frederick Seton, A.B..Maryland
Whittington, Claude Thomas, North Carolina
Williams, Palmer Francis C., B.S.

Maryland

Wilner, Joseph WalterNew York
Wollak, TheodoreMaryland
Zinn, Ralph Howard, B.S.West Virginia

Honors

University Prize—Gold Medal—THOMAS NELSON CAREY

Certificates of Honor

CLARENCE WILLIAM PEAKE
MILTON JOSEPH GOLDSTEIN
JOHN FRANK HEWITT

In the third year the Dr. Jose L. Hirsch Memorial Prize of $50.00 was awarded to Charles Edward Gill for the best work in Pathology during the second and third years.

The Dr. Leo Karlinsky Memorial Scholarship awarded to the student in the Freshman Class with the highest standing was won by John Howard Burns.
ALUMNI ASSOCIATION SCHOOL OF MEDICINE

The Advisory Committee of the Alumni recommend the following members as officers for the year 1927-1928:

**President**
FRANK KEATING

**Vice-Presidents**

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DR. HENRY KOLB

**Secretary**

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**Assistant Secretary**

DR. NATHAN WINSLOW

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Dr. C. HABLISTON

Dr. I. S. ZINBERG

Dr. WM. R. BRIDGES

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Dr. GRIFFITH W. DAVIS

Dr. M. LINTHICUM

**Alumni Council**

Dr. CHARLES BAGLEY

**Members of Editorial Committee**

Dr. HOWARD M. BUBERT

Dr. EMIL NOVAK

**Necrologist**

Dr. WM. S. LOVE
ENDOWMENT FUND

The following constitute the Board of Trustees of this Fund:

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J. M. H. Rowland, M.D.  
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This Board is incorporated by act of the Legislature of the State, its legal title being "The Trustees of the Endowment Fund of the University of Maryland," and is independent and self-perpetuating. Its powers are limited to the expenditure of the interest derived from the fund, which is to be applied in the discretion of the Board for the benefit of the University. Contributions, donations and bequests are solicited from Alumni and friends. They may be made to the general or University Fund, to the Medical Fund or to any other department of the University. If intended for the School of Medicine, they may be given to the general medical fund or to some special object, as building, research, library, pathology, hospital, publication, laboratories, gymnasium, scholarship, medal, prize, etc., in which case the wishes of the donor will be strictly regarded. Attention is invited to the "Charles Frick Research Fund," already established in memory of that distinguished investigator. Checks should be made payable to J. M. H. Rowland, Treas., Lombard and Greene Streets, Baltimore, Md.

FORMS OF DEVISE OR BEQUEST

To School of Medicine

I give, devise and bequeath to the Regents of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.

(Here state amount or describe property)

To Endowment Fund

I give, devise and bequeath to the Trustees of the Endowment Fund of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.

(Here state amount or describe property)
THE UNIVERSITY OF MARYLAND SCHOOL OF NURSING

FACULTY AND INSTRUCTORS

Superintendent of Nurses and Director of School of Nursing
ANNIE CRIGHTON, R.N.

Assistant Superintendent of Nurses
• FRANCES M. BRANLEY, R.N.

Instructor in Nursing
ISOBEL ZIMMERMAN, R.N.

Instructor in Nursing and Supervisor of Wards
HELEN E. WRIGHT, R.N.

Assistant Instructor in Nursing and Supervisor of Wards
ELIZABETH COULBOURNE, R.N.

Instructor in Surgical Technique for Nurses and
Supervisor of Operation Pavilion
ELIZABETH AITKENHEAD, R.N.

Instructor in Dietetics
MIRIAM CONNELLY

Instructor in Massage
EDITH WALTON

Instructor in Social Service
GRACE PEARSON, R.N.

MARY E. SAULSBURY, R.N.-------------------------------Night Supervisor
JANE MOFFATT, R.N.-----------------------------------Supervisor, Dispensary
REBA DAVIS, R.N.--------------------------------------Head Nurse, Obstetrical Ward
ALICE M. BENNETT, R.N.--------------------------------Head Nurse, Private Hall
BERTHA HOFFMAN, R.N.--------------------------------Head Nurse, Private Hall
FERNANDA DENNIS, R.N.-----------------------------Head Nurses, Women’s Ward
HELEN MORGART, R.N.--------------------------------Head Nurse, Men’s Medical Ward
ELIZABETH CANNON, R.N.-----------------------------Head Nurse, Men’s Surgical Ward
IDA NAGEL, R.N.----------------------------------------Assistant in Operating Room
CHARLOTTE PRICE, R.N.-------------------------------Head Nurse, Children’s Ward
JANE SCOTT, R.N.-------------------------------------Head Nurse, Accident Room
MARGARET FINK, R.N.----------------------------------Head Nurse, Men’s Surgical Ward
LECTURES FROM THE SCHOOL OF MEDICINE

Anatomy
C. L. Davis, M.D.

Physiology
A. H. Ryan, M.D.

Bacteriology
F. W. Hachtel, M.D.

Chemistry
Frank N. Ogden, M.D.

Materia Medica
W. H. Schultz, Ph.B., Ph.D.

Medicine
Maurice C. Pincoffs, M.D.
L. A. M. Krause, M.D.
C. Hampson Jones, M.D.
J. S. Hogan, M.D.
V. L. Elliott, M.D.

Pediatrics
Charles L. Summers, M.D.

Psychiatry
R. McClury Chapman, M.D.

Skin and Veneral Diseases
Harry M. Robinson, M.D.

Ophthalmology
Harry Friedenwald, M.D.

Otology
J. W. Downey, M.D.

Surgery
Joseph L. Holland, M.D.

Laryngology and Rhinology
E. A. Looper, M.D.

Gynecology
Hugh Brent, M.D.

Orthopaedic Surgery
R. Tunstall Taylor, M.D.

Obstetrics
L. H. Douglass, M.D.

Social Service
Special Lecturers
SCHOOLS OF NURSING

STUDENTS ENROLLED, 1926-1927

<table>
<thead>
<tr>
<th>Student Type</th>
<th>Number</th>
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<tbody>
<tr>
<td>Post-graduate</td>
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<tr>
<td>Graduate</td>
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<td>Seniors</td>
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<td>Intermediates</td>
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<tr>
<td>Juniors and Preparatory</td>
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<td><strong>Total</strong></td>
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GENERAL STATEMENT

The University of Maryland School for Nurses was established in the year 1889.

Since that time it has been an integral part of the University Hospital, coming under the same government.

The school is non-sectarian, the only religious services being morning prayers.

The University Hospital is a general hospital containing about 250 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing, including experience in the operating-room.

The school offers the student nurse unusual advantages in its opportunity for varied experience and in its thorough curriculum taught by best qualified instructors and members of the Medical Staff of the University.

ADMISSION—Requirements: In order to become a candidate for admission to the Training School, application must be made in person or by letter, to the Superintendent of Nurses. An application by letter should be accompanied by a statement from a clergyman testifying to good moral character and from a physician certifying to sound health and unimpaired faculties. No person will be considered who is not in a good physical condition between the ages of 18 and 35. She must also show that she has a High School education or its equivalent. This is the minimum requirement, as women of superior education and culture are given preference provided they meet the requirements in other particulars.

The fitness of the applicant for the work and the propriety of dismissing or retaining her at the end of her term of proba-
tion, is left to the decision of the Superintendent of Nurses. Misconduct, disobedience, insubordination, inefficiency, or neglect of duty are causes for dismissal at any time by the Superintendent of Nurses, with the approval of the President of the University.

TIME: Students are admitted in February, June and September.

HOURS ON DUTY: During the probation term the students are on duty not more than six hours daily. During the Junior, Intermediate and Senior years the students are on eight-hour day duty, with six hours on Sunday and Holidays, and ten-hour night duty. The night-duty periods are approximately two months each, with one day at the termination of each term for rest and recreation. The period of night duty is approximately five or six months during the three years.

SICKNESS: A physician is in attendance each day, and when ill, all students are cared for gratuitously. The time lost through illness in excess of two weeks during the three years must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

VACATIONS: Vacations are given between June and September. A period of three weeks is allowed the student at the completion of the first year and four weeks at the completion of the second year.

EXPENSE: A student receives her board, lodging and a reasonable amount of laundry from the date of entrance. During her period of probation she provides her own uniforms made in accordance with the hospital regulations. After being accepted as a student nurse, she wears the uniform furnished by the hospital. The student is also provided with textbooks, and in addition to this is paid five dollars ($5.00) a month. Her personal expenses during the course of instruction and training will depend entirely upon her individual habits and tastes.
GENERAL PLAN OF INSTRUCTION

The course of instruction covers a period of three years.

JUNIOR YEAR

First Term

The Junior Year is divided into two periods. The first term is the preparatory period (4 months) and the second the junior term.

In the preparatory term the student is given practical instruction in:

I. The making of hospital and surgical supplies. The cost of hospital materials, apparatus and surgical instruments.

II. Household economics and the preparation of foods.

III. The hospital out-patients' department and dispensary.

During this term the practical work is done under constant supervision, and teaching is given correlatively.

Excursions are made to markets, hygienic dairies, linen-rooms, laundry and store-room.

The maximum number of hours per week in formal instructions divided into laboratory and lecture periods is thirty hours and includes courses in Anatomy and Physiology, Dietetics, Materia Medica, Personal Hygiene, Drugs and Solutions, Household Economics, Short Course in Ethics and History of Nursing.

At the close of the first half of Junior Year the students are required to pass satisfactorily both the written and oral tests, and failure to do so will be sufficient reason to terminate the course at this point.

SUBSEQUENT COURSE

The course of instruction, in addition to the probationary period, occupies two and three-fourths years, and students are not accepted for a shorter period.

After entering the wards, the students are constantly engaged in practical work under the immediate supervision and direction of the head nurses and instructors.
SCHOOLS OF NURSING

JUNIOR YEAR
Second Term

During this period the students receive theoretical instruction in Massage, Bacteriology, General Surgery and Introductory Medicine. Practical instruction is received in the male and female, medical, surgical and children's wards.

INTERMEDIATE YEAR

During this period the theoretical instruction includes Pediatrics, General Medicine, Infectious Diseases, Obstetrics, Gynecology and Orthopaedics. The practical work provides experience in the nursing of obstetrical and gynecological patients, in the operating-rooms and the out-patient department.

SENIOR YEAR

During this period the student receives short courses of lectures on subjects of special interest. This includes a consideration of the work of institutions of public and private charities, of settlements, and various branches of professional work in nursing.

Experience is given in executive and administration work to those showing exceptional ability in the Senior Year. With these students conferences are held on administration and teaching problems.

EXAMINATIONS: At the end of the first half year, students are examined in Anatomy, Physiology, Materia Medica, Dietetics and Hygiene. At the end of the first year in Surgery and Bacteriology.

During the second year they are examined in Urinalysis, Massage, Gynecology, General Medicine, Infectious Diseases, Obstetrics and Pediatrics. At the end of the third year the final examination in Nervous and Mental Diseases, Diseases of Special Senses, Venereal Diseases, Ethics and History of Nursing.

Examinations—which are both written and oral—include practical tests, and the standing of the student is based upon
the general character of work throughout the year, as well as the results of the examinations. Students must pass all subjects before entering upon the work of the following year.

**Graduation:** The diploma of the School will be awarded to those who have completed satisfactorily the full term of three years and have passed successfully the final examinations.

**Scholarships:** One scholarship has been established by the Alumnae of the Training School. It entitles a nurse to a six weeks’ course at Teachers’ College, New York. This scholarship is awarded at the close of the third year to the student whose work has been of the highest excellence, and who desires to pursue post-graduate study and special work.

An Alumnae Pin is presented by the Women’s Auxiliary Board to the student who at the completion of three years shows exceptional executive ability.

A prize of fifty dollars, known as the “Edwin and Leander M. Zimmerman Prize,” is given in the senior class to the student whose practical nursing is of the highest excellency and whose interest and sympathy in the patients is greatest.

An Alumnae Pin is presented by the Women’s Auxiliary Board to the student who at the completion of three years shows exceptional executive ability.

**Graduates, 1927**

| Baldwin, Estella Coates | Maryland |
| Blackburn, Hazel Dorothy | Maryland |
| Bost, Stella Pearl | North Carolina |
| Foust, Eva Agnes | Maryland |
| Gerber, Theressa Rhae | Maryland |
| Hall, Rebecca Jane | Maryland |
| Henderson, Jane Grace | Missouri |
| Holloway, Ethel Catharyn | Maryland |
| Holt, Agnes Louise | Delaware |
| Jackson, Virginia Esther | Maryland |
| Jarrell, Emma Elizabeth | Maryland |
| Krouse, Beatrice Lutz | Maryland |
| Royster, Lucy | North Carolina |
| Seiss, Theodosia Mae | Maryland |
| Smith, Iris Nancy | Virginia |
| Wallis, Louisa Mather | Maryland |
| Young, Grace Elizabeth | Maryland |

**Five-Year Program**

In addition to the regular three-year course of training the University offers a combined Academic and Nursing program leading to the degree of Bachelor of Science and a Diploma in Nursing.

The first two years of the course (or pre-hospital period), consisting of 70 semester hours, are spent in the College of Arts and Sciences of the University, during which period the
student has an introduction to the general cultural subjects which are considered fundamental in any college training. At least the latter of these two years must be spent in residence at College Park in order that the student may have her share in the social and cultural activities of college life. The last three years are spent in the School of Nursing in Baltimore. In the fifth year of the combined program certain elective courses, such as Public Health Nursing, Nursing Education, Practical Sociology and Educational Psychology are arranged.

**TWO-YEAR PROGRAM IN THE COLLEGE OF ARTS AND SCIENCES**

**Freshmen Year**

<table>
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<th>Course</th>
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<tr>
<td>Foreign Language</td>
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<tr>
<td>General Chemistry (Chem. 101)</td>
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<tr>
<td>Elements of Social Science (Soc. Sci. 101)</td>
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<td>Elementary Foods (H. E. 101)</td>
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<td>Physical Education</td>
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**Sophomore Year**

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<th>Course</th>
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<td>English Literature or History</td>
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<td>Organic and Food Chemistry</td>
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<td>3</td>
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<tr>
<td>Nutrition</td>
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<tr>
<td>General Economics (Econ. 105)</td>
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<tr>
<td>Elements of Psychology (Psych. 101)</td>
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<tr>
<td>Gen. Zoology (Zool. 101)</td>
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<td>Public Speaking (P. S. 101-102)</td>
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<td>Physical Education (Phys. Ed. 102)</td>
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**MERCY HOSPITAL SCHOOL OF NURSING**

The Mercy Hospital School of Nursing was organized and incorporated under the laws of the State of Maryland in 1899, and has operated successfully for a quarter of a century.

The course of study is three years, during which time the Superintendent of the School assigns each pupil for definite periods to the various wards and services. Such practical train-
ing under skilled supervisors best applies the *science* and most adequately teaches the *art* of nursing. The course of study is modified and revised year by year, always with the idea of improvement. In schools of nursing, as in all other professional schools, changes are necessary, for to stand still is to retrograde. Each year new subjects are introduced or old ones are taught in new and more attractive ways. The curriculum embraces a preliminary period of four months, a junior term of eight months, an intermediate term of twelve months, and a senior term of twelve months.

Mercy Hospital being attached to the Medical School of the University of Maryland, its nurses enjoy the exceptional advantage of systematic courses of lectures covering every department of nursing. These lectures, given by professors who are masters of their subjects, are made to co-operate with the school curriculum, thus giving the student nurse a thorough knowledge of her profession.

**REQUIREMENTS FOR ADMISSION**

Applications for admission to the School of Nursing should be addressed to Superintendent of Nurses, Mercy Hospital, Baltimore, Md.

Requirements: Highest moral standard, intelligence, health, high-school education. Social references and letters from pastors and physicians are also required.

The course comprises three years of theory and practice. After four months' probation, candidates, if they possess the necessary qualifications, are admitted to the School proper, receiving Ten Dollars per month, their education being considered their compensation. Board, laundry, etc., furnished by the institution.

Four weeks before admission, candidates should forward $50.00 and measurements for uniforms and aprons, which will be in readiness on their arrival. No orders will be considered until this amount is received. These uniforms are worn throughout entire course, thus obviating additional expense after the probationary term expires. All clothing should be distinctly marked with names, Style No. 28, which may be procured from Woven Name Tape Co., Winstead, Conn. On admission, $10.00 is deposited on account of books.
Hours of duty: 7 A. M. to 7 P. M., with three hours off and one hour for meals, making an eight-hour system; one afternoon every week. A period of three weeks' vacation is allowed at the completion of the first year, and four weeks at the completion of the second year.

If nurses desire to remain out after 9:30 P. M., permission must be secured from the Superintendent. Late permission until 11:30 P. M. may be obtained once a week, from June to September, and twice a month from September to June. No visitors allowed except when off duty.

The right is reserved to dismiss pupils for any cause that may be deemed sufficient by the Superintendent of Nurses.

Dentistry should be attended to prior to entrance. Candidates should come provided with watch with second hand, fountain pen, scissors and comfortable shoes with rubber heels not too high; plain underwear, soap, towels, three laundry bags, shoe case and napkin ring.

Address baggage to Nurses' Home, Mercy Hospital, Pleasant and Calvert Streets, Baltimore, Md.

GRADUATES OF 1927

Catherine Bertin
Julia Frances Coakley
Bessie Helen Cunningham
Hazel Baker de Reamer
Sara Louise Flynn
Anna Hall Gould
Margaret Mary Jackman
Antoinette E. Jasinski
Delia Ellen Kane
Mary Helen Kearney

Mary Katherine Kerr
Mary Carmelita Kirby
Ann Meyers
Maria Agnes Monahan
Regina Catherine Monaghan
Mimi Pasternak
Helen Agnes Quirk
Jane Agnes Quirk
Mary Carmelite Smith
Elizabeth M. Thistlewood
Clare Louise Winand
THE DIAGNOSIS OF INTESTINAL OBSTRUCTION

By Alexius McGlannan, M.D.,
Baltimore, Md.

Acute Intestinal Obstruction continues to be the most fatal of abdominal crises, and is the only one whose mortality has not been considerably reduced by modern surgery.

The cause of death is the absorption of a toxin found in the obstructed loop of the intestine. The exact nature and mode of production of the toxin are not known. The absorption of a sufficient quantity of the toxin causes irredeemable damage and death.

Damage to the mucous membrane either direct or by changes in the circulation of the bowel wall plays an important part in the absorption of the toxin from the obstructed loop. The pressure within the obstructed loop is another important factor. Apparently the toxic material is taken up by the lymphatics, and a part, at least, is excreted from the blood into the duodenum and upper jejunum. If a fatal dose of the toxic material from an obstructed loop of one dog be injected into the jugular vein of another healthy dog, death occurs in a few hours. Intense hemorrhagic enteritis of the duodenum and jejunum will be found at post-mortem examination of the second animal. This apparent return of the toxic material from the circulation to the intestine offers an explanation for the increase of non-protein nitrogen in the blood without any diminution of the kidney excretion.
In some cases there is a coincident fall in the blood chlorides with a diminished excretion of these substances in the urine. Haden and Orr consider these findings an indication that the chlorides are utilized by the tissues in an effort to combat the toxin, and for this reason advise the intravenous use of hypertonic salt solution in the treatment of the condition. The experiments of Brooks and Copher do not confirm the work of Haden and Orr. Clinical experience shows that salt solution has a beneficial effect, not to be explained by the mere increase of fluid brought about by its administration.

The liver seems to be involved in the defense of the body, but liver function and bile secretion apparently are not disturbed in acute intestinal obstruction, and there are no structural changes in the liver which are associated with this condition.

![Acute Intestinal Obstruction from an inflammatory band constricting the ileum. Note the ladder pattern of the distended small intestine occupying the center of the abdomen.](image-url)
The kidneys do not show any structural change in the fatal cases. As a rule, albumen and casts are found in the urine.

No antidote has been discovered for the toxin of acute intestinal obstruction. The absorption of the toxin is the lethal factor. Therefore, early recognition and prompt relief of the obstruction are necessary for the cure of the patient.

Whenever the underlying cause of an obstruction is of such a character that it can be recognized and removed early in the disease, the severity of the toxic symptoms is diminished or their development prevented. In strangulated hernia, where a painful swelling calls direct attention to the obstruction, operation is performed in most cases before toxaemia develops. The irreducible external swelling focuses attention on the obstruction and brings the patient to operation without delay. Although certain other conditions may be responsible for a protrusion in the groin, these are quickly excluded or recognized as lesions which require operation for their cure.

Similar reasoning should bring the internal obstruction to early operation. In spite of the fact that there are no signs so distinct as the external hernial swelling, the symptoms of intestinal obstruction are well defined, and, with proper interpretation, it is often possible to make a diagnosis before the onset of grave toxaemia.

Symptoms. It is convenient to divide the symptomatology and course of acute intestinal obstruction into three stages:

1st. The stage of onset, when the symptoms are due to the arrest of the intestinal current; 2nd, the stage of compensation, when the gastro-intestinal organs attempt to overcome the obstruction or its results; 3rd, the stage of sequelae or complications when the obstruction has caused secondary destructive changes in the bowel, or in the body as an entirety. The higher and more complete the obstruction, the less clearly defined will be the symptoms of the various stages. Vascular injury always intensifies the course of the disease. Gangrene of the bowel may either complicate the compensatory effort, or be present with the toxaemia.

The characteristic initial symptoms of acute intestinal obstruction are pain, constipation or diarrhea, and vomiting. The pain is paroxysmal with free intervals, or it may be continuous with exacerbations. This paroxysmal pain, usually described as cramps, is the most constant initial symptom, and becomes increasingly severe during the first hour. The pain is not relieved by defecation or by vomiting. Constipation may be absolute, or there may be an initial bowel movement preceding the onset of pain. The constipation resists well-given
enemas, or an effectual enema does not give relief from the pain. Tenesmus or diarrhea and pain with bloody mucus in the stools occurs in certain cases of strangulation, with intussusception and with intestinal tumors.

Vomiting may be the initial symptom, followed by pain and constipation, but the usual sequence is pain, vomiting and constipation. The vomited material may be gastric or duodenal contents. As a rule, however, the material is first gastric, then biliary, and finally intestinal. At the onset it is gastric, occurring without regard to the ingestion of food. Lavage does not relieve the symptoms. The initial vomiting is reflex, and may be replaced by hiccough.

![Fig. 2—Reflex dilatation of the large intestine. Note the haustrations of the distended colon occupying the lateral portion of the abdomen and extending into the pelvis.](image-url)
The blood pressure practically always falls as the symptoms develop; occasionally there is a rise in the pressure during this initial stage. A falling pressure indicates the onset of intoxication.

The symptoms of the second stage are local and general. The pain becomes more intense, unless gangrene develops, in which event it may be diminished. The vomitus of the second stage consists of material flowing back into the stomach from the obstructed intestine. The quantity vomited may be extremely large. There is a great increase in the amount of fluid secreted by the obstructed intestine. The fluid is thin, acrid, disagreeable in taste and odor, and is irritating to the mouth, lips and chin. The color seems to darken with the duration of the obstruction, passing from yellow through green to dark brown.

Visible peristalsis or visible and palpable stiffened intestinal coils are the most characteristic symptoms of the second stage. The stiffened coil is a distended area in which the contractions have reached the tetanic stage, and in which there has occurred an infiltration of the wall with an accumulation of fluid and gases in the interior of the bowel. Visible peristalsis is due to an extraordinary activity of the bowel produced at this time. The movements are vigorous and associated with the presence of the visible stiffened coil. When much small intestine is involved in the process, the spastic distended coils may show as a series of parallel ridges, the ladder pattern. The contractures are accompanied by pain, unless the toxaemia has become grave.

The early distention is regional and usually asymmetric. Later there will be general distention. Tympanites accompanies distention. The lower the obstruction, the greater the distention and tympanites. Local tenderness may indicate the soreness of spastic muscle, or may be from a local peritonitis at the point of obstruction. The blood pressure falls during the second stage.

In the third stage the symptoms are those of toxaemia, gangrene, peritonitis and alteration of the function of the liver and kidneys. The toxin of intestinal obstruction is a virulent poison, although there appear to be individual variations in resistance to it.

The rate of the pulse and respiration is increased, the blood pressure falls; there is great prostration and cyanosis with or without clammy skin. The mental condition varies from noisy delirium to unconsciousness. Often there is a subjective sense of well-being, contrasting greatly with such objective signs as regurgitation of stercoraceous material and distended abdomen, in which violent peristaltic action is visible.
The development of gangrene is accompanied by collapse, and often sudden and severe increase of pain, although later the pain is diminished. As a result of leakage, peritonitis ensues, and with its spread comes movable dullness in the flanks and obliteration of liver dullness.

Peritonitis is the result of invasion by the intestinal bacteria either through gross rupture of gangrenous bowel, or by penetration of the bacteria through an area of intestine whose wall has been altered by distention or constriction.

Laboratory Studies. Laboratory examinations are not of great value in diagnosis, although the following estimations may prove helpful:

Blood Count. Usually there is a marked leukocytosis. In a series of 62 cases the average was 16,000; in but two was it below 5,000, and in 7 others below 10,000. The highest was 46,000 in a case of volvulus of the sigmoid.

![Image](image_url)

**Fig. 3—Ruptured ileum, pneumoperitoneum caused by gas from the intestine. Note the distinct shadow of the intestine, the liver and spleen.**

*The illustrations are reductions from the original X-rays made by Mr. Herman Schapiro.*
The Non-protein Nitrogen in the Blood. In obstruction the quantity of this nitrogen in the blood is increased. Certain variations have been noted by experimenters which indicate that a series of observations made every four or six hours will give better information than a single estimation. If the successive examinations show an increase, operation is indicated, while in the presence of a falling or stationary quantity, delay seems justifiable.

Unfortunately many of the lesions in which a differentiation from obstruction is difficult give similar changes in the blood nitrogen, or make a diagnosis so urgently necessary that delay for repeated examinations cannot be afforded.

A diminished quantity of chlorides in the blood, without any increase in the chlorides of the urine, has been noted in some cases of acute intestinal obstruction. Such a diminution of blood chlorides with an increase of the non-protein nitrogen would be a strong corroborative point in the diagnosis.

The Urine. Albumin and casts are frequently present from the onset of symptoms and are found in all cases of severe toxæmia. The casts disappear from the urine after the obstruction has been relieved. Indol and skatol derivatives are present in the urine in obstruction, but they are also present in so many other conditions that their estimation is of no value in diagnosis.

X-ray Examination. Case has contributed a most important aid to the diagnosis of intestinal obstruction. Without any preparation of the patient, a roentgenogram is made to show the entire abdominal cavity. This may be done by the use of the portable apparatus without moving the patient from his bed. The developed film will show at once the gas distention of an acute dilatation of the stomach, the characteristic haustral marking and peripheral distribution of a dilated colon, and the more or less parallel distended coils of small intestine. The last named is the characteristic finding in acute intestinal obstruction. Several feet of bowel are shown distended to several times the normal diameter, and the dilated bowel occupies the middle of the abdominal shadow rather than the flanks. Case wisely concludes his article with the warning that the Roentgen examination is not intended as a substitute for clinical methods already in general use, but as one more means of diagnosis which will aid in reaching more quickly a definite decision. The simplicity of the method, carrying with it so little disturbance of the patient is a great advantage.

Differential Diagnosis. The differential diagnosis between intestinal obstruction and other lesions having similar symptoms becomes most important when we are called on to sepa-
rate the conditions which require operation for their cure from those in which operation is not necessary, or in which it may be even harmful. In the former group of cases it may be impossible to make an accurate diagnosis beyond the recognition of the crisis, which demands immediate intervention. The exact nature of the trouble in such cases must be decided upon after the abdomen is opened. Delay for academic accuracy of diagnosis wastes the opportunity for curing the patient before the development of complications which make the use of disagreeable expedients necessary.

Abdominal Symptoms of Thoracic Disease. The onset of pneumonia, of diaphragmatic pleurisy, of pulmonary infarction, of pericarditis, as well as the acute exacerbations of cardiovascular disease may be ushered in by marked abdominal symptoms, which may closely simulate those of the first stage of intestinal obstruction, or be accompanied by distention and other signs of the toxic stage. Throat infection in children may simulate abdominal disease.

Roentgen-ray examination of the chest will often show the lung lesion and will aid in recognizing the cardiovascular ones when physical signs are indistinct. Levine notes in the confusing cardiac lesions a small, thready pulse with slight increase in rate and a regular rhythm, but quite distant heart sounds. The development of a slow pulse and fainting attacks points directly to a cardiac condition. If the patient is over forty with a history of dyspnea and there are any physical signs of cardiac enlargement, the probability of a thoracic rather than an abdominal cause for the symptoms becomes greater. When the apparatus is available, the electrocardiogram may add to the certainty of the heart lesion.

In pleurisy, if the area of pain and tenderness be carefully mapped out, and the patient then be directed to hold his breath, the pain and tenderness will be absent as long as the diaphragm remains quiet. In the absence of other signs of thoracic disease, abdominal pain associated with movements of the alae nasi during respiration indicates a thoracic and not an abdominal lesion. The anxiety in the case of the thoracic lesion is lethargic and resigned, not terror-stricken and active as in the abdominal conditions. If the possibility of thoracic disease as the cause of the symptoms is kept in mind, a mistake in their interpretation is unusual. During an epidemic such mistakes are rare.

Lead Colic. The abdomen in lead colic is usually retracted, being scaphoid rather than distended. The history of exposure to lead, the line on the gums, the characteristic blood changes, and the recovery of lead from the urine will make the diagnosis of plumbism.
The Crises of Tabes are often associated with distention of the abdomen. The characteristic changes in the pupil and in the other reflexes make the recognition of tabes definite.

The visceral crises of angioneurotic edema may simulate an acute obstruction. The presence of blood in the stools may lead to the suspicion of intussusception or tumor. The history of previous attacks, or the association with symptoms of hives, of purpura, or other superficial manifestations of the condition will make the diagnosis. Blood in the urine is suggestive of the angioneurotic lesion rather than of obstruction. The non-protein nitrogen of the blood is not increased in tabes or in angioneurotic edema.

Acute Dilatation of the Stomach. In this condition the pain is continuous and referred to the chest wall. The distention is epigastric. There is no vomiting, but rather a regurgitation of discolored fluid. Lavage gives immediate relief from the symptoms.

Adrenal Disease. Destruction of the adrenals by disease and experimental removal of these bodies both give rise to certain symptoms resembling those of the toxic stage of obstruction. The action of the toxin of obstruction is almost identical with that of acetylcholin, which substance acts as a physiological antagonist to the suprarenal secretion. The development of analogous toxic symptoms after the destruction of the adrenal bodies points to some antagonism between the substances and indicates the value of epinephrin in the treatment of patients suffering from obstruction with toxaemia. The diagnosis between the conditions can only be made by identifying the pre-existing adrenal disease.

Spastic Ileus. Spasmodic contracture of a segment of the bowel occurs in lead poisoning, in certain tabetic crises and as the result of a number of reflex irritations. The obstruction may become so complete as to lead to toxaemia and death. As a rule, the symptoms are intermittent, but they may be continuous and rapidly progressive. The condition is often observed after operations in or near the peritoneal cavity; for example, after lumbar nephrectomy. Apparently a spastic obstruction may be the beginning of an intussusception, the contracted segment being thrust into the lower loop. The differentiation between spasmodic and mechanical obstruction cannot be made from clinical investigations, and, therefore, in all cases where the symptoms are urgent, operation should be performed and the diagnosis made after the abdomen has been opened. The spasm usually relaxes spontaneously, or as the coils are handled. This fact may account for some of the cases diagnosed as obstruction in which laparotomy has failed to reveal any lesion.
Mesenteric Vascular Occlusion. The occlusion may be arterial or venous, embolic, or thrombotic. A combination of injury and infection is the usual cause. The symptoms are very like those of acute obstruction. At the onset the vascular lesion is usually associated with greater shock and there is apt to be a passage of a considerable quantity of blood and fecal material. The distention is general and is seldom as great as in obstruction. Some cases diagnosed mesenteric thrombosis or embolism have recovered without operation; but, as a rule, it is better to open the abdomen and deal with the condition surgically.

Acute Pancreatitis. The history of long-standing gall-bladder disease in an obese individual, who has an acute abdominal crisis, especially if the attack is associated with cyanosis and great collapse, will lead to the suspicion of pancreatitis, but the diagnosis is never certain until the fat necrosis is found after the abdomen has been opened. Therefore, no time should be lost in attempting a distinction between this lesion and an acute obstruction. If, as Ellis indicates, there is a close relation between the toxin of acute obstruction and that of pancreatitis, the differentiation between the lesions approaches the impossible.

Ruptured Abdominal Viscus. After the original collapse, the symptoms of ruptured viscus are those of spreading peritonitis rather than of obstruction. The continuous pain and the board-like rigidity of the abdomen are the best signs for differentiation. Similar symptoms are associated with rupture of an ectopic pregnancy. In this lesion the menstrual history usually helps. The signs are more marked in the lower abdomen, and a pelvic examination may make the diagnosis certain. Bluish discoloration of the umbilicus when present indicates ectopic pregnancy.

Torsion of a pedicled tumor may give symptoms resembling those of obstruction. In the early stage the presence of the tumor will indicate the character of the lesion. In the late stage a reflex paralytic ileus may complicate the picture. While this condition makes accurate diagnosis doubtful, it gives clear indication for the necessary treatment, namely, operation.

The onset of appendicitis, of cholecystitis and certain types of kidney colic may give symptoms very like those of acute obstruction. With the inflammatory lesions there is usually fever, and there is less shock than in obstruction. The character of the pain is continuous, and there is local tenderness and spasm from the onset of the attack. Appendicitis in older persons is apt to begin with obstructive symptoms.
Kidney colic is associated with blood in the urine, either grossly or microscopically. There are usually other symptoms referred to the urinary tract, as, for example, vesical tenesmus.

Peritonitis. The differentiation between peritonitis and intestinal obstruction is usually difficult and often impossible. Laboratory examinations do not help and the clinical signs are likely to be confusing. A local peritonitis by infiltration of the bowel wall can set up an obstruction. The fulminating type of peritonitis causes a paralytic distention of the intestine with stoppage of its contents. A tightly strangulated bowel will allow the passage of infectious material through its damaged wall and thus set up a local peritonitis.

At the onset the continuous pain of peritonitis contrasts with the paroxysms of obstruction. Muscle spasm and rigidity of the abdominal wall are prominent symptoms in peritonitis and are absent in obstruction. Fever is more likely to be present in peritonitis, and peristalsis is lessened. The development of distention in a quiet abdomen indicates peritonitis, and makes a contrast to the noisy abdomen of obstruction with its visible peristalsis and palpable distended coils. The distinction between peritonitis and obstruction is most important in post operative cases. Occasionally the nature of the primary operation gives a clue as to the more probable complication.

With these facts in mind, therefore, how shall we proceed when called on to treat a patient who is suddenly seized with paroxysmal abdominal pain, nausea or vomiting, and disturbance of the bowel movements?

The onset of an acute thoracic lesion, or one of the cardiac upsets should be considered and decided. Unless the lesion above the diaphragm is definitely recognized, the attention should be focussed on the abdomen. Lead colic, angioneurotic edema and tabes are recognized by their extra-abdominal symptoms.

The physical examination will determine the presence or absence of masses, tender points, local distention, etc. A ballooned rectum suggests a low obstruction. An empty rectum, or one containing only a little feces, is found with obstruction of the small intestine. The presence of a large quantity of feces, especially if the material be hard, indicates a coproptasis rather than an obstruction. Severe symptoms, however, are rare in cases of fecal impaction. The obstructed loop may be felt through the rectum.

An enema should be given by a competent person, and the stomach emptied by lavage. If an effectual enema does not bring relief from the pain, the suspicion of a mechanical ob-
struction becomes very strong. Similarly gastric lavage which does not bring relief points to an obstruction. If the pain continues, both enema and lavage should be repeated after an hour. If the second enema is retained, or escaped unaltered and with slight force, the presence of an obstruction becomes certain. If the second lavage brings away duodenal contents, the diagnosis is made even more certain. As a rule, these tests are sufficient to lead to a diagnosis.

Should the effect of the enema and lavage fail to be convincing, corroborative evidence of obstruction may be furnished by a rise in the quantity of the non-protein nitrogen in the blood, with a fall in the quantity of the chlorides. In the doubtful cases repeated blood studies at four-hour intervals are valuable. During this period of doubt the patient should be in the hospital, prepared for operation. The time may be employed in repeating the enema and lavage. Hypertonic or normal salt solution given subcutaneously is useful at this period.

It is in these doubtful cases that the X-ray examination will be especially valuable. A shadow showing distention of the entire colon excludes mechanical obstruction, while the ladder-like parallel coils of distended small intestine are almost certain evidence of its existence.

Cathartics are so dangerous that it has become a rule to prohibit their use in the presence of symptoms of obstruction. Opium is banned, because it may mask symptoms.

In managing a patient in whom an obstruction is suspected, the judicious use of opium or a cathartic may be employed during this period of doubt. After the stomach has been emptied by lavage, 2 or 3 ounces of castor oil is poured in through the tube. At the same time one-thirty-second of a grain of eserin salicylate, or a dose of pituitrin is given hypodermically. In the presence of mechanical obstruction this treatment intensifies the primary symptoms and hastens the development of the secondary ones to such a degree that the diagnosis becomes certain, and operation imperative. On the other hand, relief of the symptoms ends the uncertainty.

115 West Franklin Street.
SOME PRACTICAL CONSIDERATIONS OF THE WASSERMANN REACTION FROM A CLINICAL AND LABORATORY STANDPOINT

By S. Lloyd Johnson, M.D.
Baltimore, Md.

The Wassermann Complement-fixation Test was first brought out by Wassermann in 1906, and in the twenty years of its use since then has undergone a remarkable evolution. It was immediately accepted by the medical world and applied to practical uses. At first it was cherished as a specific test for Syphilis, but a little time and experience showed the fallaciousness of this opinion, and within a decade the test had come to be very much discredited.

This discredit may have served a very useful purpose since it stimulated great efforts to improve the test and render it more reliable, aiming always to give the maximum of help with a minimum of error. Since it affects the whole of mankind sooner or later, it is of great interest to every physician. While the present improvements of the Wassermann system are far superior to the first efforts, the test is still far from being fool-proof or perfect and requires thorough knowledge of its limitations and uses to give the most help. To acquaint the average physician with certain information pertinent to the test and of importance to everyone using it, is the justification for this article.

Part of this material comes first hand as the result of actual work with the Wassermann Test in the University Hospital laboratory, and the remainder, which is the larger part, is culled from some of the recent literature. Among other articles and sources bearing on the subject, special mention must be made of five. These are: Stokes' recent excellent book, "Modern Clinical Syphilology," "The Clinical Interpretation of the Wassermann Reaction," by Kilduffe; "Infection, Immunity and Biological Therapy," by Kolmer; "The Wassermann Reaction," by Craig; "The Wassermann Reaction in Treated Early Syphilis," by Moore and Kemp in the BULLETIN of the Johns Hopkins Hospital for July, 1926, pages 36-55.

Complement-Fixation for Syphilis Not Yet Specific

The principle of complement-fixation is perfectly simple and would give specific results if one had a specific antigen. As yet there is no such antigen available. Even an emulsion of the spirochaeta pallida as tried out by Noguchi is less satisfactory from this standpoint than alcoholic extracts of heart tissues. The lack of specificity of any antigen as yet devised is
the first inherent source of error in the Wassermann Test. However, from a practical standpoint, the antigen devised by Kolmer obviates this disadvantage almost completely, and gives almost specific results.

**Technical Accuracy and Experience Required for Dependable Results**

It was first believed that complement-fixation was more or less specific and could be obtained in a qualitative test. But with the passing of time and much work on this subject it has been amply demonstrated that Wassermann complement-fixation must be precisely quantitative. Every one of the elements in the test must be accurately assayed biologically and the test done with quantitative accuracy. This introduces the second possible source of error in doing a satisfactory Wassermann Test, namely, the technique. This technique cannot be acquired from reading a book or many books, or from observing the test run an occasional time, but only by actual contact and experience in doing it oneself. This implies a trained technician who has ability in doing quantitative work and who can combine experience with intelligence. This should eliminate many supposed technicians who are neither naturally adapted by temperament nor fitted by training for this work.

The technique must be good, but the results must prove correct in practice in the largest percentage of cases. This can be greatly advantaged where the clinician and laboratory work in co-operation. The laboratory checks up against the clinical findings and the clinician checks up against the laboratory reports. Each must assist the other, and that laboratory which runs along from day to day without any clinical checks is like a ship at sea, drifting without anchor or compass.

There are many larger and many smaller laboratories using the best technique and from whom Wassermann reports are as accurate as is possible to make them. And the responsibility for using such laboratories and obtaining reliable results must rest with the physician himself. He cannot plead ignorance, but ought to make inquiry into the matter, informing himself of the technique employed, the type of technicians used, whether there is competent supervision by a medical man, how the results check up clinically, and if an honest effort is being made to render the results absolutely dependable. The result may mean everything to the patient, and the doctor should be sure beyond peradventure. It is not a dollar proposition, for an inaccurate report is a bad investment to any patient whether costing much or costing nothing. The physician is the intermediary and his is the responsibility for obtaining the best.
When one has obtained a Wassermann report of "positive" or "negative," the interpretation of this report gives one much occasion to ponder and consider. Is the "positive" true to the clinical facts and can the laboratory making the report be relied on? May it be a false positive or a non-specific positive? What should be done next? Or, if a "negative" was reported, should it have been positive? Has there been any treatment to account for the result? Should another laboratory be consulted or a provocative procedure employed? These and many other questions should be considered. Unless the problem is approached in some such systematic manner it is apt to be superficially covered.

Up to this point I have tried to indicate the inherent weaknesses of the Wassermann Test (in its broadest sense) as a specific test for Syphilis. This natural weakness can be controlled or uncontrolled by the laboratory making the test. Great care and maximal technical efficiency may practically eliminate the inherent sources of error. But in spite of the best laboratory effort, there are many deviations and possible errors demanding correct information to properly evaluate the particular case in hand.

My next aim is to supply a small part of this information:

Proper Preparation of the Patient and Apparatus for Obtaining the Blood

There are a number of factors over which the physician or person taking the blood exerts full control.

1. The receptacle, usually a glass test tube, should be sterile and contain no water or other foreign material. Bacteria, if present in numbers, may contaminate the drawn blood and cause false results by weakening the positive reactions or rendering them anticomplementary.

2. Cotton threads from the stoppers may contaminate the serum and tend to yield false positives.

3. Acid or alkali in the container may cause false results.

4. Blood taken after a full meal, and especially one rich in lipoids, tends to give false complement fixation.

5. Alcoholics taken within the previous 24 hours will tend to change a positive to negative or weaken the degree of fixation.

6. Blood taken within 24 hours of general anaesthesia will tend to increase the degree of fixation producing false positives or anticomplementary reactions.
7. Blood taken too soon after antiluetic treatment, whether arsenic, mercury or iodides, may be temporarily negative and gradually regain complement fixation after two to four weeks. At least two to four weeks should elapse after treatment before taking the blood, to get a fair estimation of conditions obtaining.

Mercurial treatment has a notorious reputation for clearing reagin from the blood and producing temporary negative Wassermann tests.

8. Too small an amount of blood may handicap the laboratory performing the test. Five to ten cubic centimeters will satisfy every requirement. The container should be just large enough, without a great empty space to permit churning and oxidation.

9. The time from taking the blood until the performance of the actual test should be as short as possible. A delay of several days, especially in warm weather, may allow of complete change in the blood, rendering it unfit for examination.

10. Blood taken in oxalate or citrate (blood chemistry) receptacles is unsatisfactory.

11. Blood taken on glass slides or filter paper is unsatisfactory for complement-fixation work. It would seem unnecessary to remark on such a point, excepting that such blood has been received occasionally.

Here, then, are a number of factors over which the physician (or person taking the blood) has absolute control and due regard for which is taken for granted by the laboratory. But if they are disregarded by the physician, may be responsible for false reports.

**Other Diseases Giving False Positives**

One should differentiate between “False Positive Reactions” and “Non-Specific Reactions.” “False Positives” are truly false reactions, there being some detectable error in the technique which is susceptible of correction. A “Non-Specific Positive Reaction” is one due to true reagin in the patient’s blood, but not biologically specific for Lues. For instance, the Spirochaeta pertenuis of Yaws gives a reagin in the blood which will bind complement just the same as the closely related Spirochaeta pallida of Syphilis. Some of the diseases usually charged with giving occasional “False Positive Reactions” are the following:
Yaws, Relapsing Fever, Tuberculosis, Malaria, Diabetes, Scarlatina, Jaundice, Uremia and Nephritis, Pneumonia, Leprosy, Pernicious Anemia, Hypercholesterolemia, Carcinoma, Thyroid Conditions, Trypanosomiasis, Weil's Disease, Septicemia, Acute Exanthemata and Pregnancy.

While some of these undoubtedly do give "False Positives," so may also normal blood if the technique is uncontrolled and faulty. So that opinion at the present time is inclined to attribute these "False Positive Reactions" to bad technique rather than to the disease itself. With the better Wassermann systems used today, at least in the best laboratories, and especially with the Kolmer modification, the only diseases to be considered are: Yaws, Relapsing Fever, Tuberculosis, Diabetes and Pregnancy.

Yaws, as hinted before, gives a "Non-Specific Positive" rather than a "False Positive."

Kolmer is inclined to believe there may be an occasional "False Positive" found in Tuberculosis of the glandular type.

Rockwood and Sanford in an analysis of 500 Diabetic patients from the Mayo Clinic reported Wassermann positive reactions in two cases, that were definitely "False Positive Reactions."

Reports from the literature and evidence from the author's experience with maternity patients forces the opinion that "False Positive Reactions" are often encountered in the later months of pregnancy.

In this country where Yaws and Relapsing Fever are rare, and for all practical purposes there are few "False Positive Reactions" to contend with if a better Wassermann system, such as the Kolmer, is employed. If a less satisfactory system is employed, one can expect a similar incidence of "False Positives" in normal blood as in most of the diseases listed. In other words, most "False Positives" are due to bad technique more than to the non-syphilitic diseases.

Effect of Primary Syphilis on the Wassermann

After the inoculation of the patient (appearance of the primary sore) with the Spirochaeta pallida, there is a lapse of time before the "Reagin" (complement-fixing material) is stimulated in the patient's blood serum. This "Reagin" is the body cellular response to the invading Spirochaetae, and is found in greatest abundance where the tissue-germ conflict is most intense. Wherever the "Reagin" is found, there are the unmistakable signs of disease activity near at hand. It may,
but probably does not, represent an immunity response on the part of the body, since it disappears with the subsidence of the Syphilitic infection. And this is not the usual immunity response in other types of infectious diseases. The "Reagin" is stimulated from the very inception of the Spirochaetae into the body tissues, but in quantities too small to be detected by our present methods. After some time it increases in the blood serum in amounts sufficient to be recognized by complement-fixation. In whatever part of the body the syphilitic germ is implanted, there will be "Reagin" production and complement-fixation. "Reagin" may be found locally, intravascularly, intraspinously, conjointly or independently, depending upon the points of election of the Spirochaetae implantation. This explains why one may have complement-fixation in the blood serum and not in the spinal fluid, or in the spinal fluid and not in the blood serum, or, perhaps, in tissue juices and not in either serum or spinal fluid. It is a question of distribution of the infection at the time of taking the various types of body fluids for examination.

The amount of "Reagin" in the blood serum increases to a maximum in the florid stage of the disease. This, then, runs along on a plateau with waves of greater and lesser amounts for years, and gradually subsides (if the patient lives long enough) with the lapse of years after the inoculation.

The gradual increase of "Reagin" in the patient's blood serum can be illustrated by two tables—No. I, given by Klauder, and No. II, by Craig:

**TABLE No. I (Klauder)**

<table>
<thead>
<tr>
<th>Time After Appearance of Chancre</th>
<th>Positive Dark Field</th>
<th>Positive Wassermann</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 days</td>
<td>93.9%</td>
<td>36.0%</td>
</tr>
<tr>
<td>10-20 days</td>
<td>52.9</td>
<td>64.7</td>
</tr>
<tr>
<td>20-30 days</td>
<td>50.0</td>
<td>70.0</td>
</tr>
<tr>
<td>30-40 days</td>
<td>60.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Over 40 days</td>
<td>30.00</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**TABLE No. II (Craig)**

<table>
<thead>
<tr>
<th>Weeks After Chancre (No Treatment)</th>
<th>Positives</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>77</td>
<td>27</td>
</tr>
<tr>
<td>Second</td>
<td>155</td>
<td>92</td>
</tr>
<tr>
<td>Third</td>
<td>158</td>
<td>119</td>
</tr>
<tr>
<td>Fourth</td>
<td>167</td>
<td>129</td>
</tr>
<tr>
<td>Fifth</td>
<td>43</td>
<td>35</td>
</tr>
</tbody>
</table>

Many other tables of this sort are available, but not necessary, to indicate the degree of complement-fixation one may expect at various times during the stage of the primary sore. And that the blood serum will give a positive reaction in most cases by the sixth week after inoculation.
Wassermann Results in Various Types of Untreated Cases

Table No. III was compiled from material at the Mayo Clinic by DesBrisay.

<table>
<thead>
<tr>
<th>TYPE OF CASE</th>
<th>CASES</th>
<th>POSITIVES</th>
<th>PERCENT POSITIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visceral Lues</td>
<td>18</td>
<td>18</td>
<td>100.0</td>
</tr>
<tr>
<td>Latent Lues</td>
<td>49</td>
<td>46</td>
<td>93.8</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>20</td>
<td>17</td>
<td>85.0</td>
</tr>
<tr>
<td>Osseous</td>
<td>19</td>
<td>16</td>
<td>84.2</td>
</tr>
<tr>
<td>Cutaneous</td>
<td>22</td>
<td>18</td>
<td>81.2</td>
</tr>
<tr>
<td>Mucous Membrane</td>
<td>10</td>
<td>8</td>
<td>80.0</td>
</tr>
<tr>
<td>Neurosyphilis</td>
<td>114</td>
<td>47</td>
<td>41.2</td>
</tr>
</tbody>
</table>

This table speaks for itself and indicates what help one may expect from the blood Wassermann in untreated Lues. One notes a positive Wassermann in 100.0% of Visceral Lues to around 40.0% in Neurosyphilis. And Stokes remarks apropos this point: “I doubt if there is any evidence available which will show that more than 60-70% positive reactions (blood Wassermann) should be expected in a cross section of late Syphilis, treated and untreated, as it passes through a general diagnostic ‘Clinic,’ and one might add: “as the average doctor sees it.” This, then, leaves much to be desired and indicates the necessity for the most sensitive Wassermann technique, consistent with delicacy and specificity. Such a sensitive test was used in determining the complement-fixation on the cases in Table III, yet an average of 20-30% failed to respond.

Boas finds in a study of 363 cases of early latent Lues (three years after inoculation) that 40.0% only gave a positive Wassermann reaction. And that in long-standing latent Syphilis, with tertiary manifestations, only 48.0% gave a positive Wassermann.

There is a decline in the incidence of positiveness with effective treatment so that Engman and Eberson are able to report a positive incidence of 15.0% in well-treated cases of latent Syphilis.

Provocative Wassermann

By this term is meant the reactivation of a negative reaction and rendering it more or less positive by injections of spirochaeticides. The best of these is arsphenamine, and the optimum time to expect a provocative effect is within the first week after the injection. Blood taken within 24, and 72 hours and 7 days after the injection will be almost certain to pick up any provocative effect. Stokes finds by such a method that he gets a truly provocative effect in 20% of his cases, where it could be reasonably expected. Moore and Kemp find a provo-
ative effect in 16.3% of 110 cases of Wassermann negative primary Syphilis. They also get a provocative effect in 54.3% of Wassermann positive primary and early secondary cases before treatment.

The indications for the Provocative Test are given by Stokes and O'Leary:

1. Cases with a definite history of primary and secondary lesions or suspicious genital sore of any description, where the Wassermann has been negative.
2. Syphilis in husband or wife or history of sore in either one.
3. Treated cases to determine if they are cured or require further treatment.
4. Obscure bone or joint lesions.
5. History of miscarriages unless the cause is obvious.
6. Mothers of syphilitic children who have no clinical indications of the disease.
7. Cases with a negative Wassermann, but positive from other laboratories.
8. Mental deviates and constitutionally inferior individuals with suspicious histories.
9. Certain signs indicated by special examinations, as decreased bone conduction with normal hearing, chorioretinitis, retinitis pigmentosa, bilateral dacryocystitis in childhood.

One may sum up by saying where there is a suggestive history or physical findings and negative Wassermann (granting that the blood has been examined by a reliable laboratory) a retest or provocative test is indicated.

**Comparison of Blood and Spinal Fluid**

Some interesting data supplied by Stokes and other workers in Table No. IV gives one an easy grasp of the relationship existing between the blood serum and spinal fluid.

<table>
<thead>
<tr>
<th>Secondary Syphilis</th>
<th>Late Syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early (Stokes and McFarland)</td>
<td>Late (Fordyce and Brown)</td>
</tr>
<tr>
<td>Blood Wassermann Positive</td>
<td>Blood Wassermann Negative</td>
</tr>
<tr>
<td>Spinal Fluid Negative</td>
<td>40.0%</td>
</tr>
<tr>
<td>Blood Negative</td>
<td>26.0%</td>
</tr>
<tr>
<td>Spinal Fluid Negative</td>
<td>23.0%</td>
</tr>
<tr>
<td>Blood Positive</td>
<td>40.0%</td>
</tr>
<tr>
<td>Spinal Fluid Positive</td>
<td>8.0%</td>
</tr>
</tbody>
</table>
These figures are rather startling and would seem almost unbelievable were it not for the fact that they emanate from reliable workers, and also for the additional fact that anyone with experience in doing many sera and spinal fluid tests conjointly could in a general way confirm them. From these figures it will be observed that the total positive spinal fluid Wassermann (aside from the blood) in early secondary Syphilis is 44%, in late secondary Syphilis (probably treated cases) is 26% positive, and in late Syphilis positive in 59% of cases, according to Stokes and Brown, as against the 62% positives in late Syphilis, according to Fordyce and Rosen.

A table of Wile and Marshall (Arch. Dermat. and Syph., 1921, III, 272) in a study of 1869 spinal fluid examinations from Syphilitics in all stages is very interesting:

<table>
<thead>
<tr>
<th>TYPE OF SYPHILIS</th>
<th>NUMBER OF CASES</th>
<th>PLEOCYTES</th>
<th>GLOBULIN</th>
<th>POSITIVE Wassermann</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital</td>
<td>53</td>
<td>26.4%</td>
<td>13.2%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Primary</td>
<td>236</td>
<td>16.1%</td>
<td>19.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Secondary</td>
<td>508</td>
<td>34.0%</td>
<td>35.1%</td>
<td>26.5%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>155</td>
<td>25.1%</td>
<td>26.4%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Latent</td>
<td>586</td>
<td>28.6%</td>
<td>27.1%</td>
<td>27.9%</td>
</tr>
<tr>
<td>Diffuse Cerebro Spinal</td>
<td>178</td>
<td>88.2%</td>
<td>97.2%</td>
<td>87.5%</td>
</tr>
<tr>
<td>Tabes</td>
<td>109</td>
<td>93.5%</td>
<td>98.1%</td>
<td>93.5%</td>
</tr>
<tr>
<td>Paresis</td>
<td>49</td>
<td>95.9%</td>
<td>95.9%</td>
<td>95.9%</td>
</tr>
<tr>
<td>Tabo Paresis</td>
<td>13</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Effect of Treatment on the Wassermann Reaction**

The Wassermann Test is the best criterion of the efficiency of treatment. It is the most delicate evidence of shades of improvement and the last evidence of cure. Every course of effective arsenical treatment tends to give a provocative positive reaction after the first injection in early treated cases. The positive Wassermann may be rendered negative in 80-85% of cases in primary and early secondary Syphilis as the result of six to eight weekly injections of arsphenamine. But a month after treatment, as spirochaetae multiply and reagin increases in the serum, many of these temporary negatives gradually become positive. A negative Wassermann test, remaining negative for two years after treatment, is the best evidence of cure. A persisting positive Wassermann means ineffective treatment and spirochaetal activity. A recurring positive Wassermann demands additional treatment. The Wassermann control of treated cases requires a very sensitive technique, utilizing cholesterinized antigen and overnight fixation. A Wassermann control during treatment is desirable as a guide, but in no case should be made a substitute for a careful plan of continuous treatment carried through to completion.
Treatment will reduce the positive Wassermann in practically all stages of Syphilis, and Boas reports negative reactions as the result of treatment in 80% of 435 cases. In all of the remaining 20% of cases the Wassermann positive reaction was rendered weaker excepting in one case. Moore and Kemp in their article "The Wassermann Reaction in Treated Early Syphilis" (Bulletin of the Johns Hopkins Hospital, July, 1926) say: "For all practical purposes, all traces of Wassermann fixation has disappeared by the third course of arsenical treatment—the 28th week." This is early Syphilis and continuous treatment from the time of diagnosis up to the 7th month. No such statements apply to the later stages and indifferent or intermittent treatment.

**Anticomplementary Reactions**

Here one obtains non-specific reactions in those tubes containing antigen and also in the control tube containing no antigen. The patient’s serum is able to fix complement without the intermediary use of antigen. Or, and this seems to be the true mechanism in many cases, the complement is destroyed in all tubes, for some as yet undetermined reason, and there is no hemolysis. Improper collection of the blood may be responsible for causing some of these anticomplementary reactions, but some will persist for weeks in spite of the best technique and efforts to eliminate them.

Kilduffe, using the Kolmer-Wassermann technique reports from 1-2% anticomplementary reactions. Sanford, also using a modified Kolmer technique, reports 1-2% anticomplementary reactions, and thinks they are about equally divided between positive and negative sera. But since his negative reactions outnumber the positives in the ratio of about five to one, the incidence is around five times more frequent in the positives as against the negatives. Our own experience with a modified two-tube Kolmer technique shows about 1% anticomplementary reactions. But our percentage of positives is much higher than obtains at the Mayo Clinic, and most of our anticomplementary reactions occur in this positive group. The evidence for this is obtained by rechecking the anticomplementary reactions by Kahn precipitation tests and by clinical findings. So that we have come to consider all anticomplementary reactions as potentially positive until further effort and study can prove their true nature.

**Kahn Precipitation Method**

Our own experience favors the Kahn test as a parallel control for the Kolmer-Wassermann method. It has a very definite place in checking up on the anticomplementary reactions
and will find good uses in every laboratory. In our laboratory it checks up completely with the two-tube Kolmer method in around 94 or 95% of the tests. It has strong advantage in emergency work, since a result can be had within an hour from the beginning to the completion of the test. Such emergencies arise in selecting donors for transfusions and in differential diagnosis where it is urgent to rule out the possibility of Lues. It has an especial advantage in supplementing the Kolmer-Wassermann technique.

While it has its uses, it is not yet sufficiently reliable to replace all other methods of laboratory diagnosis of Syphilis. The present author believes that the Kahn test is more dependable than many Wassermann systems now in use, but less dependable than the best Wassermann systems that can be utilized and now at hand. The Kahn precipitation method, with its micro and office modifications, lends itself readily to abuse. It is not a fool-proof method, but requires experience and careful usage to give worthwhile results.

Conclusion

Briefly, the present author has pointed out some of the inherent sources of error of the Wassermann complement-fixation test. He wishes to stress the need for using the best methods and the best technicians. But above all he would emphasize the intelligent use of the Wassermann by the physician himself instead of a stereotyped abuse.

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A COMPLETELY PARASITIC MYOMA OF THE UTERUS*

By KENNETH B. BOYD, M.D.

Baltimore, Md.

Definition

A completely parasitic myoma is a tumor, which, originating in the uterus, has become entirely detached from it, and which derives its blood supply from surrounding structures to which it has become adherent, notably, the omentum and intestines.

Myomata fulfilling the terms of this definition are extremely rare, although glibly spoken of in all text books on gynecology. Partially parasitic myomata are much more common; here, however, the tumor partially retains its original attachment to the uterus and receives its blood supply only partially from

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*From the Department of Gynecology, University of Maryland.
surrounding structures. Pedunculated subserous myomata which have become adherent and which receive their blood supply from intestine and other neighboring viscera are comparatively common.

Incidence

Masson, in a recent edition of "Surgery, Gynecology and Obstetrics," reported three cases of completely parasitic myomata, and mentions cases reported by West in 1858 and Turner in 1861. In 1905 Knott reported two cases of his own and mentions other cases described by J. Whitridge Williams, Noble and Martin. Kelly and Cullen have reported two cases of completely parasitic myomata.

In view of the rarity of this condition, it seems worth while to report a case operated upon in the Gynecological Clinic of the University Hospital during my term as resident on this service in 1925.

History

The patient was a young colored female, 33 years of age, well developed and nourished. Her chief complaint was pain at her menstrual periods. Her history was negative, with the exception of her menstrual and gastro-intestinal history. Her periods were always regular, coming every twenty-eight to thirty days and lasting four days. She had always had a rather free flow of blood and severe low central back pain on the first and second day of each period.

In February, 1925, she had unusually severe pain in her abdomen, similar to labor pains, which lasted about fourteen days. In June of the same year she had a similar attack. There was no bleeding with either attack and no missed periods preceded them. Her periods have been regular up to the present time and she has never had inter-menstrual bleeding. Her gastro-intestinal history is interesting in view of the subsequent findings at operation. Her appetite had always been good, but she had suffered for four years from indigestion in the form of heartburn and eructation of gas. She has been obstinately constipated for the last four years. No piles and no blood in stools. No vomiting. Has noticed mass in abdomen for one year.

Physical Examination

The examination was negative except for the abdomen and pelvis. No abdominal tenderness or rigidity. No distension. There was a large mass about the size of a grapefruit (about 9 cm in diameter) extending up from the pelvis in the midline.
It was movable and not tender, it was dull on percussion, and it extended about 5 cm above the umbilicus. There was no fluid in the flanks. The pelvic examination revealed a marital outlet. Bartholin’s glands were not palpable. The cervix pointed in the axis of the vagina. A small, movable tumor about 2.5 cm in diameter was felt just behind the cervix on the posterior wall of the uterus. The abdominal mass was also felt filling up almost the entire pelvis. It was hard, firm and freely movable. The cervix moved with it, and the uterine body could not be distinguished from it. The patient’s blood pressure was 114/74. Urinalysis was negative. W. B. C. 8,500, Hb—75%—R. B. C. 4,200,000. Wassermann test was 4 plus. The diagnosis made at this time was myomata uteri.

**Operation**

The patient was operated upon on July 21, 1925. The abdomen was opened through a median suprapubic incision. A large mass immediately presented itself. It was covered entirely by omentum, to which it was densely adherent. These adhesions were released and the mass found then to be surrounded by coils of intestines. To these it was likewise densely adherent. The pelvis was explored, and the uterus, tubes and ovaries found in normal condition, with the exception of a small pedunculated sub-serous fibroid on the posterior surface of the uterus. There was no attachment whatever between the large mass above described and the uterus. An attempt to free the mass from the surrounding intestines was made, but the richness of the blood supply between the tumor and intestines, together with the density of the adhesions, made this impossible. During the dissection alarming bleeding was encountered, and in an attempt to control this, a small hole was made in a coil of small intestine. This was repaired. A block of the tumor was then removed for diagnosis. The abdomen was closed without any further attempt at removal of the growth and without drainage.

**Course in Hospital**

The patient’s recovery was uneventful except for an hæmoptysis on the third day. X-ray and physical examinations revealed no cause for this. She left the hospital August 4, having run an afebrile course. The pathological report was myosfibroma, with degenerative and inflammatory changes.

**Conclusion**

Completely parasitic myomatous tumors of the uterus are rare. From a review of the symptomatology revealed in the literature, it would appear that a differential diagnosis be-
tween parasitic and non-parasitic myomata is practically impossible.

In the case reported, the gastric disturbances, gas formation, heartburn and obstipation were probably due to a partial obstruction of the bowel by adhesions of the intestines to the tumor.

The attack which she had in February and which she likened to labor pains may have signified the time at which the tumor became detached from the uterus and changed from a pedunculated, partially parasitic myoma to a completely parasitic tumor.

MILK SENSITIZATION A FACTOR IN THE TREATMENT OF ECZEMA IN INFANTS*

By Harry M. Robinson, M.D.

Baltimore, Md.

The problem of the treatment of children suffering with eczematous conditions has always been a difficult one. The diagnosis alone has never been sufficient to indicate any special line of treatment, because, as is well known, this type of inflammation of the skin is due to numerous irritant factors. As one cannot reason with infants, nor warn them against scratching, it becomes necessary to detect the underlying and actual cause of the eczema before one can finally hope to clear up the condition. When the cause of eczema in children is due to external irritants, such as the variety of soap, of talcum powder, or clothes, one may, without much difficulty, stop the cause and so relieve the eruption. But when these eczematous conditions occur in the first months of a child’s life and are not due to external conditions, then there can be only one possible cause of the outbreak, and that is milk.

We have, in the last few years, met many cases of eczema in children in whom we were sure milk was the prime etiological factor. In order to be sure that soap, powder, and articles of clothing were not factors in the causation of the eczema, we have, at various times, stopped their use, and when no benefit resulted, we then tried to impress the mother with our idea that milk and its products were causing the eczema, and so get her to co-operate. Occasionally we had the privilege of hospitalizing some children and so verified the etiology, as shown by the cure of the condition by a milk-free diet.

It was not until about a year ago that we had the opportunity of having an eczematous child under our control, more thor-

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oughly than any of our other cases, and in whom the treatment by all kinds of local measures had failed. Finally, beginning at the age of three months up to fifteen months, not only was all milk eliminated from the child’s diet, but also no product of milk was given, and we were able to demonstrate a “cure,” with apparent good health in the child. This case has proved so interesting because of the stoppage of milk in an infant’s diet, and the good results which followed, that it is worth reporting.

R. C. D.—Male.

Four days after the baby’s delivery we were called in to see the mother because of an itching, cutaneous manifestation distributed well over the body. The lesions were pinkish red in color, slightly hive-like in character, and largely confluent, although there were many small, irregular-shaped areas. This condition was diagnosed as “Toxic Dermatitis,” probably due to some food sensitization. It was found that the mother had had a craving for candy and cake, and this was being supplied to her in generous quantities. All sugars were then forbidden, and in a few days’ time the eruption entirely disappeared.

The infant was seen when it was about one month old. The mother complained that the child was losing weight, and that she, herself, had not enough milk, apparently, to satisfy the baby. A physician at one of the milk stations prescribed a modified milk diet, alternating with the breast milk. About two weeks after beginning this new diet the little patient started to scratch, and soon afterward began to show skin lesions of an eczematous type. In spite of the use of calamine lotion and anti-pruritic ointments, these skin lesions became gradually larger and more intensified, involving the face, forehead, and slowly, but consistently, extending over the rest of the body. The mother was advised not to use any soap or powder, but no benefit was noticed, since the baby seemed to itch and scratch just as much no matter what clothes it wore, and even when the clothes were removed, when the weather was warm enough, so we eliminated these as a possible irritant. The matter of diet was then considered. The first procedure was to eliminate, as much as possible, all sugar from the milk; but, after a week’s trial, this proved to be of no benefit. The baby was then taken off cow’s milk and limited to the breast milk. This also was apparently harmful, and the lesions continued to increase. The baby was then put on, successively: Mellin’s Food, Dextrose, Dry Co, Malted Milk, in conjunction with prepared barley. During these experimental periods we used as anti-pruritics: Crude coal tar ointment, calamine lotion, salicylic acid ointment, aristol ointment, sulphur oint-
ment, and boric ointment, but all with little or no effect. Then all forms of artificial milk were stopped, the baby only receiving water, in addition to breast milk. As the skin lesions were still present, to a marked degree, we came to the conclusion that the mother's breast milk was also harmful, and even this must be stopped and replaced by other articles of food.

As it had been experimentally proved that cod liver oil was equal to, or almost equal to, milk in vitamine power, we substituted the oil for the milk, and instituted as well a varied cereal and vegetable dietary.

Age, three months; weight, 14 pounds.
Substitution treatment was begun, meals four times a day, with a dietary as follows:
Cod liver oil—1 teaspoonful twice a day.
Soy bean mush—1 tablespoonful three times a day.
Oatmeal gruel—2 tablespoonsful (boiled four hours) twice daily.
Cream of wheat—2 tablespoonsful per day.
Prune juice—1 oz. per day.
Orange juice—1 oz. per day.
Spinach puree—1 oz. per day.
Half slice baker's bread (crust removed) in broth.
Broth—(beef or veal) 6 oz. per day.
Carrots—(mashed) with oleomargerine, 1 tablespoonful daily.

Two weeks later the skin showed definite signs of improvement.

Age, four months; weight, 16 pounds.
Orange and prune juice believed to be irritating, therefore forbidden. Tomato juice substituted. Cod liver oil, one teaspoonful three times a day.

Age, five months; weight, stationary at 16 pounds.
The eczema has disappeared from the trunk and lower extremities. From the supervision of the diet list, tomato juice also believed to be irritating.

Age, six months. First tooth has appeared.
There was still a marked amount of eruption on the face, scalp, and arms, and it was, therefore, decided to send the child to the hospital for closer observation. Beginning with the first day at the hospital, no one was allowed to handle the baby other than for bathing and changing of clothes. We also started tying the baby's hands to the side of the bed, and ankles to the foot, so that he could not scratch. The skin was improving nicely while in the hospital, when there suddenly appeared a mild epidemic of ileo-colitis. At the time of re-
moval the child had been in the hospital for two weeks. All instructions were continued at home, and semi-weekly supervision of the general habits of the child were made.

Age, seven months. Three teeth are present. Weight, 17 pounds.
Lima beans added to the diet, and all other articles that had been allowed increased 100%. Baked apples added to the diet, half baked apple per day. Two tablespoonsful of boiled rice (boiled two hours) permitted.

Age, eight months; weight, 19 pounds.
Meals reduced to three a day. Four teeth present.
A slight exacerbation of itching and eruption, apparently worse on the days on which the baked apple was eaten. Apples forbidden.

Nine months. Weight, 20 pounds.
Bread permitted up to two slices per meal. Cod liver oil increased to one teaspoonful five times a day. All fresh vegetables, except cabbage and cauliflower, were permitted at this time. Also shredded or chopped beef, veal or chicken (fat-free as far as practical), one tablespoonful per day. Soy bean mush cut to one teaspoonful three times a day (but as this was found to apparently cause constipation, the original amount, of one tablespoonful three times a day, was resumed).
The only lesions present now were on the cheeks, with an occasional erythematous patch on the chest.

Ten months; 20½ pounds. Condition stationary; five teeth present.

Twelve months; weight, 22 pounds. Six teeth are present. Condition the same.

Thirteen months. The only actual lesions present now are on the cheeks. For the purpose of finding out the cause for the non-disappearance of these lesions, a scarification of the skin and an intradermal test with a dilute solution of sterile milk (1-1000) and aolan were used. In both the scarification and intradermal tests there was an immediate reaction, with a hive-like lesion appearing within a few seconds, and lasting for three hours. It was then thought that the parents, or some friends, were giving the child milk; but, after close questioning and frequent visits, it was thought wise to carefully inspect the daily dietary of the child for the purpose of detecting by what means milk was being taken in, and, by a process of elimination, it was found to be baker’s bread. This decision was verified by the baker himself, who said he used milk in making the bread; so, we tried replacing the baker’s bread by
home-made bread in which no milk was used. Since this substitution the child has entirely cleared up. The child is now fifteen months of age, weighs 26 pounds, walks and climbs chairs easily, and has nine teeth.

It was rather difficult trying to find a general diet of cereals, fruits, vegetables and products, easily tolerated and nourishing, for the patient. It was necessary to experiment with various foods from week to week, receiving from the parents a detailed account of amount and time of the giving of the various articles of diet. In this way it was possible to follow when exacerbations of itching ensued after the taking of any given food. For example, when it was shown, by this list, that tomatoes were aggravating to the child’s skin, we eliminated them, and to prove this, tomatoes were again given, and found that it was, apparently, a definite factor; likewise, oranges, prunes, and eggs.

From three months to nine months, after which time we allowed him a more varied diet, he subsisted mostly on cod liver oil, soy bean mush, barley, oatmeal, spinach, cream of wheat, potatoes, and bread soaked in veal or beef broth. We found that curtailing his amount of soy bean mush, which he usually received three times a day, brought on constipation, and that putting him back on regular soy bean allowances corrected this condition. The cod liver oil has been continued since first prescribing it. The first doses were one teaspoonful twice a day, which was increased to one teaspoonful three times a day in the child’s fifth month. When the child was eight months of age, the cod liver oil was given one teaspoonful five times a day, and has been kept so to the present age of fifteen months.

He has continued to thrive and gain weight consistently. Since the substitution of home-made bread, without milk, for baker’s bread, which proved to be an irritant food, the eruption has entirely disappeared.

He is now receiving all fresh vegetables (with the exception of cabbage), broths (from which grease is almost entirely removed), ground or shredded meat (except hog meat) about one tablespoonful per day, all cereals (without milk), soda crackers and home-made bread (without milk). His liquids consist only of broths and water. Instead of butter, oleomargarine was given, as this seems to be well tolerated.

In addition to the above case, there were two or three more cases in which milk also seemed to be the etiological cause of the eczema, but we were not as thoroughly able to control the patient as in the one just reported.
Case No. 2. W. H. K.—Male.

This little boy first came to us in September, 1923, at the age of six months, with a condition which had been diagnosed as eczema by his physicians. This diagnosis we concurred in.

On examination there were patches on each cheek, on the forearms, and hands. The hands showed a hyper-keratosis, with some exfoliation at the sides. These patches were about 3 to 5 cm. in diameter, infiltrated, covered with scales, moderate in amount, of a pinkish-red color, and ill-defined in outline. There were several excoriations over the surface of each lesion. These scaly lesions had been present since the child was about three weeks old. At this time the mother's milk was thought to be at fault, and the child was put on a modified milk diet, but the lesions became progressively worse.

For the two months preceding the visit to the office the child had not gained in weight and was sickly-looking. We believed that milk sensitization was at fault, and explained fully to the mother the problem of stopping all milk and replacing it with cod liver oil and a general diet, and the difficulties that would face her. She promised to co-operate.

At her next visit, a week later, the child had very much improved, especially the palms, which had been much thickened at first, had now softened considerably. On the following visit, however, about two weeks after the last, the condition had relapsed and was practically as bad as when first seen. The mother then told us that the child's grandmother had refused to allow any baby of her kin to be brought up without milk. We once more pointed out the reason for the relapse, which the mother was able to understand, and advised the return to a milk-free diet.

At the next visit, ten days later, the condition had again cleared considerably, so she was told to return again in three weeks' time. When seen at this time, the condition was again very bad, and this time it was the father's fault; he could not understand how any child could be brought up without milk. He had been away, and on returning was, of course, horrified to think that the child was forbidden milk, but when he saw the ill effects that resulted after a return to the milk diet, he also became pliant, and this time the child started on a milk-free diet, until it was entirely cleared. It was then discharged, and the mother told to keep the child on the diet, gradually increasing general foods. We saw the child again two and one-half years later. The mother told us that the child had been kept on the prescribed diet and had continued to thrive, and that the skin had cleared up entirely.
About six months previous to this last visit, lesions had begun to appear on the forearms and hands, and the child was scratching very much. On examination, there was present, on each forearm and hand, a patch about 4 to 6 cm. in diameter, irregular in shape, ill-defined, and moderately scaly, with evidences of excoriation. Remembering the child's sensitization on the previous visit, we went through the diet carefully, and found that the child was receiving cheese and whipped cream, but no milk or butter. This was pointed out to the mother, with the promise of eliminating these articles. At the next visit, three weeks later, the child had cleared up once more.

Case No. 3. H. K. W.—Male, age 8 months.

Apparently normal skin during the first month of life. When one month old the mother noticed a dry, parched, scaly appearance of the hands and wrists, with the baby continually scratching. On examination, there were numerous excoriations over the involved areas, with infiltration and scaliness. The color of the lesions was light pink. Here, also, after much quizzing, we believed that the irritant factor was milk. We told the mother that if she were very anxious to relieve the condition, she must promise to follow our directions closely. We agreed to supply her with a dietary, which she promised to follow.

In three or four weeks' time the mother telephoned us that the baby had entirely cleared up, and was not losing weight under the diet.

Case No. 4. E. C.—Male.

This boy was sent to us when three years old by Dr. Kovna. The skin manifestation was limited to the bends of the elbows, and showed two dark-reddish, ill-defined areas about 7 by 4 cm. in diameter, scaly, markedly infiltrated, and thickened. We tried putting this little patient on a general diet, sugar-free and excess fat-free, but with no apparent results, although we were also using, first, calamine lotion, then 5% salicylic acid ointment, followed by oil of cade ointment. We then advised hospitalization, and took the child to the University of Maryland Hospital. After some experimentation, we decided to eliminate all milk from the diet, and the condition began to clear up. About ten days after the child had been in the hospital, and when the lesions were apparently clearing up, there was a sudden recurrence of all the lesions, and an exacerbation of itching. On investigation, the interne found that one of the ward nurses had been giving the patient milk. The nurses were warned about giving the patient milk. After this the patient entirely cleared up.
As can be seen from the above, the problem in eczema, as in all other conditions, is to find the cause, and, if possible, eliminate it. The real difficulty comes in substituting something for that which has been taken away from the patient. This is not nearly so difficult with adults as with children. If we can gain the confidence and consent of the parents or guardian to undertake a substitution diet, all is easy, but the most difficult part is to convince parents that a child can thrive and live without milk.

In infants this substitution diet we selected from the following list of foods:

<table>
<thead>
<tr>
<th>Cod liver oil</th>
<th>Tomato juice</th>
<th>Prune juice</th>
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<tbody>
<tr>
<td>Soy bean mush</td>
<td>Beef broth</td>
<td>Zwieback</td>
</tr>
<tr>
<td>Oatmeal, strained</td>
<td>Gruels</td>
<td>Potatoes</td>
</tr>
<tr>
<td>Cream of wheat</td>
<td>Puree of spinach</td>
<td>Carrots</td>
</tr>
<tr>
<td>All cereals</td>
<td>Orange juice</td>
<td>Bread (in broths)</td>
</tr>
<tr>
<td></td>
<td>Rice</td>
<td></td>
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</tbody>
</table>

Those articles that we found easiest tolerated without causing irritation were:

- Barley mush  
- Cod liver oil  
- Soy bean mush  
- Oatmeal, strained  
- Cream of wheat  
- Beef broth  
- Potatoes (white)  
- Bread (in broths)  
- Rice  

And those ingredients most often given in the meals were:

- Soy bean mush  
- Bread soaked in broth  
- Strained oatmeal

In the case of the first child reported, at no time could we give tomato juice or orange juice.

Conclusions:

1. The cases cited above belong in the group of eczematous eruptions caused by milk sensitization.

2. The only satisfactory treatment is elimination of milk from the diet with substitution, inasmuch as desensitization is impracticable in patients so young.

3. Conclusion No. 2 is possible of attainment by substitution of cod liver oil and vegetables as outlined in the article.

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I am indebted to Mrs. Robinson for her able help in the compilation and preparation of the child's dietary.
RECOLLECTIONS OF FIFTY YEARS OF THE MEDICAL AND CHIRURGICAL FACULTY*

By Randolph Winslow, M.D.

Baltimore, Md.

On April 13, 1876, I was elected a member of this Faculty, and have been continuously in membership since that date. At that time there were about 225 members, of whom 40 were from the counties and 19 were non-residents. Of that number only two are living at this time, or, at least, only two are still connected with the Faculty—Dr. Samuel Theobald, elected in 1874, and Dr. Samuel K. Merrick, elected in 1875, who, however, has not been continuously in membership.

As early as 1835, and perhaps at an earlier date, an effort had been made to establish a library, and a number of standard books and well-known journals were added from year to year, as the meager funds available permitted. In 1857 the library was in such a sad plight that "the Secretary of the Committee was authorized to have the books boxed up" and stowed away until such time as the Society might be in possession of a hall of its own. Fortunately, this time was near at hand, for at the annual meeting in June, 1858, Dr. Joshua I. Cohen, the President, "congratulated the members upon their assembling for the first time since their organization, in 1799, in their own hall, and under circumstances so favorable to the future prospects of the Faculty." The library was removed to this building and was once more opened to the members. The new home of the Faculty was located at 47 North Calvert Street, and had a frontage of 25 feet and was two stories and an attic high.

No proceedings of the Faculty were published from 1860-1869, but it is evident that the hall on Calvert Street did not meet the requirements, as another house was purchased on Courtland Street, and the 74th annual session was held there in 1873, at which time it was reported that no additions had been made to the library during the past year.

The 75th annual session was also held at the hall of the Faculty, No. 60 Courtland Street, in April, 1874, and at this meeting a resolution was passed authorizing the Executive Committee to sell or rent the property and to rent a suitable hall in a more central position. This was done, and the next annual meeting, in April, 1875, was held in the rented hall at 122 West Fayette Street. I was present at this meeting, but was not a member. Thirty-seven new members were elected

*Read at the 129th annual meeting of the Medical and Chirurgical Faculty of the State of Maryland, April 27, 1927.
and a lengthy report was received from the Library Board, which said: "The library as it now exists is of no practical utility or benefit to the profession. Not a single physician (as far as your committee are informed) has within the past year availed himself of the privilege of membership, and the 1,400 volumes have been quietly left alone."

The annual oration was delivered by Dr. Joseph M. Toner, of Washington, D. C., on "The Medical History and Physical Geography of Maryland," a very valuable contribution. Valuable papers also were read at this session by Dr. William T. Howard in his report on "Obstetrics and Gynecology," by Dr. Thomas R. Brown on "Surgery," by Dr. Richard McSherry on "Materia Medica and Therapeutics," by Dr. I. E. Atkinson on "The Contagium-particles of the Eruptive Contagious Fevers," by Dr. Samuel Theobald on "Tinnitus Aurium," by Drs. Francis T. Miles, Samuel C. Chew and others. I mention these names simply to show that men of the greatest prominence and highest attainments have contributed to the scientific proceedings of the Faculty as far back as I have personal knowledge. There were others, however, who, while not so active in the scientific work, were of the greatest service in the administration and executive duties of the Faculty, among whom were Dr. Wilson G. Regester, the Secretary; Dr. Judson Gilman, Treasurer, and Dr. G. Lane Taneyhill, chairman of the Library Board, and subsequently, for many years, Secretary of the Faculty.

In 1876 the annual session was also held in the hall, 122 West Fayette Street, over a tailor shop. At this meeting 11 new members were elected, of whom the writer is the sole survivor. The annual oration was delivered by Dr. Roberts Bartholow, Professor of the Theory and Practice of Medicine in the Medical College of Ohio, and the author of a work on "Therapeutics," which was a great authority in its day. His subject was "The Degree of Certainty in Therapeutics," which was treated in a masterly manner. Incidentally, I might mention that Dr. Bartholow graduated from the University of Maryland in 1852, and that he was called from the Medical College, in Cincinnati, to Philadelphia to be Professor of Medicine in Jefferson Medical College. Reports on surgery were read by Dr. Christopher Johnston, Dr. Thomas R. Brown, Dr. Samuel Theobald and Dr. Aaron Friedenwald, and on the practice of medicine by Dr. Abram B. Arnold, on gynecology by Dr. Augustus F. Erick, on psychology and physiology by Dr. John S. Conrad. Dr. Frank Donaldson and others read interesting voluntary papers. But the most important communication was that of the combined Executive Committee and the Library Board, which had been instructed to consider the resolutions of the Library Board made at the previous annual ses-
sion. The names of the members of this committee deserve to be inscribed in bronze and placed on the walls of this hall, as from their recommendations the present magnificent library had its origin. The committee was composed of the following gentlemen: Samuel C. Chew, Philip C. Williams, Henry M. Wilson, Richard McSherry, John Morris, G. Lane Taneyhill, W. F. A. Kemp, John Dickson, Charles H. Jones and I. Edmondson Atkinson. The report advised the sale of some of the venerable tomes on the shelves of the library to the Army Medical Library; the securing of a suitable suite of rooms for meeting-place and library; the subscribing to a number of journals; hospital reports and society transactions, and purchasing such recent books as would be of interest and advantage to physicians and a special assessment of four dollars, annually, on each permanent and delegate member of the society. The sum of $450 was appropriated for the purposes mentioned; a new location was secured for the library, at the northwest corner of Park Avenue and Fayette Street, where the Baltimore Commercial Bank is now located, and on August 22, 1876, the formal opening took place. Dr. J. Shelton Hill was appointed librarian and the rooms were open every afternoon from 3 to 6 o'clock. At the annual meeting in 1877 Dr. Hill reported that there were 1,863 bound volumes and 512 unbound journals and periodicals now in the library, and that 871 volumes had been added since the change of location. The attendance had also been much increased.

The session of 1877 was held in the concert hall of the Academy of Music. Thirty-two new members were elected, of whom Drs. Joseph T. Smith and James D. Iglehart, of Baltimore, and Dr. Arthur Williams, of Howard County, are still with us. Prof. Christopher Johnston presided at the sessions and delivered an able address, which seems to have been the first of the long line of presidential addresses that have become customary since that time. I wish here to pay my tribute of respect to the memory of Dr. Johnston. He was a man of high character, of large culture and of great professional attainment; he was a skilled microscopist, an artist of no mean ability and an excellent linguist. He had spent several years in Paris and was thoroughly imbued with French ideas of practice. Dr. S. Weir Mitchell, of Philadelphia, delivered the annual oration and described his now famous "rest cure." A large number of highly interesting papers were read at this session, and, incidentally, I may say that I made my first appearance before the society as an author and read an account of some cases of "incontinence of urine treated by the hypodermic injection of strychnia," which communication, if it did no good, at least, probably, did no harm.
The session of 1878 was also held at the Academy of Music Concert Hall, and was a very interesting occasion. Dr. Abram D. Arnold presided, and delivered an address on "Homoeopathy," which, while interesting, probably did not worry the homoeopaths much or deter anyone so inclined from embracing and practicing that cult. The annual oration was delivered by Dr. Ira Remsen, of the Johns Hopkins University, whose subject was "Chemistry in Its Relations to Medicine." Dr. Remsen began his address with the following declaration: "Eleven years ago, in company with 99 others, I was proclaimed fit to enter upon the career of a medical man. My erudition in medical matters was exhibited in a thesis on 'Fatty Degeneration of the Liver,' a subject of which I was and am profoundly ignorant. In fact, I had never seen a liver which had undergone fatty degeneration, nor a patient who possessed or was supposed to possess one; nor, may I add, have I had that pleasure up to this day. Let me introduce my remarks, then, by the emphasized statement, I am not a medical man." He then delivered an entertaining and useful address. Prof. Nathan R. Smith, the great surgeon, known far and wide as the "Emperor," died on July 2, 1877, and at this meeting Dr. Samuel C. Chew delivered a magnificent address commemorative of his life and work. The report on "Surgery" was presented by Dr. Alan P. Smith, who gave an account of "52 successful cases of lithotomy." In all but six cases the operation was performed with the lithotome devised by his father, Professor Smith, and to the use of this instrument he attributed much of his success. In one case there were reasons why an anaesthetic could not be given, and upon the assurance that the operation would be done quickly, the patient submitted "and the operation from the first incision to the extraction of the stone was accomplished in a few seconds less than a minute." All these were lateral lithotomies, a procedure that has almost gone out of use. The most interesting case in his series was that of a middle-aged man who had a double penis, with two separate and distinct bladders, from one of which he passed clear urine, while from the other the urine was ammoniacal and turbid with mucus and pus. He removed a calculus from this bladder.

At this same session Dr. Augustus F. Erich narrated a case of double vagina and uterus which had come under his observation and Dr. John N. Monmonier reported two cases of extrophy of the bladder upon which he had operated with marked benefit to the patients. Dr. L. McLane Tiffany reported a case of "Naso-pharyngeal Polypus" which he removed by a temporary depression of both upper jaws; a truly formidable operation. This patient recovered and lived for many
years subsequently. Dr. Tiffany repeated this operation in the early "nineties" with an equally good result. At the time of the first operation he only knew of one similar attempt by Cheever, of Boston, which terminated fatally in 120 hours.

A number of highly instructive papers were read at this annual meeting, which I must pass over without comment. In 1879 we found ourselves back over the tailor shop at 122 West Fayette Street, the former quarters having proved inadequate, and here the annual meeting was held. The President, Dr. Samuel P. Smith, of Cumberland, a very ancient man, was prevented by illness from attending, and Dr. James Carey Thomas, First Vice-President, acted in his stead. The oration was delivered by Prof. H. Newell Martin, of Johns Hopkins University, on "The Physiology of Secretion," which was an able and interesting address. The Library Board reported many additions of books and journals to the library and a great increase in the number of its patrons. Thirty-two gentlemen also were elected to membership in the Faculty during the year, but the losses by death and in other ways largely offset this increase. The most serious loss of the year was that of Prof. Thomas R. Brown, who was a very active and useful member of the Faculty; a talented surgeon, who had already attained distinction, and a most estimable gentleman. He was in the 35th year of his age when the grim reaper cut short his very promising career.

The session of 1880 was held in Hopkins Hall, under the presidency of Dr. Samuel C. Chew, who delivered a beautiful inaugural address entitled "Medicine in the Past and in the Future." Among the striking expressions of the address is the following: "Though much has been accomplished, much remains to be done, and the attainments of the present time may hereafter seem but faint beginnings in comparison with what will then have been achieved. A broader light will surely illumine much that is now obscure. More delicate and subtile methods of examination than any we now possess will shadow impending diseases, or detect them at earlier and more remediable periods of their courses." How prophetic of what has now come to pass! In less than three years Koch announced his discovery of the tubercle bacillus, and both the diagnosis and treatment of pulmonary diseases have been revolutionized in consequence thereof. The annual address was by Prof. John W. Mallet, of the University of Virginia, whose subject was: "The Claims of Science for Its Own Sake Upon the Medical Profession," which was a very earnest plea for the cultivation of pure science as a means of mental discipline and a source of mental relaxation and invigoration. The most outstanding paper was the report of the section on practice of medicine by Prof. Abram D. Arnold on "The Use of the Sphygmograph in
Practice," which Dr. Christopher Johnston declared to be an epoch in the history of the Society.

The year 1881 was a momentous period for our association. The annual meeting was held in Hopkins Hall under the presidency of Dr. H. P. C. Wilson, who delivered his inaugural address, in which, for the first time as far as I am aware, the need of a fire-proof library building was stressed. He said: "We all desire to have a complete medical library. It should be so founded as to be imperishable, so founded that those who contribute to its shelves may feel that their contributions will be safe for their children and the generations who follow them. We should have a fire-proof library building, and with such, books would flow in to us from many sources where they are now withheld." This was a tocsin call, but the times were not ripe for carrying out the message. At this very session Dr. Joseph M. Toner, of Washington, was present and gave an incomplete list of medical Bibliographies of Maryland, chiefly prior to 1800. On his death some years later he left his valuable collection of books to the Faculty, on condition that we furnish a fire-proof building for its protection. This we could not do, and the collection went to a library in Washington. It was a sad loss to us. The Library Committee made an encouraging report and said: "Your committee returns today the trust confided to it, richer, more precious than when received. It entreats the Faculty to recognize the vital importance of its report and to provide for the maintenance of the library in a manner that will prove creditable to the intelligence and liberality of our profession." In the resuscitation and development of the library the names of Drs. I. E. Atkinson, T. A. Ashby, E. F. Cordell and J. Shelton Hill have an important place.

At this meeting, also, Dr. John R. Quinan read an historical sketch of John Archer, M.D., the first graduate of the Medical College of Philadelphia, now the University of Pennsylvania, and presented his diploma conferred on June 21, 1763. This is the first diploma ever issued by a medical college within the limits of the United States of America, and it is now hanging on the wall of the Frick room. It is a priceless possession and ought to be securely protected, which is not the case. The annual address was delivered by Prof. William Goodell, of the University of Pennsylvania, on "The Dangers and Duty of the Hour." He animadverted on the dangers of the intensive education of girls, as productive of overdevelopment of the brains and the underdevelopment of the body, especially the reproductive organs, with ill health and sterility as a sequel. "I am," said Dr. Goodell, "old-fashioned enough to believe that the chief end of woman is to be married, to have a home of her own, and to give birth to healthy children; and that woman
as woman has no right to do anything that will unfit her for this end.” These words are as appropriate now as when they were uttered, 46 years ago.

Prof. H. Newell Martin described his method of isolating the mammalian heart and studying its functions, while the rest of the body was entirely dead. Dr. George M. Sternberg, subsequently Surgeon-General of the United States Army, reported a “Fatal Form of Septicemia in the Rabbit, Produced by the Subcutaneous Injection of Human Saliva.” An experimental research. Many valuable papers by our members were read and discussed at this meeting, which I must pass over without further notice.

The house on Courtland street had been carried on the books at an estimated value of $5,700, but it had fallen into disrepair and was an expense and not an asset, hence the Executive Committee was authorized to dispose of it on the best terms possible. This was done and the chairman reported the sale of the property for $550, less expenses, leaving a net balance of 503.50 in the hands of the Treasurer, “a loss below actual cost of $5,196.50;” certainly a severe blow to an impoverished society.

The Sesqui-Centennial of the founding of Baltimore occurred in 1880, and the Faculty, desiring to appropriately celebrate this historical event, appointed certain gentlemen to contribute to the medical phases of this important occasion. Dr. B. Bernard Brown’s address was on “The Surgeons of Baltimore and Their Achievements,” and he mentioned a fact that is not generally known. “The first surgeon,” says he, of whom history gives any account was Dr. Walter Russell, who in June, 1608, accompanied Capt. John Smith in his expedition up the Chesapeake Bay and landed on the present site of Baltimore. “It chanced Captain Smith, while taking a fish (not knowing her condition), which much resembled a Thornback, but a long tayle like a riding saddle whereon the middest is a most poisoned sting, of two or three inches long, bearded like a saw on each side, which she struck into the wrist of his arm neare an inch and a half; no blood or wound was scene, but a little blue spot, but the torment was instantly so extreme that in four hours had so swollen his hand, arm and shoulder we all with much sorrow concluded his funerall and prepared his grave in an island by, as himself directed; yet it pleased God by a precious oyle Dr. Russell at the first applied to it with a probe (ere night) his tormenting paine was so well assuaged, that he ate of the fish for his supper, which gave no less joy and content to us than ease to himself, for which we called the island Stingray isle after the name of the fish.”
Dr. G. Lane Taneyhill read "An Historical Sketch of the Medical Societies of Baltimore from 1780 to 1880;" Dr. Thos. A. Ashby on "Medical Journalism in Maryland," and Dr. Eugene F. Cordell on "The Medical Schools of Baltimore," and all of these are valuable historical documents. Dr. John R. Quinan, a gentleman of marked literary taste and ability, prepared a volume of 274 pages on "The Medical Annals of Baltimore from 1608 to 1880," which will always be authoritative on the lives and achievements of our predecessors in this city and state. Our meetings continued to be occasions of interest and of helpfulness and were presided over by men of distinction, either local or national. Eminent physicians from other cities continued to address us on important topics, among whom were Drs. Johns S. Billings, of the Army Medical Library, and Dr. William Pepper, Provost and Professor of Medicine in the University of Pennsylvania. At this time we began to derive great benefit from the close association with the Johns Hopkins University, and at almost every annual meeting Prof. H. Newell Martin and his assistants made valuable contributions.

Death each year took its toll of our members, and we were called on to lament the loss of Dr. Wilson G. Regester, our efficient secretary; of Dr. Judson Gilman, our careful treasurer; and of Dr. E. Lloyd Howard, one of our most useful and active fellows. These gaps were filled by the election of Dr. G. Lane Taneyhill as secretary, a position he continued to occupy until near the time of his death; while Dr. W. F. A. Kemp succeeded to the office of treasurer, and for 15 years was a veritable watch dog of the treasury. Dr. Lloyd Howard was an able man, who had achieved distinction in his profession, and at the time of his death was Professor of Physiology in the College of Physicians and Surgeons, and was the President of the State Board of Health and Resident Physician at the Marine Hospital. He was drowned, probably on account of defective eyesight, by falling overboard from his boat.

In ten years the membership remained almost stationary. Three physicians of negro extraction were elected members, which caused such dissatisfaction that some of our most valued associates handed in their resignations. Dr. Whitfield Winsey was a very blond man, whom no one would suspect of having negro blood, but he never claimed to be otherwise. He was a graduate of Harvard Medical School and was a very reputable man. Dr. Reverdy M. Hall would also have passed for a white man, while Dr. William H. Thompson was an unmistakable negro. The arrangement was not satisfactory, and no others of the colored race have been elected since. The Library Board continued to appeal for more funds at each annual meeting, but reported each year larger numbers of books and journals and greater attendance of readers.
In looking over the published transactions, I was surprised to find the following statement, of which I have no recollection whatever. On May 16, 1885, Dr. R. Winslow offered the following resolution: "Resolved, That a committee of five be appointed by the President to memorialize the next legislature in regard to the passage of a bill to regulate the practice of medicine in the State of Maryland," which was adopted and was sent to the legislature, but was subsequently withdrawn. For the next seven years efforts were made to secure legislation on this important matter, but it was not until 1892 that we succeeded in getting a law passed by the legislature and signed by the Governor, establishing a Board of Medical Examiners for the State of Maryland; which restored, in a measure, chartered rights of which this Faculty had been illegally deprived for more than half a century. In 1886 we made another hegira, this time to the Athenæum Building, now occupied as the offices of the Commissioner of Motor Vehicles. This was a dark and gloomy hall, but it was large and better adapted to our needs than any other location we had hitherto occupied, and here we remained for the next ten years. Another event of great importance during 1886 was the election to membership of one who is now the Nestor of our profession, whose name is known and acclaimed the world over, Dr. William H. Welch, and whose services to the Society have been both varied and great. The annual meeting assembled in our new home in 1887, under the presidency of Dr. George W. Miltenberger, the great family physician and obstetrician of the city, and Dr. Welch made the annual address on "Modes of Infection." In 1888 Dr. I. Edmondson Atkinson was the president, an honor earned by many years of devoted service to the Faculty and especially to the renaissance of the library, without which it is doubtful whether the library would have survived. Dr. Richard Gundry, Superintendent of Spring Grove Insane Asylum, a highly cultured gentleman, was the orator of the occasion.

We now come to another year which may be regarded as epochal in the history of the association. At the annual meeting in April, 1889, Dr. John Morris was President and Dr. William Osler, the newly elected Professor of Medicine in the Johns Hopkins University, made the annual address on "The License to Practice." This was our first meeting with one who was destined to do more for the establishment of our association on a firm foundation than any other person living or dead. He was elected to membership in 1890, and for the next 15 years was most active in advancing its interest, and when called to be Regius Professor of Medicine at Oxford University in 1905, he still bore us on his heart and mind and frequently remembered us with valuable gifts. One of his last efforts,
while on his death bed, was to send a check for $1,000 to Dr. Ruhräh to help extinguish the debt on this building. This hall in which we have met is dedicated to him as a very slight token of our love and esteem. In the autumn of 1889 a semi-annual meeting was held at Hagerstown, which was the first of similar meetings, that have been continued with pleasure and profit since that time in nearly all the larger towns of the state. A great effort was now made to secure a larger number of members, and at the annual meeting in 1890 Dr. Ashby announced 92 candidates for election, and as a reward for his efforts he was elected president for the ensuing year. In 1892 Dr. Wm. H. Welch was elected president. In 1893 Dr. L. McLane Tiffany was the presiding officer, and the annual address was given by Dr. Reginald H. Fitz, the physician and pathologist who was the first in recent times to point out the agency of the vermiform appendix in the production of the serious conditions occurring in the right iliac region of the abdomen. One hundred and twenty new members were enrolled this year. Having now secured a much larger list of fellows, a change of location began to be thought of, and on April 18, 1895, the fine house and lot No. 847 North Eutaw Street was bought on favorable terms. On December 14, 1895, occurred one of those catastrophies that are the occasion of shock and gloom. Dr. J. Edwin Michael, who had been elected president at the annual meeting in April, died before he had had a chance to exercise the duties of the office. He was a large, handsome man, of fine ability and attainments, a fluent speaker and a genial and popular person. Dr. Charles G. Hill, who has recently passed away, succeeded him as president. During 1896 a Book and Journal Club was formed by subscription, the object of which was to secure additional books and journals for the library, as well as to encourage a literary taste among our members. This club, after many years of existence as a private enterprise, is now an integral section of this Faculty, and is one of its most interesting and useful activities. In the same year another incident of great interest occurred. This was the establishment of the Frick Fund, in honor of the late Prof. Charles Frick, by the generosity of his brothers, Messrs. W. F. and Frank Frick, and subsequently increased through a donation by his friend, Hon. Revedy Johnson. In 1897 Dr. Osler was the presiding officer at the annual meeting, and delivered a splendid address on "The Functions of a State Faculty." Dr. David W. Cheever, Emeritus Professor of Surgery at Harvard, delivered the annual address. The next year Dr. Charles M. Ellis, of Elkton, was president, and the subject of his address was "The Country Doctor." Dr. Ellis deserves more than a passing notice, as on his death, some years later, it was found that he had bequeathed to the Faculty 60 shares
of the capital stock of the National Bank of Elkton, the income from which amounts to $1,800 a year. Truly a great relief to our overburdened treasury. Dr. Wm. T. Councilman, formerly one of our own members, but then Professor of Pathology in Harvard, delivered an admirable address on "Epidemic Cerebrospinal Meningitis." Miss Marcia C. Noyes was appointed librarian about this time, and under her administration the library has quadrupled in numbers and usefulness. The centennial of the founding of the Faculty was now drawing nigh, and it was determined to celebrate the anniversary with appropriate ceremonies. The honored Chew was for the second time called to the presidency, which he filled in every way worthy of the occasion. Dr. Eugene Fauntleroy Cordell was appointed to prepare the Medical Annals of Maryland, which he accomplished in a masterful manner, and the large volume presented by him will be for all time authoritative on the medical history of Maryland from its settlement in 1634 to 1899.

The centennial assembly met in McCoy Hall, Johns Hopkins University, on April 25-26-27, 1899, and besides addresses by many eminent members of the profession, there was a large exhibit of historical medical books, portraits and other objects of interest. A splendid banquet was given at the Rentert Hotel, which was not only "a feast of reason, but a flow of soul." The presidential address of Prof. Samuel C. Chew was a comprehensive review of the great discoveries of the preceding 100 years, among which he placed the discovery of vaccination by Jenner. 2nd. The method of auscultation by Laennec. 3rd. The discovery of anaesthesia. 4th. The discovery of micro-organisms, leading to the science of bacteriology. The principal oration was delivered by Dr. William W. Keen, of Philadelphia, on "The Debt of the Public to the Medical Profession." Dr. Keen has the distinction of having been the only officer to serve in the U. S. Army during the Civil War and to hold a commission, that of major, during the World War. He is now in the 91st year of his age. In terminating his address, he made the following striking remarks: "I would that some artist might paint a companion picture of the 'Conquerors in Medicine,' instead of the 'Conquerors in War.' Instead of spectral hills and a barren waste, the scene should be laid in a fertile, smiling valley, bounded by the Delectable Mountains. The stately procession should be led by Edward Jenner. He should be flanked by Joseph Lister and John C. Warren, and followed by Simpson, Billroth, Livingston, Ambroise Paré, Virchow, John Hunter and many a modest, but unknown, hero who has yielded up his spirit in the performance of his duty. Instead of treading their way through lines of corpses, they should march between lines of grateful men
and women and a host of God’s little children, who, on bended knee and with clasped hands, would reverently invoke Heaven’s richest benediction upon their deliverers.

“Thus should humanity recognize its debt to the medical profession.” Other addresses were by Dr. Abram Jacobi, of New York, on “European Medicine About 1799;” by Dr. Herman Knap, of New York, on “Ophthalmology in the Nineteenth Century;” by Dr. George Ben Johnston, of Richmond, Va., on “Conservative Surgery of the Female Generative Organs;” by Dr. W. W. Johnson, of Washington, D. C., on “J. Hughes Bennett: His Services to Medicine;” by Dr. E. H. Bradford, of Boston, on “A Study of the Human Gait;” by Dr. Horatio C. Wood, of Philadelphia, on “Nostrums,” and by Dr. Roswell Park, of Buffalo, N. Y., on “Cancer as a Parasitic Disease.” Thus was brought to a close the celebration of the first centennial anniversary of the Medical and Chirurgical Faculty of Maryland. It was a memorable occasion. Twenty-eight years have passed since that time, and by far the majority of those who took a prominent part in the proceedings have passed to the beyond, but their works do follow them. An increased interest in the Faculty, and especially in the library, was aroused, and it was not long before it was seen that we should have to secure more commodious accommodations for our ever-expanding activities. Subscriptions were solicited from the profession and from the public. This lot was bought, and in 1909 the present beautiful building was erected and was dedicated with imposing ceremonies, which, however, I cannot speak of further at this time.

From the time of the erection of this building the Faculty entered upon a period of prosperity; not only have we increased in membership, but in varied activities. Our stacks are groaning under their load of books, and in a short time will be insufficient for our needs, and will have to be enlarged. The purse strings of our members and of the public have been loosened, and we have the Osler Endowment Fund and the Osler Testimonial Fund, the Finney Fund, the Trimble Lectureship Fund, the Ellis Fund, the Baker Fund, the Herbert Harlan Fund, and the Eugene Faunteroy Cordell Fund, besides the portraits and plaques depicting the features of many of our deceased associates. This is as it should be, but it is not enough. We now stand again at the parting of the ways. We must go forward or we shall go back; we cannot stand still. The first quarter of the 20th century has dealt kindly with us, and we have made great progress. Let us meet the second quarter with courage, hope and a firm resolve to accomplish even greater results than those that have blessed our efforts in the past.
THURSDAY CLINICS

For some time it has been the feeling of the faculty of our Medical School that not only had they an obligation to perform for our regular medical students, but that this obligation extended further, namely, to those men that had graduated and gone out to practice their profession.

Heretofore Medical Education here, at least, had been, after graduation, a static thing. Men were taught all that was known at the time they were students, and then, in the great majority of cases, their Alma Mater tacitly said: "Anything further must be obtained elsewhere." In an effort to solve this tremendous problem, partially, at least, a committee on extension work was formed, composed of heads of departments—Medicine, Surgery, Gynecology, Obstetrics and Ophthalmology—also President of the University, and Drs. Gordon Wilson and Llewellys Barker, and these men, after consideration, felt that among other steps a series of clinics, open to everyone, at a convenient time, by men of world fame and upon subjects of practical interest, would be valuable.

The result is known to everyone; the cream of the profession, men known internationally as outstanding in their specialties, were obtained—Barker, Woodyatt, Brooks, de Schweinitz, Thayer, Finney, Finkelstein, Joslin, Riesman, Lewis, Lee, Pemberton, Beidl, Kretschmer, Howland, Kerr, Piersol, Lowsley, Robinson and Norris.

A consideration of these names leaves us in no doubt as to the patient, indefatigable work of the committee, which cannot be sufficiently praised. The value to the hundreds of medical men who heard them likewise must be obvious.

Therefore, when you hear of short series of lectures at other institutions, think of the Thursday Clinics at your own Alma Mater; they have seldom, if ever, been equaled and certainly could not be surpassed by any school anywhere, because they are by the best there is, and they are open to all men of our profession without charge.
Our readers know that at the College Park branch of the University of Maryland, teaching and research activities are being conducted that are of great importance to the State as a whole.

The work of the College of Agriculture is perhaps better known than other lines of work. In this college young men are given standard university four year course in agriculture. The majority of the graduates go into technical positions but a surprisingly large number of them go "back" to the farms.

The value of the research work in agricultural lines is very high. Conservative estimates show that the State is richer by several million dollars each year on account of the researches in agricultural sciences and the application to practical farming.

The College of Engineering also is widely known because of the high standards of its work and its large enrollment. Graduates of the College of Engineering of the University of Maryland are given training equal to that in other standard Engineering Schools and they compare favorably with the graduates of the best known institutions.

In recent years the four-year college course in Home Economics has been developed. This is for women what agriculture or engineering colleges are for men. The Home Economics course includes naturally considerable training in nutrition, domestic art and home economics. It gives also thorough training in fundamental sciences such as chemistry and considerable work in cultural lines. More and more it is stated, young women graduating from High School and having a natural taste for science and its application, are enrolling in four-year courses in Home Economics for their life training.

The College of Education at College Park gives training for the teaching profession and naturally emphasizes training for the vocations that are so prominent in the curriculum at College Park.

Underlying all the work in these technical colleges are many courses in the Arts and Sciences and a large group of students are enrolled in the four-year course in Arts and Sciences. The students are given the opportunity to elect work in the technical colleges.

The enrollment of students at College Park this year is about 1,100, the largest of record.

On the recommendation of Governor Ritchie the Legislature which has just adjourned has appropriated $200,000 for a Library at College Park and additional funds for equipment
of the various departments and to pay off certain debts connected with the erection of buildings recently put into use.

The State appropriation for maintenance has been increased $38,000 for each year of the biennium.

A MUNIFICENT GIFT

The Alumni of the Schools of Pharmacy and Medicine, in fact all Alumni of the University of Maryland, extend thanks to Capt. Isaac E. Emerson.

His gift as announced at the Commencement June 4 is equivalent to securities sufficient to insure a yearly income of $6,000. The yearly income of $6,000 will be divided so as to support a Professorship in Biological Testing and Drug Assaying in the School of Pharmacy at the rate of $4,500, and there will be $1,500 for a Fellowship in Pharmacology in the School of Medicine.

This is a great gift. It sets a new pace. It adds the name of Capt. Isaac E. Emerson to the list of leading benefactors of the University of Maryland. The purposes of the gift are exceptionally well chosen. The larger part is for the benefit of a line of work in which Captain Emerson is especially interested. The other portion of the gift also represents a subject in which he is interested. The work in pharmacy and pharmacology will be greatly strengthened.

The thanks of all friends of the University of Maryland are extended to Captain Emerson.

$30,000 FOR MARYLAND MENTAL CLINIC—QUARTERS TO BE PROVIDED BY U. OF M.

Thirty thousand dollars have been appropriated by the Commonwealth Fund of New York City to provide a mental hygiene clinic for the Mental Hygiene Society of Maryland, with an additional $23,000 available, provided the work of the clinic is satisfactory and the support needed. The clinic will be established in quarters provided by the medical department of the University of Maryland, and it is expected that it will be in operation the coming October.

The director of the clinic will be Dr. Ralph P. Truitt, Class of 1910, who has done extensive work throughout the United States in establishing such clinics. In a recent announcement the Mental Hygiene Society of Maryland said: “Problems involving children are particularly urgent, as are many related to family welfare, the prevention of threatened psychoses and the care of those who have already succumbed.
"The clinic to be established will not only render a much-needed service to the organizations interested in charitable and social work in the community, but will have a distinctly educational value in the training of social workers connected with psychiatric organizations, as well as to some extent aiding the training of advanced medical students of psychiatry."

The Board of Directors of the Mental Hygiene Society of Maryland includes the following:

Dr. Adolph Meyer, DeCourcy W. Thom, Miss Elizabeth Gilman, Robert Biggs, Dr. William H. Welch, Dr. Lewellys F. Barker, Dr. Hugh H. Young, Richard L. Carey, Jacob M. Moses, W. Champlin Robinson, Dr. Ross C. Chapman, Dr. Edward N. Brush, Dr. J. Hall Pleasants.

Dr. Meyer is president and Mr. Thom and Miss Gilman, vice-presidents.

"TAKE ON"

This University is on the road to bigger things, and the future appears bright. Won't you aid it in its work by joining the Alumni Association and lending the officers every possible help.

The dues are three dollars per annum. Indicate your willingness by communicating with the Secretary of the Medical Alumni Association, University of Maryland, Lombard and Greene Streets, Baltimore, Maryland.
ALUMNI ASSOCIATION ACTIVITIES

OFFICERS
Frank W. Keating, M.D., President

Vice-Presidents
Joseph W. Holland, M.D.  David E. Hoag, M.D.  Henry Kolb, M.D.
Howard M. Bubert, M.D., Secretary  Nathan Winslow, M.D., Asst. Secretary
M. LeRoy Lumpkin, Treasurer

Executive Committee
Charles W. Maxson, M.D., Chairman
Edgar B. Friedenwald, M.D.
Edward P. Smith, M.D.

Advisory Committee
Robert L. Mitchell, M.D., Chairman
Paul Brown, M.D.
I. S. Zinberg, M.D.

Alumni Council
Charles Bagley, Jr.

Hospital Council
S. Griffith Davis, M.D.
Howard M. Bubert, M.D.

Editors
G. Milton Linthicum, M.D.
Emil Novak, M.D.

ELECTION OF OFFICERS
The names listed above are our officers for the term beginning June 3rd, 1927, and ending June, 1928.

PREAMBLE TO OUR CONSTITUTION AND BY-LAWS
We, Alumni of the School of Medicine of the University of Maryland, comprising the graduates of the University of Maryland School of Medicine, the Baltimore Medical College and the College of Physicians and Surgeons of Baltimore City, desirous of perpetuating those associations which began during our professional student life and of keeping alive our interest in our Alma Mater, and advancing in every legitimate way her welfare, do hereby form an association for the above purposes and do enact the following Constitution and By-Laws for the government of same.

ANNUAL REPORT OF THE SECRETARY
In an endeavor to present in a clear-cut way the activities of the office of the Association during the past twelve months, I have had prepared certain statistics as follows, to show that you have an interested, active set of officers:
First—The Advisory Committee has had one meeting alone, at which the attendance was 100 per cent.  
Secondly—The Executive Committee has had six meetings, at which meetings the attendance has been 100 per cent, with the exception of two meetings, which showed one and two absent, respectively.  
Thirdly—The meetings of the two combined committees have been four, at which the attendance has been 80 per cent.  
Fourthly—There have been two general meetings of the officers, at which each elected man is supposed to be present. The attendance was 50 per cent. You must take into consideration that three of our Vice-Presidents are out-of-town men, and whenever the group that is supposed to meet is large, the percentage of attendance falls, except under unusual circumstances, no matter what the organization may be.  
The Bulletin: As you know, it was decided last year to appropriate $600.00 per annum toward the cost of publishing the Bulletin of the Medical School, with the idea in mind of making another issue possible. In return for this, we were allowed two editors, and are running, as you no doubt know, a section in the Bulletin known as the “Alumni Association Activities.” May I take this opportunity to state that the Editors of the Bulletin are active and intensely interested, and I feel sure that everyone will agree with me when I say that this periodical has been greatly improved in the recent past. It is my intention to make the Bulletin our means of communication with the graduates. In this way we can save money during the course of a year, as a circular letter to 6,000 men costs over $200.00. Needless to say, it will take a year or more to advertise the Bulletin sufficiently to make it answer our requirements as a medium of communication.  
Headquarters in Baltimore: February of this year the Executive Committee decided to move our offices from the Medical and Chirurgical Faculty Building to Lombard and Greene Streets, as we felt that it was the logical place for us to be. We also engaged a full-time secretary, and it has been because of this that our activities have so greatly increased, both in amount and effectiveness. We desire to have every man visiting Baltimore, at any time, to make our office his headquarters, and to the best of our ability we will endeavor to make his stay in the city both pleasant and profitable.  
Student Aid: Within the past week we have arranged to make a loan of $250.00 to a student in the Medical School, after a thorough investigation, which will make it possible for him to continue his studies, which otherwise he might have been forced either to continue at a tremendous disadvantage or give
up entirely. This is simply a start. After we get our groundwork laid, we intend to make this one of our biggest features.

**Growth:** An idea of our growth can best be given by the following figures: On June 1st, 1926, when the present officers assumed office, there were 1498 members. Since that time we have obtained 283 new members, making our list, at the present time, number 1681 members. Also we have added to our general file of graduates, the names of approximately 400, for whom we did not have definite addresses, and whom we have found through sending out search cards and tracing through the A. M. A. Directory.

**Lost:** In the rush of work we have not perfected an adequate plan to determine how many members have been lost, but in view of the returns that we have received in dues, we feel sure that this number will be relatively small.

**Deaths:** Amongst the 4319 graduates, who are not active members, since June 1st, 1926, there have been 123 deaths or 2.8 per cent. Amongst the 1681 active members, there have been 16 deaths or a percentage of .9 of 1 per cent. So you may readily see that, amongst the many advantages of being a member of this organization, we may add that great one, longer life.

**Correspondence:** Since June, 1926, the volume of correspondence handled by the office is best indicated by giving you an idea of the number of letters that have been received and which have gone out from this office. First there have been two circular letters to all the graduates, the first one having to do with advertising the BULLETIN, early in December; and the second setting forth our activity in Washington during the American Medical Association Convention. There have been two circular letters sent to, and prepared for, our Field Secretaries; approximately 1000 letters in the interest of the class reunions held during the months of May and June, and 2500 letters advertising our annual banquet of June 2nd, in Baltimore. We have received in this office, more than 400 letters, all of which have received attention and have been filed.

**General Activities:** During the last year we have laid the foundation for a very complete directory of all our graduates, which will be filed in four different ways:— alphabetically; status, which shows whether members are active or inactive or deceased, and which includes a list of the Faculty and the recently appointed Field Secretaries; according to school and class, and geographically.

**Field Secretaries:** The April issue of the BULLETIN contained a list of thirty-two Field Secretaries. Since that time those listed below have kindly consented to act for their States and districts, as designated.
Dr. Andres G. Martin ------------ Palma Soriano, Cuba
Dr. Frank Talmadge Barker---------- Tampa, Fla.
Dr. Robert A. Bonner-------------- Waterbury, Conn.
Dr. LeRoy H. Smith--------------- Winterport, Maine
Dr. Howard Barton Bryer------------ Warwick, R. I.
Dr. Branch Craigie---------------- El Paso, Texas
Dr. Fred Wood Phifer--------------- Wheatland, Wyo.
Dr. Charles W. Ray--------------- Charleston, W. Va.

Meetings: Last fall on the 16th of November, during the Southern Medical Meeting at Atlanta, Georgia, Dr. Charles W. Roberts, our Field Secretary for that State, arranged a banquet at which there were 67 men present, and of which the most glowing reports were brought back by the Baltimore men present.

On Founder's Day, December 18th, we gave a reception at the Rennert Hotel to the President, Board of Regents, Faculty of the School of Medicine and the members of the Senior Class of the Medical School, at which there were 166 present.

At Syracuse, N. Y., April 19th, there was a get-together of some of our graduates, at which time they formed a branch chapter of the Association. Dr. Charles W. Maxson, our President, was present at this meeting, and said that the men showed a great deal of enthusiasm.

At New York City, April 21st, the Baltimore Medical Club of New York City held a banquet, at which we were represented by Drs. Charles W. Maxson, Edgar B. Friedenwald, Frank J. Kirby, Joseph W. Holland, A. C. Smink, Arthur J. Lomas and C. R. Monroe.

At the Washington meeting, during the A. M. A. Convention last month, we maintained headquarters at the Raleigh Hotel during the entire meeting and had a registration over 250, with 27 States, England, Canada and Cuba represented. (A complete list of our headquarters registration is appended to this report.) On the evening of May 18th, we gave a banquet at the Raleigh Hotel, with an attendance of more than two hundred. I believe that the men who were present in Washington agree that our participation was a great success.

Our Annual Banquet, was held June 2nd at the Belvedere Hotel, in Baltimore, in honor of the graduating class of 1927, with 205 present; and I feel that when I express my personal appreciation to the Committee, consisting of Drs. Robert L. Mitchell, Edgar B. Friedenwald and Charles Reid Edwards, I also express the feeling of all those fortunate enough to be present.

Reunions: In connection with the activities of the Alumni Association, we have assisted by means of correspondence in getting several Class Reunions together:
Dr. Edgar B. Friedenwald's Class of 1903 had eleven members present to represent their class at the banquet in Washington. Immediately following the Washington Meeting, Dr. Lichtenberg's Class of 1912 held its reunion in Baltimore, with thirty-seven present at the Emerson Hotel. Dr. Wheeler's Class of 1917 had its Tenth Year Reunion and had twenty present at the Annual Alumni Banquet at the Belvedere Hotel. Owing to the distance and pressure of work at this time, the members of Dr. Henry F. Hill's Class of 1877 were unable to join him either in Washington or at the Annual Alumni Banquet in Baltimore.

**General Activities:** Our Committee, composed of Dr. Charles Bagley, Jr., Chairman, Dr. Harry Friedenwald and Dr. M. Le-Roy Lumpkin, with the hearty support of the Extension Committee of the Faculty, arranged a course of lectures on "Oto-Neurology," by Dr. Hans Brunner, of the University of Vienna. These lectures were very well attended, and the men fortunate enough to hear them were unanimous in their appreciation and approval.

The above is not an attempt to go into detail of everything that we have done, because this would be impossible in the space at our disposal at this time; it is my desire, however, to give you at least an idea of the number and scope of our activities.

**PERSONAL**

Dr. Davis E. Hoag, class of 1896, University of Maryland, Baltimore, now Professor of Nervous and Mental Diseases, New York University, and Bellevue Hospital Medical College, New York City; Clinical Professor, New York Polyclinic Medical School and Hospital, Department Nervous and Mental Diseases; Consulting Neurologist and Psychiatrist, Rehabilitation Hospital; Adjunct Attending Neurologist, New York City Hospital; formerly Associate Neurologist, New York Post Graduate Hospital, and a regularly Commissioned Officer, Medical Reserve Corps, U. S. Army, has been ordered by the War Department to 15 days' active duty to serve with the 245th Coast Artillery, Fort Wright, Fisher's Island, N. Y., to go on duty July 2nd, 1927. On July 23rd, 1927, Dr. Hoag, accompanied by Mrs. Hoag, will sail for Europe on the White Star liner "Homerico" for a three months' stay, attending the "Conference on Law and Order" at Lausanne, Switzerland, in August, and the "International Psychological Congress" at Groningen, Holland, September 6th. They will also visit Austria, Germany, Belgium, England, Scotland, France, Norway, Sweden and Denmark before returning home. As in his former most recent
trip, it is the plan of Dr. Hoag to cover a part of this territory by aeroplane and motor. His former rather thrilling experience of getting lost in fog while in an aeroplane over the English Channel, does not daunt him from again resorting to air travel.

LIST OF ALUMNI REGISTERED AT WASHINGTON DURING A. M. A. CONVENTION MAY 16-20, 1927

Dr. Randolph Winslow, Baltimore, Md. ........................................... U. of Md. 1873
Dr. J. E. Person, Pikesville, N. C. ............................................. P. & S. 1875
Dr. W. H. Marsh, Solomons, Md. .................................................. U. of Md. 1876
Dr. Henry F. Hill, Baltimore, Md. .................................................. U. of Md. 1877
Dr. J. L. Stevens, Washington, D. C. ............................................ U. of Md. 1878
Dr. P. P. Fisher, Sharon, Pa. ...................................................... P. & S. 1881
Dr. J. M. Templeton, Cary, N. C. ................................................... B. M. C. 1882
Dr. W. A. Vincent, Three Mile Bay, N. Y. ...................................... P. & S. 1882
Dr. D. E. Fisher, Needmore, Pa. .................................................... B. M. C. 1883
Dr. G. B. Free, Danville, Pa. ....................................................... U. of Md. 1883
Dr. J. A. Biever, Columbia, Pa. .................................................... P. & S. 1885
Dr. S. K. Pfaltzgraff, York, Pa. .................................................... U. of Md. 1886
Dr. C. Garrabrant, Atlantic City, N. J. ........................................... P. & S. 1886
Dr. L. L. Doane, Butler, Pa. .......................................................... B. M. C. 1886
Dr. F. J. Collinson, Bluefield, W. Va. ........................................... P. & S. 1888
Dr. H. B. McDonnell, College Park, Md. ......................................... P. & S. 1888
Dr. Dougall Bissell, New York City ................................................ U. of Md. 1888
Dr. J. Wm. Funck, Baltimore, Md. ................................................ U. of Md. 1888
Dr. Wm. G. Townsend, Baltimore, Md. ............................................ U. of Md. 1888
Dr. James Putney, Charleston, W. Va. ............................................. U. of Md. 1889
Dr. C. Hampson Jones, Baltimore, Md. ............................................ P. & S. 1889
Dr. J. Fred Klinedinst, York, Pa. ................................................... U. of Md. 1889
Dr. J. O. McAllister, Ridgeway, Pa. .............................................. P. & S. 1889
Dr. G. Carville McCormick, Sparrows Point, Md. ............................... U. of Md. 1890
Dr. Wm. S. Love, Baltimore, Md. ................................................... U. of Md. 1890
Dr. J. M. Shackelford, Martinsville, Va. ........................................ B. M. C. 1891
Dr. R. I. Pollard, Garrett, Pa. ..................................................... B. M. C. 1891
Dr. W. E. Fitch, Buffalo Lithia Springs, Va. ................................... P. & S. 1891
Dr. B. H. Tatum, Clifton Forge, Va. ............................................... U. of Md. 1891
Dr. George H. Riggs, Hjamsville, Md. ........................................... U. of Md. 1891
Dr. J. W. Wallace, Corrington, Va. ................................................ U. of Md. 1891
Dr. I. E. Sloan, Johnstown, Pa. .................................................... B. M. C. 1892
Dr. J. Bruce McCleary, Harrisburg, Pa. ......................................... U. of Md. 1892
Dr. J. W. Hodges, Birmingham, Ala. .............................................. B. M. C. 1892
Dr. J. M. H. Rowland, Baltimore, Md. ............................................ B. M. C. 1892
Dr. W. C. Ashworth, Greensboro, N. C. ......................................... P. & S. 1892
Dr. W. Wayne Babcock, Philadelphia, Pa. ....................................... P. & S. 1893
Dr. S. Griffith Davis, Baltimore, Md. ............................................ U. of Md. 1893
Dr. C. M. Grigsby, Dallas, Texas ................................................... P. & S. 1893
Dr. G. Milton Linthicum, Baltimore, Md. ......................................... U. of Md. (P. & S.) 1893
Dr. Robert A. Bacon, Washington, D. C. ........................................ P. & S. 1893
Dr. S. J. Waterworth, Clearfield, Pa. ............................................ P. & S. 1893
Dr. J. B. McElroy, Memphis, Tenn. ................................................ P. & S. 1893
Dr. Noble P. Barnes, Washington, D. C. ........................................ B. M. C. 1893
Dr. L. S. Savage, Washington, D. C. ............................................. B. M. C. 1893
Dr. J. E. Rader, Huntington, W. Va. ......................................................... P. & S. 1894
Dr. A. Lawrence Miner, Shippensburg, Pa. ............................................. B. M. C. 1894
Dr. Alfred T. Gundry, Catonsville, Md. .................................................. P. & S. 1894
Dr. G. L. Miner, Bellows Falls, Vt. ........................................................ B. M. C. 1894
Dr. J. Fletcher, Glen Rock, Pa. ...................................................................... P. & S. 1894
Dr. Otto Schaefer, Baltimore, Md. ................................................................. U. of Md. 1894
Dr. J. E. Kempter, Chambersburg, Pa. ......................................................... U. of Md. 1894
Dr. J. Fletcher Lutz, Glen Rock, Pa. ............................................................... P. & S. 1894
Dr. R. V. Palmer, Abell, Md. .......................................................................... U. of Md. 1895
Dr. Elmer Martin Perry, Ft. Spring, W. Va. .................................................... B. M. C. 1895
Dr. Alexius McGlannan, Baltimore, Md. ......................................................... P. & S. 1895
Dr. Wm. R. Bruin, Los Angeles, Cal. ............................................................. U. of Md. 1895
Dr. Edward Macgruder, Baltimore, Md. ......................................................... B. M. C. 1895
Dr. J. E. Sansbury, Forest Hill, Md. .............................................................. P. & S. 1895
Dr. Charles Emil Brack, Baltimore, Md. ......................................................... P. & S. 1895
Dr. Stephen J. Podlewski, Steubenville, Ohio ................................................ B. M. C. 1895
Dr. H. E. Peterman, Baltimore, Md. ............................................................... B. M. C. 1895
Dr. Joseph W. Holland, Baltimore, Md. .......................................................... U. of Md. 1896
Dr. A. B. Santry, Little Falls, N. Y. ............................................................... U. of Md. 1896
Dr. David E. Hoag, New York City ................................................................. U. of Md. 1896
Dr. Frank W. Keating, Owings Mills, Md. ...................................................... U. of Md. 1896
Dr. J. A. Weamer, Tarentum, Pa. ................................................................... B. M. C. 1896
Dr. V. H. Vandeveerter, Ishpeming, Mich. .................................................... P. & S. 1896
Dr. Jesses C. Coggins, Laurel, Md. ............................................................... P. & S. 1896
Dr. P. Williams, Providence, R. I. .................................................................. P. & S. 1896
Dr. H. M. Cohen, Manchester, England ....................................................... P. & S. 1896
Dr. Arthur B. Herring, Baltimore, Md. .......................................................... B. M. C. 1896
Dr. G. L. Howell, Worthington, W. Va. ........................................................ B. M. C. 1896
Dr. J. C. Coggins, Laurel, Md. ....................................................................... P. & S. 1896
Dr. J. S. Arnold, Washington, D. C. .............................................................. P. & S. 1896
Dr. V. Van Williams, Baltimore, Md. ............................................................ B. M. C. 1897
Dr. Guy Steele, Cambridge, Md. ..................................................................... U. of Md. 1897
Dr. N. F. Schmucker, Mt. Jackson, Va. ........................................................ B. M. C. 1897
Dr. B. M. Tittsworth, Jefferson City, Tenn. .................................................. B. M. C. 1897
Dr. E. W. Barry, Whitinville, Mass. .............................................................. P. & S. 1897
Dr. Compton Riely, Baltimore, Md. ............................................................... U. of Md. 1897
Dr. L. N. Glenn, Gastonia, N. C. ................................................................. U. of Md. 1897
Dr. A. M. Loop, Courtland, N. Y. ................................................................. B. M. C. 1898
Dr. E. E. Wolff, Cambridge, Md. ................................................................... U. of Md. 1898
Dr. Henry A. Cotton, Trenton, N. J. .............................................................. U. of Md. 1899
Dr. Frank W. Smith, Chestertown, Md. ........................................................... B. M. C. 1900
Dr. James S. Akehurst, Baltimore, Md. ........................................................... U. of Md. 1900
Dr. A. A. Shawkey, Charleston, W. Va. ........................................................ P. & S. 1900
Dr. Arthur G. Barrett, Baltimore, Md. .......................................................... P. & S. 1900
Dr. J. R. Davies, Blossburg, Pa. ................................................................... B. M. C. 1901
Dr. Nathan Winslow, Baltimore, Md. ............................................................ U. of Md. 1901
Dr. S. Dana Sutliff, Shippensburg, Pa. .......................................................... P. & S. 1901
Dr. T. V. Moore, Acme, N. D. ................................................................. B. M. C. 1901
Dr. H. D. Walker, Elizabeth City, N. C. ....................................................... U. of Md. 1902
Dr. Walter D. Wise, Baltimore, Md. .............................................................. U. of Md. 1902
Dr. Arthur M. Shipley, Baltimore, Md. ........................................................... U. of Md. 1902
Dr. Thomas W. Glasgow, Passaic, N. J. ......................................................... B. M. C. 1902
Dr. S. Clark Steele, Brave, Pa. ....................................................................... B. M. C. 1902
Dr. C. A. Clapp, Baltimore, Md. ................................................................... B. M. C. 1902
Dr. P. S. Lansdale, Frederick, Md. ................................................................. U. of Md. 1902
Dr. J. W. McMillan, Charleston, W. Va. ....................................................... P. & S. 1903
Dr. J. J. Heck, Baltimore, Md. ....................................................................... P. & S. 1903
Dr. A. F. Ries, Baltimore, Md. ........................................ P. & S. 1903
Dr. T. Richard Pagenelli, New York City ................................ P. & S. 1903
Dr. G. F. Sargent, Towson, Md. ........................................ P. & S. 1903
Dr. Edgar B. Friedenwald, Baltimore, Md. .......................... P. & S. 1903
Dr. Arnold C. Scherr, Keyser, W. Va. .................................. P. & S. 1903
Dr. Thos. A. Mann, Fairfield, N. C. ..................................... U. of Md. 1903
Dr. W. W. Sawyer, Elizabeth City, N. C. ............................. U. of Md. 1903
Dr. Josiah S. Bowen, Mt. Washington, Md. .......................... U. of Md. 1903
Dr. Lloyd Noland, Fairfield, Ala. ...................................... B. M. C. 1903
Dr. A. E. Dann, Canton, Pa. ............................................. U. of Md. 1904
Dr. Charles Bagley, Jr., Baltimore, Md. .............................. U. of Md. 1904
Dr. Emil Novak, Baltimore, Md. .......................................... B. M. C. 1904
Dr. Leonard A. Richardson, Baltimore, Md. ........................... U. of Md. 1904
Dr. H. K. Fleck, Baltimore, Md. ........................................ P. & S. 1904
Dr. A. R. Morse, Oxford, N. Y. ......................................... B. M. C. 1904
Dr. Howard V. Dutrow, Dayton, Ohio ................................. U. of Md. 1904
Dr. Ejnar Hansen, New York City ....................................... U. of Md. 1904
Dr. Andrew C. Gillis, Baltimore, Md. ................................... P. & S. 1904
Dr. Benjamin F. Teft, West Warwick, R. I. .......................... U. of Md. 1905
Dr. F. D. Chappelear, Hughesville, Md. ............................... U. of Md. 1905
Dr. F. E. Martin, New Martinsville, W. Va. ........................ P. & S. 1905
Dr. C. D. Christ, Orlando, Fla. ......................................... P. & S. 1905
Dr. Herbert C. Blake, Baltimore, Md. ................................ B. M. C. 1905
Dr. E. Blight Harrison, Fredericksburg, Va. ........................ U. of Md. 1905
Dr. Robert L. Mitchell, Baltimore, Md. ............................... U. of Md. 1905
Dr. Ira Burns, Wilmington, Del. ....................................... U. of Md. 1905
Dr. C. W. Roberts, Atlanta, Ga. ........................................ U. of Md. 1906
Dr. K. M. Jarrell, Beckley, W. Va. .................................... U. of Md. 1906
Dr. James A. Grizzard .................................................... B. M. C. 1906
Dr. N. W. Herschner, Mechanicsburg, Pa. ............................. U. of Md. 1906
Dr. W. A. Cantwell, North East, Md. ................................ U. of Md. 1906
Dr. Henry J. Walton, Baltimore, Md. ................................ B. M. C. 1906
Dr. H. V. Bietler, Baltimore, Md. ...................................... B. M. C. 1906
Dr. Edson W. Glidden, 2nd, Alto, Ga. ................................ U. of Md. 1907
Dr. Sidney H. Adler, New York City .................................... U. of Md. 1907
Dr. George L. Macke, Bonner Brook, N. J. ............................ P. & S. 1907
Dr. W. C. Gordon, Providence, R. I. .................................. U. of Md. 1907
Dr. John W. McConnell, Davidson, N. C. ............................... U. of Md. 1907
Dr. H. A. Turk, East Liverpool, Ohio ................................ B. M. C. 1907
Dr. J. A. Bates, Elkton, Md. ............................................ U. of Md. 1907
Dr. E. S. Griffith, Clifton Forge, Va. ................................ U. of Md. 1907
Dr. R. A. Warren, Hot Springs, Va. .................................. U. of Md. 1907
Dr. Frank S. Lynn, Baltimore, Md. .................................... U. of Md. 1907
Dr. B. S. Rankin, Tunnellton, W. Va. ................................ B. M. C. 1907
Dr. C. Burr Pigott, Washington, D. C. ................................ U. of Md. 1907
Dr. A. W. Erskine, Cedar Rapids, Ia. ................................ B. M. C. 1908
Dr. G. O. Sharrett, Cumberland, Md. ................................ B. M. C. 1908
Dr. M. D. McCutcheon, East Liverpool, Ohio ........................ P. & S. 1908
Dr. E. E. Whipple, Corning, N. Y. .................................... P. & S. 1908
Dr. W. A. Richards, Port Deposit, Md. ................................ U. of Md. 1908
Dr. Wm. Ellingwood, Rockland, Me. .................................. U. of Md. 1908
Dr. G. Hampton Richards, Port Deposit, Md. ........................ U. of Md. 1908
Dr. C. A. Neafie, Pontiac, Mich. ............................ U. of Md. 1909
Dr. James B. Parramore, Jacksonville, Fla. ......................... U. of Md. 1909
Dr. Paul Brown, Baltimore, Md. ........................................ U. of Md. 1909
Dr. John L. Messmore, Masontown, Pa. ................................ U. of Md. 1909
Dr. I. B. Broadwater, Oakland, Md. ................................... U. of Md. 1909
Dr. Morris B. Greene, Baltimore, Md............................U. of Md. 1909
Dr. E. R. Lewis, Clinton, N. Y..................................B. M. C. 1909
Dr. Harry M. Robinson, Baltimore, Md..........................U. of Md. 1909
Dr. W. Allen Griffith, Berwyn, Md..............................P. & S. 1909
Dr. Elmer G. Braddock, Lewiston, Idaho.........................P. & S. 1909
Dr. Ernest G. Hand, Binghamport, N. Y..........................B. M. C. 1910
Dr. George C. McElfratrick, Wilmington, Del..................B. M. C. 1910
Dr. Hugh R. Spencer, Baltimore, Md..............................B. M. C. 1910
Dr. George A. Arhart, Amelia, Va................................B. M. C. 1910
Dr. Charles W. Daly, Hartford, Conn.............................P. & S. 1910
Dr. Charles W. Maxson, Baltimore, Md............................P. & S. 1910
Dr. James N. Hanrahan, Elizabeth, N. J.........................P. & S. 1910
Dr. V. H. McKnight, Elkton, Md..................................U. of Md. 1910
Dr. N. Garb, Baltimore, Md........................................U. of Md. 1910
Dr. W. A. Gracie, Cumberland, Md................................U. of Md. 1910
Dr. E. H. Kloman, Baltimore, Md................................U. of Md. 1910
Dr. L. Winfield Kohn, New York City............................U. of Md. 1910
Dr. Grant Dent Townsend, Kansas City, Mo......................U. of Md. 1911
Dr. S. Wallenstein, Baltimore, Md................................U. of Md. 1911
Dr. Waitman F. Zinn, Baltimore, Md..............................P. & S. 1911
Dr. Claude V. Gautier, Washington, D. C........................P. & S. 1911
Dr. F. J. Broschard, Gaithersburg, Md...........................B. M. C. 1911
Dr. John D. Bobert, Baltimore, Md................................B. M. C. 1912
Dr. Wm. L. Sheahan, New Haven, Conn............................P. & S. 1912
Dr. A. G. Goldstein, Baltimore, Md...............................P. & S. 1912
Dr. E. P. Smith, Baltimore, Md....................................P. & S. 1912
Dr. James A. Duggan, South Bend, Ind............................U. of Md. 1912
Dr. Reese A. Allgood, Fayetteville, N. C.........................U. of Md. 1912
Dr. Andres G. Martin, Palma Soriano, Cuba.....................U. of Md. 1912
Dr. G. Vega, Tegucigalpa, Cuba..................................U. of Md. 1912
Dr. Benjamin Newhouse, Washington, D. C........................U. of Md. 1912
Dr. Walter A. Ostendorf, San Antonio, Texas...................U. of Md. 1913
Dr. C. Reid Edwards, Baltimore, Md..............................U. of Md. 1913
Dr. A. G. Breeding, Washington, D. C............................U. of Md. 1913
Dr. N. C. Nitsch, Baltimore, Md..................................U. of Md. 1913
Dr. W. H. Toulson, Baltimore, Md................................U. of Md. 1913
Dr. George A. Abersold, Wheeling, W. Va.......................P. & S. 1913
Dr. George Piness, Los Angeles, Cal.............................B. M. C. 1913
Dr. Porter P. Vinson, Mayo Clinic, Rochester, Minn..............U. of Md. 1914
Dr. Austin H. Wood, Baltimore, Md...............................U. of Md. 1914
Dr. Harry M. Stein, Baltimore, Md................................U. of Md. 1914
Dr. Benajmin Pushkin, Baltimore, Md..............................U. of Md. 1914
Dr. H. H. Warner, Baltimore, Md..................................U. of Md. 1914
Dr. W. P. Black, Charleston, W. Va...............................P. & S. 1914
Dr. Jos. J. Waff, Shenandoah, Va................................U. of Md. 1915
Dr. D. B. Moffett, Washington, D. C..............................U. of Md. 1915
Dr. Bascom L. Wilson, Washington, D. C..........................U. of Md. 1915
Dr. Robert B. Hill, Washington, D. C............................U. of Md. 1915
Dr. E. Winslow Lane, Bloomsbury, N. J............................U. of Md. 1915
Dr. W. H. Jenkins, Washington, D. C.............................U. of Md. 1915
Dr. Louis W. Schreiber, St. Louis, Mo............................U. of Md. 1915
Dr. William A. Bridges, Towson, Md...............................U. of Md. 1915
Dr. Thos. K. Galvin, Baltimore, Md...............................(P. & S) U. of Md. 1915
Dr. George R. Patrick, Bessemer City, N. C......................U. of Md. 1916
Dr. C. A. Reiffschneider, Baltimore, Md........................U. of Md. 1916
Dr. J. Gerald O'Brien, Baltimore, Md............................U. of Md. 1916
Dr. Benjamin M. Jaffe, Baltimore, Md.............................U. of Md. 1916
Dr. Franklin B. Anderson, Baltimore, Md.........................U. of Md. 1916
Dr. D. McAllister Aikman, Wheeling, W. Va......................P. & S. 1916
Dr. A. W. Mankin, Washington, D. C..............................P. & S. 1916
Dr. H. Lawrence Wheeler, Baltimore, Md.  U. of Md. 1917
Dr. J. J. Giesen, Redford, Va.  U. of Md. 1918
Dr. Cyrus F. Horine, Baltimore, Md.  U. of Md. 1919
Dr. C. C. Romine, Jenkins, Ky.  U. of Md. 1919
Dr. Charles R. Goldsborough, Baltimore, Md.  U. of Md. 1919
Dr. N. J. Davidov, Baltimore, Md.  U. of Md. 1920
Dr. W. J. B. Orr, Smithfield, N. C.  U. of Md. 1920
Dr. Howard M. Hubert, Baltimore, Md.  U. of Md. 1920
Dr. John Metcalf, Toronto, Ohio  U. of Md. 1920
Dr. Fred B. Smith, Baltimore, Md.  U. of Md. 1920
Dr. Stanley W. Matthews, Washington, D. C.  U. of Md. 1921
Dr. C. E. Hawks, Rockville, Md.  U. of Md. 1921
Dr. B. S. John, Rockville, Md.  U. of Md. 1921
Dr. Marie M. Kovner, Baltimore, Md. (Russian Univ.)  U. of Md. 1921
Dr. J. P. Linke, Plainfield, N. J.  U. of Md. 1922
Dr. J. Ogle Warfield, Jr., Washington, D. C.  U. of Md. 1922
Dr. Theresa Snaith, Owings Mills, Md.  U. of Md. 1923
Dr. William S. Love, Jr., Baltimore, Md.  U. of Md. 1923
Dr. R. S. Anderson, Baltimore, Md.  U. of Md. 1924
Dr. Eva Dodge, Baltimore, Md.  U. of Md. 1925
Dr. R. M. Nock, Baltimore, Md.  U. of Md. 1925
Dr. John L. Winstead, Baltimore, Md.  U. of Md. 1925
Dr. Edgar R. Miller, Baltimore, Md.  U. of Md. 1925
Dr. Margaret Ballard, Baltimore, Md.  U. of Md. 1926
Dr. Elizabeth Sherman, Baltimore, Md.  U. of Md. 1926
Dr. F. L. Lusby, Baltimore, Md.  U. of Md. 1926

Dr. Raymond A. Pearson, President of Univ. of Maryland, Baltimore.
Hon. Samuel A. Shoemaker, Chairman of Board of Regents, Univ. of Maryland, Baltimore.

Dr. C. Gilchrist, Baltimore, Md., English Univ.
Dr. Wm. J. Deadmon, Hamilton, Can., Univ. of Toronto.
Dr. Reed Rockwood, Baltimore, Md., Univ. of Iowa.
Dr. Leo Brady, Baltimore, Md., Johns Hopkins Univ.
Dr. W. E. Grempler, Baltimore, Md., Johns Hopkins Univ.
Dr. Arthur J. Lomas, Baltimore, Md., McGill, Univ.
Dr. H. Norton Mason, Richmond, Va., Univ. of Virginia.
Dr. J. Mason Hundley, Jr., Baltimore, Md., Johns Hopkins Univ.
Mr. A. D. Johnson, Cashier, Univ. of Maryland.
Mrs. Ruth Briscoe, Librarian, Univ. of Maryland.
Mrs. Grace B. Cable, Executive Secretary and Registrar, Medical Alumni Association, Univ. of Maryland.

Miss Aileen Weston, Asst. Registrar, Medical Alumni Assn., Univ. of Md.
Mr. J. E. Smith, Registrar, Medical Alumni Association Headquarters.

DEATHS

Dr. Willis Linn, Garrison, Ky., formerly of New York; class of 1911; aged 37, died, May 1, 1927, of a self-inflicted knife wound, done during a period of mental aberration from overwork. Dr. Linn was educated in the schools of Rochester, at Mercersburg Academy, Colgate and the University of Maryland, whence he received his medical degree. During his residence at the University he was vice-president of his class one year and its president for three years. As such his was a large part in instituting the honor system which has unfortunately been allowed to lapse. After graduating he married Miss Ethel Hamilton, of Baltimore, from whom he separated six years later. He first located in Wilmington, Del. After
practicing there for three years, he moved to Rochester, where he joined the New York National Guard and was sent to the Mexican border with an ambulance unit during the trouble with our Southern neighbor. On his return home he was placed in command of Troop A, New York State Constabulary, which commission he resigned to engage in practice at Brockport. He next accepted a position on the staff of the American Fruit Company’s Hospital at Trajilla, Spanish Honduras. While on service there he nearly lost his life from Black Water fever, from which he never entirely recovered. He then established himself in Binghamton. In the autumn of 1925, he went West to accept a position in a sanatorium, but for the past year he had been at work among the Hill People of Kentucky. While at the University of Maryland, Dr. Linn was exceedingly popular amongst his college-mates. He was active in class affairs and well thought of by his teachers.

Dr. Charles Teackle Carter Buckner, Captain, Medical Corps, United States Army; class of 1899; a native Baltimorean, aged 49; died, February 19, 1927, at Selma, Ala., as a result of injuries received when an airplane in which he was riding made a forced descent. He was a son of the late Dr. Charles S. Buckner, class of 1843. Captain Buckner practiced medicine in Baltimore until 1916, when he entered the army. He was a graduate of the School for Flight Surgeons and was stationed at Wright Field, Ohio.

Dr. John E. Mapp, Keller, Va.; Washington University School of Medicine, class of 1868; aged 81; died, April 30, 1927, of hepatic cirrhosis.

Dr. George Hugh Peddle, Perry, N. Y.; P. & S., class of 1891; aged 64; died, May 4, 1927, of cerebral hemorrhage.

Dr. Stephen Walter Woodyard, Greenville, Tenn.; P. & S., class of 1891; aged 58; died, February 19, 1927.

Dr. Virgil H. Lilly, McSherrystown, Pa.; class of 1869; aged 81; died, April 21, 1927, of injuries received in a fall.

Dr. Gilman Pitt Evans, Baltimore, Md.; B. M. C., class of 1895; aged 69; died, April 18, 1927, of chronic nephritis and myocarditis.

Dr. Casper Smith Peeler, Gloucester, N. J.; class of 1917; aged 35; died in April, 1927.

Dr. Robert Oliver Blacklock, Detroit, Mich.; P. & S., class of 1907; served during the World War; aged 44; died, February 19, 1927.

Dr. James Thomas Wrightson, Newark, N. J.; class of 1878; aged 73; died, March 16, 1927, of bronchopneumonia.

Dr. Zachariah Nason, Kansas City, Kan.; P. & S., class of 1888; formerly professor of clinical obstetrics, University of Kansas, School of Medicine; aged 72; died, February 20, 1927, of retroperitoneal sarcoma.

Dr. James William Livesay, Mount Clare, W. Va.; P. & S., class of 1913; aged 42; died, March 19, 1927, of heart disease.

Dr. Hanford Crafts Pattengill, Fairfield, Maine; B. M. C., class of 1906; assistant superintendent of the Central Maine Sanitorium, aged 49; died, March 14, 1927.

Dr. John Thomas Leahy, Boundbrook, N. J.; P. & S., class of 1908; aged 40; died, April 20, 1927.

Dr. Philip Briscoe, Mutual, Md.; P. & S., class of 1879; past president of the Medical and Chirurgical Faculty of Maryland and of the Calvert County Medical Society; aged 72; died, May 4, 1927, of pneumonia. He was the father of Dr. Everard Briscoe, Baltimore, Md., class of 1918.

Dr. Edward Emory Tull, Salisbury, Md.; class of 1887; for many years a practitioner in New York City; aged 60; died, April 29, 1927, of heart disease.
Dr. Benamin F. Phillips, Baltimore, Md.; class of 1878; aged 72; died, May 25, 1927, of heart disease.

Dr. Bertram J. Darmond, Brooklyn, N. Y.; B. M. C., class of 1904; aged about 50; was found dead, April 29, 1927, in a state-room of the steamer New York, on the vessel's arrival at Boston bound from New York, of suicide.

Dr. Frank T. Turner, White Hall, Md.; P. & S., class of 1879; aged 69; died, April 30, 1927.

BOOK REVIEWS

Reminiscences. By George Henry Fox. Published by Medical Life Press, 1926.

This small book brings one into an intimacy with the inner life of our foremost living American dermatologist. This grand old man, whom I had the pleasure of meeting last November, runs through the almost forgotten vistas of his life, and opens to us, for our pleasure, the door that leads to his early home life until the days when college and its roistering frolics called him away. Of the beginnings of his medical life, I enjoyed most his European wanderings as a member of the "Quadrilateral." His intimate pictures of Braun, Pollitzer, Hebra and Neuman make one feel a closer association for the reading.

Dr. Fox gives us an interesting viewpoint into his family tree, and takes great pride in his relationship to the father of our country.

In all, this little book, with its numerous, unique and interesting illustrations invites one to spend an enjoyable hour or two in relaxation.


The third edition of this handy manual for the diabetic patient has just appeared. It is the best and simplest on the market for the diabetic patient who wishes to read upon the treatment of his own disease and can be understood by anyone of average intelligence. After finishing this little book, the individual with diabetes can well graduate to other more advanced texts, such as that of Joslin. In this edition an extra chapter and a nomographic chart is added for the physician who wishes to calculate his diets on this basis. This is a very brief account of the problem, and the reviewer believes that it would have been more to the point to have given references to Wilder's original papers on the subject.

Crile's writings always make interesting reading regardless of how much or how little one may agree with his conclusions. The present book is no exception to the rule. This work is based on the experiments which Crile has carried on for many years, and attempts to offer explanations for such diverse things as cancer, hyperthyroidism, memory, heredity and the mechanism of reproduction. An analysis of the conclusions, however, and the experimental work show that Crile is either a generation ahead of the current leaders of physiological thought in this country or is wandering to a considerable extent along the wrong paths. Time alone will tell which is correct.

**ADDRESSES WANTED**

Any information about these men will be much appreciated. They are lost to us and with the sources at our command we are unable to locate them.

**ALUMNI OF THE COLLEGE OF PHYSICIANS AND SURGEONS**

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Notify Secretary, Medical Alumni Association, University of Maryland, Lombard and Greene Sts., Baltimore, Md.

"LOYALTY"

The following is taken from a letter of a New York graduate:

"I have made a provision in my will, so that the Medical School of the University of Maryland will be a beneficiary."

HOW ABOUT YOU?
NEWER ASPECTS OF OVARIAN THERAPY.

By Emil Novak, M. D.,

Baltimore, Md.

Through the ovary the female generative organs are intimately linked up with the ductless gland chain, so that endocrine disturbances frequently manifest themselves by some form or other of gynecological disorder. It is not surprising, therefore, that gynecologists have shown an interest in endocrinology and organotherapy perhaps greater than that of specialists in other surgical fields. The brilliant results of thyroid therapy led to similar hopes for treatment by ovarian extracts, but it may be stated, at the very outset, that these hopes have not been realized. The over-enthusiasm of earlier workers has led to a reaction on the part of the profession, many of whom have lost all confidence and interest in the subject. As a matter of fact, nothing can be more rational than ovarian therapy, when this is carried out in accord with what we know as to the physiology of the female generative organs. In other words, to employ ovarian therapy intelligently, one must have some idea of the mechanism of the characteristic female functions, especially menstruation and ovulation. The fact that our views on this subject have within the past few years undergone such radical change has supplied the incentive for this brief paper.
Ovulation is now known to occur, not at the time of menstruation, but in the intermenstrual period, usually at about the thirteenth or fourteenth day of the cycle. The ovum then discharged enters the Fallopian tube and begins its journey toward the uterus, this requiring a number of days. In the meantime the endometrium prepares for the reception of the ovum by undergoing a slow hypertrophic development. A few days before the next menstrual period, this hypertrophy becomes much more marked, constituting the distinctive premenstrual phase. A better term is the pre-decidual or pre-gravid phase, because at this time the appearance of the mucosa is strongly suggestive of genuine decidua. This change is almost certainly due to the secretory activity of the corpus luteum resulting from the last ovulation, which has at this time reached maturity, after a gradual development from the time of ovulation. The earlier and less conspicuous developmental changes in the endometrium, i.e. those before the pregravid phase, are probably due to a hormone secreted by the Graafian follicle.

In the event of fertilization of the ovum, the endometrial preparation serves a useful purpose, for the precidual endometrium passes by a very easy transition into genuine decidua. But if, as is more frequent, the ovum is not fertilized before the end of its life span of approximately two weeks, the elaborate preparation on the part of the endometrium goes for naught, and the endometrium dismantles itself, with casting-off of tissue and hemorrhage, i.e. menstruation.

The statements here made as to the rôles played by the follicle and by the corpus luteum are in accord with the best opinion of those who have studied the human problem, but they are opposed to the views of those who have studied the sexual cycle in the lower animals. The latter group of investigators, however, are not warranted in extending their results unqualifiedly to the human, because of important differences between the human and animal cycle. This whole question I have reviewed in a paper presented at the recent meeting of the American Association for the Study of Internal Secretions. (1)

It is a matter which deserves great emphasis, because a number of authors (Allen and Doisy, Frank, and others), have published
articles urging the ovarian follicle hormone as the all-important female hormone, and I believe this view is incorrect. In the human being, it is probable that the follicle hormone, unless correlated with that of the corpus luteum, is usually insufficient to produce a menstrual cycle. I say "usually," because there is at least one group of cases, encountered not rarely by gynecologists, in which the uterine bleeding is almost surely of follicular origin, i.e. the cases of so-called "functional uterine bleeding." These cases, however, constitute the exception and not the rule. For a further discussion of this aspect of the problem I would refer the reader to the previous paper, above alluded to. (1)

With regard to the matter of ovarian organotherapy, I shall touch upon only one or two generalizing points. In the first place, it is becoming more and more generally accepted that the administration of ovarian extracts by mouth is probably of little value. This statement may be unwelcome to some who believe they have obtained satisfactory results by this method in the treatment of amenorrhea, menopausal symptoms, etc. There are probably few, however, who will claim to have re-established menstruation by this plan of treatment, and in the evaluation of the results in the menopausal cases, it is difficult to eliminate the individual and subjective factors.

Although many points concerning ovarian therapy are still uncertain, there are two at least upon which there is reasonably general agreement on the part of those who have studied the question in a really scientific spirit. The first of these, as already mentioned, is that there is probably little or no virtue in the mouth administration of ovarian extracts of any type. The second is that in some way the potent principles of the ovary is bound up with its lipoid elements. As a corollary to this second generalization, it follows that watery extracts for hypodermic administration are without potency, except perhaps a psychic one, and that, while the hypodermic route is the preferable one, the preparation used must include the lipoid elements.

The most discussed point at present is as to the relative value of ovarian follicle substance and corpus luteum preparations. The first of these, on the basis of animal experiments, has recently been urged as the "female sex hormone," but the clinical results of its therapeutic employment have been disappointing.
This is hardly surprising in view of the fact that, in human beings, the corpus luteum secretion plays a part no less important than does the follicle.

For this reason I have felt that, in the treatment of conditions due to ovarian hypo-function of the ovary, such as functional amenorrhea and the vasomotor symptoms of the menopause, the rational treatment must aim to reproduce the sequence of events as we believe it to take place in life, i.e. follicle secretion with slow development of the endometrium, followed by the "topping-off" corpus luteum influence with the characteristic premenstrual or secretory phase in the endometrium. The only encouraging results which I have obtained in the treatment of such conditions has been by this method of treatment. The ovarian follicle substance is now available commercially, but as yet potent lipoid-containing corpus luteum extracts are not easily obtained. My own work has been carried out with a preparation which was kindly made, at my suggestion, by Parke, Davis & Co., and which, I believe, will soon be available commercially.

The plan of treatment has been to give daily injections of the follicle substance for ten or twelve days, the dose being as large as possible. So far, the procurable strength of the ampoules, measured in "rat units," has been rather woefully inadequate, as applied to the human. This is followed by daily injections for five or six days, of the lipoid-containing corpus luteum substance. In several cases menstruation has been produced, at times repeatedly, a result which, in my experience, is not obtainable with other methods of ovarian organotherapy.

I do not vaunt this plan as a cure for ovarian hypo-function, for it will most often fail. I stress it merely because it appears to mimic what we believe actually occurs in life, and because it should therefore give better results than the use of either follicle substance alone or corpus luteum substance alone.

An obvious disadvantage of the hypodermic method of treatment is the fact that it entails daily visits to the physician for the injections, so that they soon lose their enthusiasm for the treatment. This is particularly so because the conditions under treatment are usually perfectly innocuous in themselves. There are some women who are much concerned because they feel that amenorrhea sets them apart from others of their sex, while
others, again, are concerned because amenorrhea undoubtedly lessens the probability of pregnancy. In my own experience, as a matter of fact, it is this last consideration which, more often than any other, induces the woman to submit to a long course of hypodermic medication. The proper procedure, in the case of the patient who is intelligent enough to appreciate it, is to explain beforehand the purpose of the treatment, and to present both its possibilities and its limitations in as fair a way as possible.

Reference.

1. Novak, Emil. How far can recent studies on ovarian follicle hormone be applied to the human? Endocrinology. Forthcoming. (Read at annual meeting of American Association for the Study of Internal Secretions, May 17, 1927.) This paper contains a discussion of the investigations by other authors referred to in this paper.

Contributions from the Department of Pharmacology of the University of Maryland Medical School.

1. A comparative study of the pressor effects of synthetic epinephrin and ephedrin with some notes on their clinical uses.

W. H. Schultz, Ph. D.,

Baltimore, Md.

Of all the drugs recently introduced into medicine, few present so many phases of interest as does ephedrin. The crude drug, Ma Huang (Ephedra vulgaris), has a pedigree that can be traced in Chinese literature many centuries back. The history of this drug and of epinephrin also discussed in this paper makes a story so interesting that their development into realism by modern scientific methods should be written as romances of practical therapy. All through the early stages of experimentation with Ephedra men, not lower animals were experimented upon to determine its medicinal value, however little progress was made. Contrast this with Epinephrin, which was developed through animal experimentation and note the rate of progress.
It was in 1887 Nagai (1) isolated the active principle, ephedrin, and demonstrated its chemical relation to epinephrin. A comparison of the following formulae (I and II) demonstrates a very close relationship between the active principles, the one from the plant, the other from the animal kingdom.

Formula I.
(Ephedrin (Crystals)
(From Ephedra-plants)

Formula II.
Epinephrin (Crystals)
(From Animal Glands)
(Or Synthetic)

Since the isolation of the active principle by the chemist the pharmacologist has been experimenting to determine by biological test the therapeutic value of the various derivatives.

Curve 1a illustrates the effect of injecting .01 mg. of synthetic epinephrin into the saphenous vein of a dog weighing 10.8 Kilo. The sudden rise of blood pressure is followed by a rapid fall; at times very nearly approaching the original normal level, at times descending below it. There is then a secondary more or less prolonged rise accompanied by a vagus pulse. Ordinarily with this dose the whole reaction is over within four minutes except that a new blood pressure level has been established slightly lower than the original normal.

Curve 1b illustrates the same type of injection three minutes after an intravenous injection of 1 mg. of atropin sulfate. Note the elimination of the vagus pulse and a marked augmentation of the secondary rise, which rise is more persistent.

Curve 1c represents the type of blood pressure curve secured by an intravenous injection of 30 mg. of ephedrin hydrochloride twenty-two minutes after the injection of curve 1b. Several noteworthy differences are illustrated by these three curves. The ephedrin dose is 3000 times the weight of the crystals used to produce the epinephrin curves 1a and 1b; the primary rise of blood pressure is greater for the ephedrin, whereas the secondary

Note 1—Nagai, Pharm. Zeit., 1887, xxxii, 700. This drug is frequently mentioned in Chinese literature and was used as a medicine at least 5000 years before Nagai studied its chemistry. Amatsu and Kubota, Chen and Schmidt studied the action of the active principle upon the blood vessels, intestine, and respiratory muscle. Since the pharmacological investigations of 1918 numerous pharmacological studies have been made.
rise is greater for the adrenalin; the primary fall produces a greater dip in the curve for the epinephrin than for the ephedrin, but the final return for the ephedrin is much slower than for the epinephrin. The latter returns to normal level within five minutes and even drops below it, whereas ephedrin requires an hour to return.

When doses of epinephrin are used exceeding .01 mg. without atropin, the pressor effect is reduced through vagus inhibition. This is illustrated in curves 1a and 1b. After the paralysis of the vagus post-ganglionic fibers by atropin, therefore, the pulse rate should be increased, the blood pressure raised, and the return to normal level be more gradual, as illustrated in the curves.

Ephedrin being so much weaker than epinephrin does not ordinarily affect the vagus, but if doses are pushed so as to equal in effect that of .01 mg. or more of epinephrin hydrochloride then vagus effects are in evidence. But the relative potency of ephedrin and of epinephrin respectively in stimulating the vagus must be left for a more technical paper to be published later. (1) For a more detailed discussion of the relative value of synthetic products of this type and of the natural substances of epinephrin obtained from adrenal glands see W. H. Schultz, 1909 and 1910 (1), (2).

Soon after the discovery of epinephrin subcutaneous injections were demonstrated to be slowly absorbed. This slow absorption and the rapid destruction in the blood stream could not furnish a dose sufficiently large to elicit a measurable vaso-constrictor effect. With these ideas in mind a common conception obtained that subcutaneous injections of epinephrin alone caused a glyco-
genolytic effect whereas intravenous injections caused in addition to this a hemodynamic action. Animal experiments supported this view, but the more observing physicians in their practice noted an altered pulse and even report rises of blood pressure. But these observers instead of seeing in them normal responses frequently associated them with the Goetsch test.


Fig. 2. Dog 5.4 Kilo, ether anesthesia until all operation procedures completed.
1:36—100 mgs. amytal; 1:41 ether off; 2:9 lcc. of 1:1000 adrenalin chloride injected subcutaneously over M. anconaeus longus; injection bleb 3cm. diameter at 2:15; 2:55 the bleb was about 4 cm. across.
Curve A. Blood pressure curve resulting from gentle massage of the injection bleb, right leg, 52 minutes after the injection.
Curve B. Blood pressure curve after massage of the corresponding area of the opposite leg (left).
Curve C. Blood pressure curve after gentle massage of the injection bleb (right leg).
Curve D. Blood pressure curve after injecting .01 mg. of synthetic adrenalin into the saphenous vein. (Injection period 3 seconds.)
Luckhardt and Koppányi, 1927, (1) working with dogs under light ether anesthesia or narcotized with sodium barbital demonstrated that subcutaneous injections properly manipulated cause a measurable rise of blood pressure. The doses used were large and dangerous, 0.34 cc. per Kilo body weight (+1 cc. for a 7.6 Kilo dog). The secret is to massage the injected area gently, not sooner than 30 to 45 minutes after making the injection.

Curve 2 illustrates an interesting experiment performed under my direction by a group of Sophomore Medical students. (2). The dog was anesthetized with ether and prepared for one of the regular blood pressure experiments. When all operative procedures were completed the ether was removed and in the stage of very light anesthesia amytal was injected intravenously. Under these conditions the vaso-motor apparatus recovers its irritability, but the central nervous system is in a stage of narcosis almost simulating that of ether surgical anesthesia. One milligram of epinephrin (vol. 1 cc.) was injected subcutaneously on a level with the right M. anconaeous longus. This injection formed a distinct elevation sharply outlined. At the end of 57 and of 90 minutes the corresponding area on the left forelimb was gently massaged. (See blood pressure curve.) No vaso-motor effect can be detected in the blood pressure curve. The injection area was massaged 52 and 102½ minutes later in the same manner but for twenty seconds only. A beautiful vaso-motor response is recorded (See curves 2a, c.) This effect is almost identical with the change in blood pressure produced by an intravenous injection of 1 cc. of a 1 :100000 solution of the same drug. (See Fig. 2, Curve D.)

From this experiment one is justified in concluding that the amount of adrenalin suddenly forced into the circulation from the injection bleb by the massage (20 second duration) is equivalent to .01 mg. of adrenalin chloride. If the area over the subcutaneous injection be again massaged the process is repeated. Experiment shows that the adrenalin is retained in the injection bleb as such for from three to ten hours unless forced into the circulation by massage. All around the margin of the bleb the blood vessels are constricted, thereby permitting little or no cir-

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Note 1—Luckhardt & Koppányi, Amer. J. Physiol. 1927.
Note 2—These particular curves were made by Messrs. Anderson, Husted, Fifer, and Barland. Mr. Barland at the time was studying the value of amytal as an anesthetic.
cularization through the area. As a matter of fact when one to three cubic centimeters of a 1:1000 solution of adrenalin is so injected, the tissues may be asphyxiated and necrosis results unless the drug is spread by persistent massage. Reduction processes rather than oxidation processes, therefore, obtain, for unoxidized adrenalin can be withdrawn from such an unmassaged area seven or more hours after having been injected. Should the withdrawn portion be injected intravenously the characteristic pressor effect is produced.

The above observation is most important from several points of view: (1) The Goetsch test as is well known depends for its diagnostic value upon a hyper-irritable condition of the sympathetics towards epinephrin. In the normal animal this surface massage of the skin and the muscular movement underneath the injection bleb result in release of epinephrin, and its appearance in the blood causes it to resemble intravenous injections of varying doses. If two patients are injected subcutaneously with equal doses in homologous areas, the technic being identical except that in the one muscle and skin are protected from movement, in the other there are movements resulting in mild massage, it is more than likely the one may give the impression of having hyper-irritable sympathetics when the reactions are alone due to the unsuspected massage accompanying the movements of muscle or skin. For the Goetsch test to be of value this source of error must be avoided.

(2) Since some of the epinephrin in the subcutaneous area is known to remain in the site of the injection for ten to fifteen hours apparently still active as evidenced by massage (dogs), there is no need for repeated injections in cases of bronchial spasm, pollen or protein sensitization if the site of injection is gently massaged for periods of ten to twelve seconds whenever needed. Judging from the blood pressure experiments the latent period between massage and the rise of blood pressure is fifteen to twenty seconds. The intensity of the vaso-motor reaction is roughly proportional to the intensity and duration of the massage and the frequency of its application, being best when the intervals between the times of massage are one to two hours.

(3) Frequently patients requiring this type of medication must be protected from additional or sudden hypertension. By
the proper technic a physician with good judgment ought to secure excellent results by properly adjusting the concentration of his injection, its location, and the type of massage, thus avoiding the symptoms that go with hypertension, yet securing the full value of the epinephrin therapy.

1. Some Clinical Applications for this Series of Drugs.

In conditions where the heart and blood vessels have lost their tonus no other group of compounds with so few dangerous side actions and yet possessing the property of immediate response is available. It may prove invaluable in cases of drowning, asphyxia of various types including the new-born, in collapse from anesthetics (1), in over-dose of soporifics, etc. Even when the ventricle has failed and no pulse can be felt, yet if the auricles twitch there is hope of recovery. As a last resort inject .05 to .5 mg. of adrenalin into the left heart and then massage, forcing the drug into the circulation. If bronchial spasms be involved, inject into the right heart; otherwise avoid as much as possible pulmonary vaso-constriction. Such procedures have resulted in spectacular recoveries.

Synthetic and natural epinephrin with their more powerful action and relatively transient residue of hypertension even in such large doses seem to be the more logical drugs to use. If, however, prolonged vaso-motor constriction is desired, then ephedrin is indicated, since, as mentioned above, with .5 mg. of epinephrin the blood pressure may remain above normal for thirty to sixty minutes whereas with 30 to 150 mg. of ephedrin hypertension may last from one to five hours. As with every heroic treatment of last resort, the result is either spectacular or a flat failure. Judging from my own experience with heart failure in dogs, the medical student should miss no opportunity to develop a good technic of cardiac injection and massage.

2. Edema and smooth muscle hyperirritability.

There are a number of skin reactions associated with drug actions of aspirin, salicylates and other compounds that respond

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Note 1—Chloroform and other chlorine derivatives seem to be an exception. For even under ether anesthesia following chloroform adrenalin is particularly dangerous, the heart going into fibrillar contractions. In our animal experiments it has been observed that after severe alkaloidal poisoning (morphine, etc.) heart failure was common. This was associated with the excessively low blood pressure following the severe cardiac strain.
promptly to epinephrin and ephedrin. Schultz (1) was one of the first to demonstrate that adrenalin was the most efficient remedy in serum anaphylaxis. It is now generally recognized as an almost certain relief for anaphylactoid-like reactions from pollen, food, and certain types of hypersensitization. For treatment of these types the subcutaneous method discussed on page 75 is worthy of extensive trial. Often, however, injections are not desirable and now that ephedrin is available for oral administration this new and simple treatment is being used. Epinephrin is destroyed in the stomach; ephedrin is absorbed in active form. When the dose is large enough even a rise of blood pressure can be recorded. The dose for asthma, hay fever, and anaphylactoid reactions is three-fourths grain (48 mg.) of the crystalline sulfate or hydrochloride in capsules. If the drug is effective, relief is obtained within thirty minutes. Those patients who absorb the drug too rapidly may complain of nervousness, tremors, and headache. A knowledge of this factor and of the patient's vaso-motor reaction is important in properly gauging the dose.

3. **To aid in retaining certain drugs at the site of injection or to aid in furthering their action (synergistic).**

It has long been known that adrenalin has a real use in localizing the action of local anesthetics. The new drug ephedrin has a similar action, but must be used in much stronger concentrations (5 to 10 per cent.) For eye work a 10 per cent. solution is used to produce mydriasis without cycloplegia. When 0.1 per cent. homatropin sulfate dissolved in 10 per cent. ephedrin sulfate is used the mydriasis is rapid with little or no cycloplegia. (2). If atropin sulfate be substituted for homatropin sulfate there also results a synergistic action. There results an almost maximum dilatation of the pupil, a brief paresis of accommodation, and disappearance of the light reflex. The ephedrin speeds up the action of the atropin, intensifying its mydriatic action, but lessens the duration of this action and antagonizes its strong tendency to produce cycloplegia.


My own experience with these two drugs (pharmacologically) is that epinephrin is much the more potent drug. Solutions used for injections and especially for instillation into the eye must be nearly neutral. When such solutions are close to the neutral point mixture with alkaloids may render them neutral and even basic whereupon epinephrin quickly loses its potency and is rendered useless. Neutral salts of these drugs, therefore, should always be mixed with similar salts of the alkaloids in such combinations as will retain neutrality or slight acidity, the acidity, however, not great enough to render them irritating.

For preservation of epinephrin, the solution should be slightly acid, well stoppered (avoiding glassware containing easily soluble alkali), and free from undue exposure to light. With these precautions, I have had no trouble in preserving the strength of either epinephrin or ephedrin hydrochlorides. Further experience is needed to determine whether or no ephedrin solutions keep as well as those of epinephrin.

LAPAROHYSTEROTOMY.

By M. Alexander Novey, M.D.

Baltimore, Md.

Laparohysterotomy, or Caesarean Section, as it is commonly called was not performed on the living subject before the year 1500. During the period preceding 1500 the operation was performed occasionally on women who died during the latter part of pregnancy in the hope of obtaining a living child. It can be traced back to many authentic sources. Thus Valerius Maximus speaks of the posthumous birth of the philosopher Gorgius and Pliny states that the celebrated Scipio Africanus and Manilius were saved under Numa's law which made it illegal to bury a pregnant woman until her abdomen was opened. The common belief that Julius Caesar obtained his name from the operation is undoubtedly incorrect, since Julia, his mother, lived many years after his birth. The most plausible explanation of the derivation of the term Caesarean Section is that it originated from the lex regia of Numa Pompilius in 715 B. C. The lex regia ordered an abdominal section on every woman dying when far advanced in pregnancy even when the foetus was dead
so that the mother and child could be buried separately. The lex regia of Numa became the lex caesarea under the rule of the emperors and thus the operation gradually became known as the Caesarean operation.

The second period in the authentic history begins about the year 1500 and extends until about 1876 when Porro described his operation. The precise period at which the operation was first performed on the living patient remains undetermined. Mansfield of Brunswick tried to discover unquestionable traces of it in the Talmud but the proof is not conclusive. According to M. C. Lage the first authentic case was reported by Nicholas de Falcon in 1491. Bauhin, in 1588, states that the first Caesarean Section upon a living woman was performed in 1500 by Jacob Nüfer, a castrator of pigs, at Sigerhausen, Switzerland, who operated successfully upon his own wife, after a dozen midwives and several barbers had failed to deliver her, and had given up the task as hopeless. In view of the fact that the patient had five spontaneous labors following there is some question that the operation was a true Caesarean Section and in all probability it was merely the removal of an extra-uterine child from the abdominal cavity. In 1581 Rousset published a treatise in which he collected a number of successful Caesarean Sections. Several of these cases were not authentic and it is quite likely that most of the others were merely operations for advanced extra-uterine pregnancy. In spite of this fact his article had one great merit in that it brought the operation to the attention of the medical profession. Surgeons were so aroused by Rousset's monograph that Caesarean Section was often resorted to without any indication whatever and its popularity became so great at one time that it was as common in France as blood-letting in Italy. The first authentic section was probably done in 1610 by Trautman of Wittenberg on a woman with hernia of the uterus. The technique of the operation at this period was extremely crude. The uterus was simply incised and the child and placenta extracted. The uterine walls were not sutured and their contraction and retraction alone relied upon to check hemorrhage. The mortality was appalling from hemorrhage and infection and the results from the operation were so horrible that it fell very much into disrepute.

This continued until 1876, which was the beginning of the third period in the history of Caesarean Sections when Porro introduced
the amputation of the body of the uterus and the fixation of the stump in the lower angle of the abdominal wound. In 1769 Lebas first used sutures and in 1882, after Sanger published his article on the use of sutures, this technique came into more general use. From this time on the closing of the uterine incision by suture and the preservation of the uterus became known as the conservative operation in contrast to the Porro, or radical Caesarean Section. With the increasing improvement in surgical technique the conservative operation has been followed by excellent results and it is only extremely rarely that the radical operation is found necessary.

In 1907 a fourth period began with the introduction of the so-called extra-peritoneal Caesarean Section by Frank of Cologne in definitely infected cases. Frank's original operation was later modified by Latzko, Sellheim, Doderlein and Kustner until the so-called laparotrchelotomy recently popularized by DeLee was evolved.

With the introduction of modern aseptic surgery and the employment of the operation early in labor Caesarean Section has become more and more popular and many patients have been subjected to this apparently harmless procedure needlessly to the exclusion of methods of delivery better suited to the needs of the particular patient until now it is probably the most abused obstetrical operation. It is not an uncommon sight in some of the best clinics in this country to see patients subjected to Caesarean Section with no other indication than a slow but normal labor, which the attending physician has ended in the most convenient manner for himself. The attitude has become quite general that this operation is so exceedingly simple and so perfectly safe that even the most inexperienced practitioner can perform it with no fear of bad results. There is no doubt in the minds of many physicians that every case of eclampsia, every case of placenta praevia, and every patient who has been in labor more than a few hours, or who has had an unsuccessful attempt at delivery by vagina should be sectioned. One need but glance at the records of many hospitals in this country to be convinced of the appalling loss of maternal and foetal life due to the employment of this operation upon improper cases. The marked advantage of the elective Caesarean Section performed before labor begins or extremely early in labor over the same operation done upon a patient long in labor is a lesson yet to be learned by the great mass of practitioners as well as innumerable other
points of advantage concerning the operation which in well-conducted clinics has phenomenally lowered both maternal and foetal mortality.

A consideration of the indications for Caesarean Section would in a short time reveal to us how frequently the operation is inadvisedly performed in some of our best obstetrical clinics. In the average individual’s mind the contracted pelvis is certainly a legitimate excuse for a section but it is surprising how many so-called contracted pelves with external conjugates of 16, 17 or 18 cm. will deliver spontaneously if the foetus is somewhat under-sized. In other words, the absolute pelvic measurements mean very little and the same plea must be made here that we hear from our lung specialist or our heart specialist, and that is, every case be individualized and it becomes a question of whether or not this particular foetus shows any disproportion to this particular pelvis. It is true that sufficient information is obtained from routine pelvimetry to warrant its being done upon every patient before she goes into labor, but it is only upon the extreme cases with marked contractions of the pelvis that it is of real immediate value.

It is rather common practice in the better clinics to divide this pelvic indication for Caesarean Section into an absolute and a relative group. Even here one finds that there is no definite agreement among authorities but it is generally accepted that given a pelvis with a true conjugate measuring 5 cms. or less, Caesarean Section should be performed regardless of the condition of the mother or child. With such a marked degree of pelvic contraction delivery of a child even after one of the destructive obstetrical operations on the foetus, is practically impossible. In those cases in which the conjugata vera measures between 5 cms. and 7.5 cms. usually we only have one of two procedures to fall back upon, Caesarean Section or craniotomy. With an increase in the measurement of the true conjugate up to 8.5 cms. we occasionally see a spontaneous delivery. In this class of patients, however, less than 50 per cent. of the cases deliver spontaneously. The remainder may terminate with a craniotomy, a version and breech extraction or an elective Caesarean Section. The dangers of the version and breech extraction in this type of pelvis should be well borne in mind and only a most careful consideration of the case at hand should lead one to choose this procedure. Pubiotomy, still recommended by some, has
been almost totally discarded as an obstetrical operation and it is not recommended here. Those pelves with conjugata vera measuring between 8.5 cms. and 9 cms. approach still closer the normal and here we find from 60 to 75 per cent. of the patients delivering spontaneously or by forceps. Occasionally even in this group one finds it necessary to do an elective section, a version and breech extraction or even a craniotomy if there is considerable disproportion or the child is dead. The pelves with conjugata vera measuring more than this terminate with 85-95 per cent. spontaneous deliveries and only occasionally do we find a forceps delivery or a version and breech extraction in this group. Thus, one can lay down a fairly comprehensive table as a classification for the treatment of labor in cases with contracted pelves, bearing in mind, however, that every case must be individualized and only expert obstetrical judgment can determine the proper procedure in any particular case.

Caesarean Section performed at the time of election and with proper technic has given such good results compared to delivery by vagina in the borderline pelvis that it is not uncommon to see this operation being performed in cases which heretofore would have terminated in a difficult forceps delivery with possible injury to the child or mother. It is most interesting in this connection to notice the rapid decrease in the number of high and mid-forceps operations and the accompanying increase in the number of sections in the past few years. The previous obstetrical history, the relationship between the foetal head and the mother’s pelvis, and other considerations all enter into the problem, and only an expert knowledge of the art of obstetrics can decide in the borderline case just which procedure is most advisable.

It is interesting to note into how much disrepute the so-called "test of labor," previously a common procedure, has fallen. There are several reasons for this. First of all, the advantages of the elective section in selected cases have been outstanding, and secondly, the recent findings by Harris that every woman in labor more than a few hours, even with unruptured membranes has bacterial contamination of the uterine cavity. These findings still more emphasize the advantage of the elective section and make one less anxious to give the patient a test of labor to determine if a true disproportion exists.
It is impossible here to go into too great detail concerning the pelvic indication for Caesarean Section, but it is an unquestionable fact that one of the most common indications for this operation is found in the disproportion between the foetal head and the mother's pelvis and any practitioner who has under his care an obstetrical patient whose pelvis he has never measured is guilty of neglect. The advantage of the elective section, done several days before the patient is due in indicated cases over the results obtained from the same operation after labor has progressed several hours, is unquestioned. At this point it would perhaps be appropriate to make a plea for routine pelvimetry for all obstetrical patients. Just as a physician is guilty of neglect if a patient develops eclampsia without his having treated her for one of the toxemias, which he has discovered by routine blood pressure reading and urinary examination, so should he be responsible for the performance of a craniotomy or a high forceps operation on a patient whose pelvis he has never measured during the three or four months of supposedly careful prenatal care he has given her.

One cannot discuss in detail here the pelvis with the contracted outlet, the kyphotic pelvis, the spondylolisthetic, the Robert and the Naegle pelvis and a host of other contractions, except to stress the importance of their recognition before the patient comes to term and their proper treatment.

As time goes on, the indications for Caesarean Section grow more and more, until at the present time hospital records show that this operation has been performed for almost every obstetrical complication and often with no indication whatsoever.

It is true that this operation is often the most advisable procedure in many cases, but at the present time it is being so abused that only those versed in the fundamentals of obstetrics should decide when the indication for its use exists. General surgeons and incompetent obstetricians add mightily to the maternal mortality due to childbirth by the use of Caesarean Section in contra-indicated cases, or cases which would deliver by vagina if better judgment were used.

Rarely, the birth canal may be obstructed by myomata, ovarian or other tumors which necessitate the performance of a section. Carcinoma of the cervix may, in some instances, be a legitimate indication. It is not uncommon to find instances of partial atresia
of the vagina or vulva making vaginal delivery impossible. Cicatricial stenosis of the cervix or even true rigidity of the cervix, such as one finds in elderly primiparae, may occasionally demand a section as the most satisfactory procedure.

Thus, one can see that there is no end to the indications for this operation and it is not at all strange that very often one is tempted to make minor indications suffice for an excuse to do a section.

There is yet to be considered a group of cases for which this operation is often performed in which there is still some question as to its advisability. The use of the Caesarean Section in the treatment of the toxaemias of pregnancy, particularly eclampsia, is a much-debated question, and space does not permit a full discussion of this subject. Suffice it to say that extremely often a patient with one of the toxaemias of pregnancy is subjected to an abdominal operation needlessly, when more conservative treatment, such as diet, elimination, intravenous Magnesium Sulphate or venesection would suffice. The combat between the radical and conservative schools in regard to the proper treatment of eclampsia still goes on, and each side has much in its favor. More careful prenatal work would undoubtedly do more toward the improvement of the ultimate results than all the treatment known be it conservative or radical in nature.

The use of Caesarean Section in the treatment of placenta praevia must be limited to those cases which are at or nearly at term, and which on examination show an undilated cervix and a large child. The Braxton-Hicks bipolar version, bagging, or some other conservative procedure in the premature case very often gives far better results. The secret of the successful treatment of placenta praevia perhaps is to consider each case individually, and deliver her promptly by the most conservative method for that particular case.

It is true that more and more sections for placenta praevia are being done each year. Time alone will tell whether this is the best treatment, surely it surpasses the rapid manual dilation of a closed cervix and the forcible extraction of a large child. With the premature child, however, other procedures such as have been mentioned above usually give better results.

Premature separation of the normally implanted placenta is very often best treated by Caesarean Section, since this condition often
occurs before labor sets in. If labor is already in progress, the
damage to the uterine musculature is many times so severe that even
here a Caesarean section is indicated and the ability to do a hyster-
ectomy at the time of delivery often saves the mother from an
exodus due to postpartum hemorrhage.

Another category of cases which are often best treated by section
is the cardiac with an imminent or outspoken break in compensation.
The strain incident to labor is the recognized factor in causing the
damage done to the cardiac case in giving birth to children, and so it
is that one must often make this burden as light as possible and it is
not uncommon to terminate a pregnancy by Caesarean Section in
a serious cardiac involvement, whether the lesion be valvular,
myocardial, or both. These cases afford excellent opportunities for
Caesarean Section under local anaesthesia, an operation which is
done not infrequently with good results.

Thus, one could go on and on enumerating the indications for
this operation endlessly, and it is not surprising that in the past
decade, it has become one of the most abused obstetrical procedures.
Caesarean Section performed in properly indicated cases and at the
proper time ranks high among the successful surgical procedures,
but improperly done on contra-indicated cases and at the improper
time, it is one of the most dangerous operations to which a woman
can be subjected. The toll of human life exacted by childbirth
yearly is greatly increased by the mortality of Caesarean Sections
performed by men who have no obstetrical judgment and are in no
way qualified to say whether or not a patient should be delivered by
vagina or through the abdomen, and simply choose the abdominal
route because the physician who called them into consultation was
unable to deliver the patient by vagina. Knowing as we do now
that the interior of the uterus contains organisms after the first few
hours of labor, the laparotrachelotomy is coming more and more
into use in the case long in labor, be it a clean or an infected one.
Excellent results have followed its use, and it is highly recommended.
The post-operative course is usually very calm, distension and dis-
comfort being less, and in the event of an infection it is confined
to the pelvic portion of the abdominal cavity and usually it is extra-
peritoneal in nature. This operation differs from the classical one
in that the visceral peritoneum covering the uterus is incised in a
transverse manner rather than horizontally. In this way the bladder
can be peeled away from the uterus and the uterine incision itself made in the lower segment, rather than in the upper portion of the body of the uterus. Following the extraction of the child, the uterine incision is closed and the upper and lower edges of the visceral peritoneum over the uterus overlapped, thus making the uterine incision entirely extraperitoneal. The peritoneal cavity is then closed in the usual manner.

The day has come when one must recognize obstetrics as a specialty unto itself and those physicians who only see an occasional obstetrical patient must admit their lack of detailed knowledge of the art of obstetrics and be willing to accept the advice of those specially trained in this particular field when difficulties present themselves.

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PRESERVATION OF THE NAVAL IN UMBILICAL HERNIOTOMY.—REPORT OF TWO CASES.

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Man is extremely sensitive about the appearance of his surface anatomy whether upon parts that are concealed or exposed. Whenever possible, therefore, the normal topography of the body should be conserved and not distorted by surgical operations. The sacrifice of such an insignificant structure as the umbilicus is no exception to this rule. In the Surgical Clinics of North America, 1923, iii, 1184, under the title of "Cosmetics in Operation for Umbilical Hernia," R. E. Farr has described a method in which he preserves the navel. Ignorant of Farr's work, C. A. Roeder devised and practised an operation along the same general principles (A Modified Mayo Umbilical Herniotomy, Surgery, Gynecology and Obstetrics, 1925, xl, 707). In December, 1910, I performed a somewhat similar operation, being influenced to do so purely for cosmetic purposes, and with the idea of saving the child possible embarrassment if she had occasion to expose her abdomen.

The patient, a white female, age 5, was admitted into the University Hospital, Baltimore, December 14, 1910, for a small umbilical
COSMETIC UMBILICAL HERNIORRTROPHY
hernia, the opening of which would admit the tip of the little finger. The rupture had been increasing slowly but steadily in size. It protruded on coughing and was painful. The operation was performed on December 15, 1910, in the following manner. The skin incision was made to the left of the hernial ring and extended several inches above and below the umbilicus. The wound was then deepened to the base of the hernial sac which was divided by a circular incision. The sac was dissected free and the hole in the peritoneum was closed by the overlapping technic of Mayo. The umbilicus was sewed to the rectus sheath by a buried suture and the skin closed with silk. When last seen, six months after the operation, the child had a perfectly normal looking umbilicus.

On March 11, 1913, I again performed this operation on a white boy, age 3½ years, who had been admitted into the University Hospital, Baltimore, the day before and discharged March 17, 1913, as cured. Here also the incision was made to the left of the navel (see illustration), and the operation was carried out exactly as in the first case. This patient has developed into a robust young man 16 years of age. Not only his parents but the youth are much pleased with the operative result and, whenever the opportunity offers, never fail to express their thanks for the preservation of the umbilicus.

These cases have not been reported with the idea of provoking an argument as to who originated the method. In that Farr was the first to advocate it in the press, he is entitled to that credit. My sole object in recording my experiences with the operation is to add two more cases of umbilical herniotomy to the literature in which the navel was preserved for cosmetic purposes. It appears to be a most sensible procedure when practicable, viz., in small herniae and is bound to spare sensitive children much unnecessary embarrassment.
LEOPOLD AUENBRUGGER.

LOUIS A. M. KRAUSE, M.D.,

BALTIMORE, Md.

Percussion as a means of testing whether walls were solid or covered hiding places, whether barrels were empty or full, and for a number of other purposes in the order of life, must have been in use since the dawn of civilization. The full art of the method as applied finding out the state of preservation of a corpse in a coffin is explained in Edwin Drood by Durdels to Mr. Jasper in the vaults of Rochester Cathedral: "So I sound that tomb, I take my hammer and I tap; I tap, tap, tap; solid. I go on tapping; solid still, I tap again; hollow, hollow, tap again, solid in hollow, tap, tap, tap—solid in hollow and inside solid hollow again, there you are." Old ones crumbled away in stone coffins in vaults. It is surprising, therefore, that no one seems to have thought of using percussion of the human body as a means of diagnosis until its utility was discovered by Auenbrugger in the middle of the eighteenth century. A short account of the man is opportune, and may be of interest to some.

Joseph Leopold Auenbrugger was born at Gratz, in Styria, in 1722. His father is said to have been an innkeeper. He gave his son a solid education and in due course the son studied medicine at the University of Vienna, where he was a pupil of Van Swieten, who was a former pupil of Boerhaave at Leiden, and on whom the mantle of that famous physician was supposed to have fallen. After taking his degree, Auenbrugger settled in Vienna but was not a teacher in the University. In addition to his medical ability he was a musician of repute.

He held a musicale at his home every Sunday from 12 till 2 P. M. He was the composer of at least one opera, "The Chimney Sweep." The operas so pleased the Empress, Marie Teresa, that she asked him to write another. He declined, however, saying that he had something better to do than write operas. "Ich habe was besseres zu tun als Komäden Stückel zu schreiben."

It was in 1754 that he noticed the difference of sound produced by striking the chest wall in different places. He pursued the line of clinical research thus opened to him for seven years, and in 1761
he embodied the results of his observation, in a work entitled, "In-ventum Novum ex Percussion Thoracis Humani." In the preface, he says that he wishes to call attention to a new method of detecting diseases of the chest which he discovered. He goes on to say: "In making public my discovery respecting this matter, I have been actuated neither by an itch for writing (pruritus scribendi) nor a fondness for speculation" and confesses that there are still many defects in his work which can be remedied only by further experience and observation.

After describing the sound produced by striking the chest of a healthy person in different parts, he gives a detailed account of the method of practising percussion. "The thorax should," he says, "be struck at the same time extended." It might be noted that he recommends that while this is being done, the shirt should be drawn tight over the chest or the hand of the operator should be covered with a glove of unpolished leather. Had he but applied his ear as well as his hand, he would have anticipated Laennec. He proceeds to describe the dullness of the percussion note caused by the greater or less diminution of volume of the air in the chest due to compression of the lung, either by an effused fluid or solid growth. He proved the value of the method by experiments made with empty or partly filled wine casks and with a dead body, into the thoracic cavity of which fluid had been injected. He also closely compared the information yielded by percussion with the state of things found after death. In cases of scirrhus of the lung, he explains this to be the degeneration of the natural substance of an organ into an indolent fleshy mass. He also considers, vomica, empyema, pleural effusion, dropsy of the pericardium, extravasation of the blood into the cavity of the pleura or pericardium and aneurysm of the heart. He came near to the discovery of auscultation, for he says: "If the hand is laid over the situation of a vomica as revealed by percussion and the patient should cough, you will clearly distinguish the rattling of pus inside of the chest."

There is no mention whatever of the elasticity of comparatively normal and pathological structures as developed by percussion, a phenomenon now considered of some importance. As a clinician, Auenbrugger seems to have established his greatest reputation in the recognition of pleural effusion. In the eleventh chapter in his book is an interesting conception of cavity formation which I quote:
"When a tumor, sound or morbid, is deposited from the circulating mass in a solid form, and is later softened and converted into matter contained in a sort of capsule, I term this collection of matter a vomica." A few paragraphs on, an empyema is defined as a result produced by the drainage of the contents of the vomica into the pleural cavity or upon the diaphragm. In the twelfth chapter, Auenbrugger clearly anticipates Skoda by almost a hundred years, in the description of that important phenomenon now known as Skoda's resonance. Auenbrugger took as his standard that percussion note produced in percussing over a fleshy limb.

Auenbrugger's teaching fell on deaf ears. His discovery was ignored by those occupying the high places of medicine and his own teacher, Van Swieten. The only physician of standing in his day, who appreciated the value of his discovery was Stoll, who succeeded Dehaen as professor at Vienna. The method was either confused with succussion, which is mentioned by Hippocrates, or not mentioned at all by contemporary writers. The lot which befell Auenbrugger's little book is an example of the attitude of the superior person towards anything new that does not emanate from his own sphere. This has been one of the chief influences that have retarded the progress of medicine. Thru a little book by one of Stoll's pupils, named Eyeral, percussion was partly brought to the attention of that distinguished French physician, Corvisart, preceptor to Laennec. Corvisart was the court physician to Napoleon and a man of broad attainments of diagnostic acumen. It is quite interesting to note that his elevation to the high position held in the French court came about as a result of Napoleon's appreciation of his new method of diagnosis, namely, that of percussion in chest diseases. When Corvisart began his investigation of percussion, it was practically unknown in Europe outside of Vienna. He had Auenbrugger's monograph translated into French with commentaries. It is a great tribute to Corvisart that while his own investigations and writing established percussion upon a firm base and even extended its applications, he renders all credits to the source from which came his inspiration to use his own words, he says: "I would not sacrifice the name of Auenbrugger to personal vanity." it is he and the beautiful invention, which of right belongs to him, that I wish to recall to life, Auenbrugger himself was too well posted and serene by nature to worry about his post-humous reputation.
In the light of our present knowledge, it is rather difficult to understand how a man of Auenbrugger’s attainments bringing to the profession such a valuable diagnostic method could have failed to anticipate the discovery of Laennec by 50 years. How in palpating and appreciating tactile fremitus, in percussing and differentiating tones elicited, he could have failed to apply the ear in diagnosing will always remain a mystery to me.

In 1798 he became ill, suffering of “Faulfieber.” He gradually recovered but a little later he became blind in one eye. In 1804 he regained his health sufficiently for active work. In this year he celebrated his fiftieth wedding anniversary. In 1807 his wife died. Following the death of his wife, he lost interest in life. Eighteen hundred and eight, one year before his death, percussion was greatly used. He might have said, as Jolson said to Lord Chesterfield when that nobleman came forward as a patron of his contemporary, “The notice which you have pleased to take of my labors, had it been early, would have been kind, but it has been delayed until I am indifferent and cannot enjoy it, ’till I am solitary and cannot impart it, ’till I am known and do not want it.”

Auenbrugger died at 2 P. M. on May 17 or 18, 1809, of Faulfieber.

Bibliography

IN MEMORIAM—DR. JOHN THEODORE KING.

By Randolph Winslow, A.M., M.D., LL.D.,

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For 50 years I have been continuously a member of the Medical and Chirurgical Faculty of Maryland, and have seen it increase in numbers and influence from an insignificant society, without a local habitation but with, indeed, a highly honored name, to the splendid institution of the present day. But all through its history the most prominent physicians of the city and State have been its loyal supporters. Of those who were members in 1876, the names of only three are still on our roll. One by one our former friends and associates have gone to the undiscovered country from whose bourn no traveller returns. At each annual meeting the names of those who have departed within the year are announced and we mourn their absence from our midst; but in recent years a notable custom has become established, that of presenting to the Faculty memorials of many of our deceased members. These memorials usually take the form of portraits or bronze medallions of our former colleagues, and as such are most welcome, serving not only to preserve their features but to remind us of their efforts in the cause of humanity and for the honor of our calling. Such a one was our departed colleague, Dr. John Theodore King, in appreciative remembrance of whom I desire to speak a few words tonight.

One day, I think it was in the summer of 1872, a pleasant gentleman came to the University Hospital and we learned that he was Dr. John T. King, a surgeon in the United States Army. I was at that time a clinical assistant in the hospital and my acquaintance with Dr. King dates from that visit. Later, when I came to know him better, my acquaintance ripened into friendship, and for a period of 50 years I have held him in high esteem. He was born in Baltimore on December 14, 1844, and after graduating from the City College entered the University of Maryland and received his M.D. degree in 1866. While a student he was the private pupil of Dr. Frank Donaldson, at that time one of the most prominent physicians in the city, who held the chair of physiology in the University. Dr. King served in the army from 1866 to 1873. He then resigned

*Eulogy delivered at the Medical and Chirurgical Faculty, April 28, 1926.*
and opened an office in Baltimore. Practice did not come with a rush and his emoluments for the first year reached seventy-five dollars. He was greatly discouraged and was thinking of leaving the city. In this dilemma he consulted Dr. Donaldson, who said, "Why man you are born proud, you are making too much money. I did not make that much during my first year. Go back and stick to your work." He persevered and gradually patients in increasing numbers sought his professional services and for many years he was one of the most active as well as one of the most beloved physicians in the city. He was one of the old fashioned family physicians, of the type of Dr. William MacLure of the Bonnie Briar Bush—one who gave without stint of his time and of his energies to the service of his patrons, who were also his friends, until exhausted nature could do no more and he fell on sleep on December 2, 1924. Becoming a member of this Faculty in 1882, he was a constant attender at its meetings, served in the House of Delegates and was a highly esteemed friend and associate.

Dr. King was, as I have said, one of that fast disappearing type of the family doctor, whose whole efforts were expended in the service of his patients. He was the intimate friend of his patrons, he shared their joys and he wept with their sorrows. He had no desire to shine in the field of literature, nor did a scholastic career appeal to him but he was faithful in the performance of his daily duties and his carriage or automobile was a familiar sight on the streets as he was making his numerous calls by day and by night.

With a desire to perpetuate his memory, as well as to show his love for this Faculty, his family have caused a bronze medallion plaque to be made of him and have done me the honor of requesting me to present it at this meeting. The artist who has made such a striking likeness of our late friend and colleague is Miss Isabelle Schultz, one of the instructors at the Maryland Institute and a relative of Dr. King. It is, therefore, not only a work of art, but a labor of love, and she is to be congratulated on the skill with which she has accomplished her task.

And now, Mr. President, on behalf of the family of Dr. King, I take great pleasure in presenting to the Medical and Chirurgical Faculty this memorial of our late fellow-member and I ask that it be placed among those of the other worthies whose features adorn our halls.
This summer has seen the inauguration of a new effort on the part of the School of Medicine to extend its usefulness as a center of medical instruction to the practising physicians of the State of Maryland. Early in July the Extension Committee notified the various county medical societies that the University was prepared to offer a limited number of courses on medical topics in the towns and cities of the State during the summer months. These courses were to be given in those centers where a group of physicians of sufficient number were enrolled by the county medical society as post-graduate students.

Each course was to consist of six weekly half-day meetings. The courses organized for this year were the following:

1. Diseases of the Circulatory System
2. Diseases of the Respiratory System.
3. Diseases of Endocrine Glands and of Metabolism.

There are, at present, three of these courses being given in Frederick and Hagerstown. Upon the success of these first courses will, no doubt, depend the demand for a continuance of this new feature of the University's work. It will be interesting to watch the developments in this field.

The Research Club.

The presentation of two bound volumes of reprints of articles by members of the Research Club to the library of the medical department at a meeting of the University Hospital staff last October offers the opportunity of commenting upon this interesting organization. These volumes were duplicates of a set which had been previously given to Dr. Harry Friedenwald, Professor of Ophthalmology, by his fellow-members of this club as a testimonial of their affection and esteem. This action on the part of the club was particularly fitting since Dr. Friedenwald founded the organization 25 years ago, and has been a faithful and enthusiastic member ever since. The club* consists of 20 members and one honorary member.

and every member has read a number of scientific medical papers before the society, the maximum per member being 18 and the minimum 3. In all, 186 papers have been read, and most of them have since been published in scientific journals. There is a complete set of bound volumes of these reprints at the library of the Medical and Chirurgical Faculty in Baltimore.

It would perhaps be invidious to consider the work of any individual living member, but it may at least be permitted to mention the brilliant work of one of the former members, Dr. Samuel T. Darling, who later became an honorary member of the club. Even during his active membership he read papers of considerable scientific interest, but from the day of his honorary membership until his death he carried on scientific work which made him a leader amongst those pursuing the subject of tropical medicine, especially those who studied the diseases caused by animal parasites. After graduating from the College of Physicians and Surgeons and serving as the resident pathologist, Dr. Darling was appointed Chief of the Laboratories of the Isthmian Canal Commission, and he was intimately associated with Dr. Gorgas in his epoch-making work at Panama. He later accompanied this brilliant administrator to South Africa, where they were able to institute measures which produced a great reduction in the incidence of pneumonia amongst the miners. In 1915 he became a member of the Rockefeller International Health Board, and spent three years in Malaya, Java and Fiji, studying the various tropical infections. He then became Professor and Director of the Laboratories of Hygiene in the medical school of Sao Paulo, Brazil, and in 1920 was appointed Director of the Laboratory for Research in Malaria in Leesburg, Ga. He finally joined the Malarial Commission of the League of Nations, and while in Syria investigating this disease he met an untimely death due to an accident in which the automobile in which he was riding went over a precipice.

We are also proud in having enjoyed the companionship of the late Dr. A. C. Harrison, whose all too early death robbed the community of a brilliant surgeon and a patriotic citizen.

Our first volume of reprints was issued in honor of the memory of Dr. Thomas S. Latimer, Professor of Medicine in the College of Physicians and Surgeons, and our second one as a testimonial to
Dr. William Simon, Professor of Chemistry in the same institution. Two volumes have since been issued to Dr. William F. Lockwood and two to Dr. Harry Friedenwald, both as a testimonial of our admiration for the character and achievements of these individuals.

The six volumes of reprints mentioned above contain 455 reprints, including studies in general medicine, surgery, and various medical and surgical specialties, the history of medicine, physiology and physiological chemistry, bacteriology, pathology, and preventive medicine. A careful examination of the contents of these volumes will reveal the fact that these studies are very inclusive, embracing most of the interesting subjects which are under study and discussion by clinicians, laboratory investigators, historians and sanitarians of today.

The verses which follow are a modest attempt to express the sentiments which have always prevailed at the meetings of the club, and were read at the house of Dr. Harry Friedenwald when the testimonial volumes were presented to him.

FRIENDSHIP

Happy is the home that shelters a friend.

-Emerson.

To Abraham, the patriarch,
Some mystic guests once came,
Who claimed his hospitality
In friendship's sacred name.

And when they left, a holy light
Suffused his humble home.
His friends were heavenly visitors,
Consigned the earth to roam.

And so when friends surround us,
And share our hearth and cheer,
A benisen and blessing
Such guests do oft appear.

And when they leave our cheered abode,
Regret the household shares,
And oft it seems we've entertained
Celestials unawares.
And so I sing of friendship,
    Sweet converse of the mind;
Its genius, hospitality,
    Which here we always find.

Like virtue, hospitality
    Is oft its own reward.
Which brings the thoughts and acts of friends
    To rich and full accord.

Thrice blessed therefore be this house,
    Tried friendship's sacred fane;
Long may its cheery flame abide,
    As years still wax and wane.

No Jobean friends will here invade,
    But all applaud the plan
That made the elements unite
    To make in thee a man.

—WILLIAM ROYAL STOKES.

PNEUMO-THORAX CLINIC.

The University Hospital announces the opening of a Pneumo-thorax Clinic as a part of its general out-patient department. Dr. C. C. Habliston will be Chief of Clinic. This clinic is organized to provide after care for cases discharged from sanatoria, whose lung lesions were being treated by means of artificial pneumothorax while in the sanatoria. This clinic will be held every Wednesday at twelve o'clock, at which time pneumothorax refills will be given to cases referred for treatment.

EMILE DUSKES

In the death of Dr. Emile Duskes the Medical Profession has lost a member of great promise, the University an earnest and energetic worker and his associates a friend of delightful personality.

Born in Montreal on August 6th, 1900, he received his education in that city, and was graduated with honors from McGill University in 1923. Selecting Surgery as his life's work, he embarked on a plan of full preparation; he spent two years in interne service, one
DR. EMILE DUSKES
year in general practice, and in the fall of 1926, came to the University as a full time teacher in Pathology with the title of Associate, intending to devote three years to that work.

In the laboratory his efforts were untiring; always striving to improve himself and add to the efficiency of the department. He made himself a very valuable part of the University. His death following a short illness has put to an end a career of promise and has left a void that is difficult to fill.

Hugh R. Spencer.

CONCERNING REPRINTS OF THE WRITINGS OF THE ALUMNI

The Library of the University of Maryland in Baltimore, is endeavoring to complete its collection of reprints of the work of the alumni of the various Departments. It is proposed to bind and permanently file these reprints—those of the Medical Department to be entitled:

"Contributions to Medicine and Surgery by the Alumni of the University of Maryland, School of Medicine."

The material of the first series is made up in reprint-cases, alphabetically arranged by author, and alphabetically by title under author. Members of the Library Staff will be pleased to show the collection to interested alumni.

This is a very important part of our historical work, and one for which we bespeak your interest. Please co-operate with us by sending in two (2) copies of your original or reprinted articles to:

Mrs. Ruth Lee Briscoe,
Librarian, University of Maryland,
Baltimore, Md.

IMPROVEMENTS AT UNIVERSITY HOSPITAL

The past summer has brought about many improvements to the University Hospital, which have not only resulted in an improved appearance, but have supplied several long felt wants. Those of our Alumni who have been familiar with the narrow, sombre corridor through the operating suite will be more than pleased on their next inspection to find that this has been completely renovated. The old low ceiling has been removed and raised to the normal level of ten
feet, all doorways have been widened to the five-foot standard and above all, the new operating room created. The old instrument-room and supply room have been joined together and the walls covered with a very pretty bluish-grey tile. The floor is of a corresponding shade and supplies a delightful neutral tone. A new Scanlon-Morris operating table and a new Crane Company scrub-up sink served to make the equipment modern and efficient. The new French Scialytique Operating light has been installed and is found to be very satisfactory. Electrical attachments for direct and alternating current and a vacuum system has been placed in a condolite head on the floor beneath the table, thus doing away with the streamers from the wall which tend to make passage around the table difficult. The instruments and sterile supplies have been placed in the old South Operating room known as "A" Operating room, thus providing a very efficient and attractive supply room.

Another long felt want has been supplied to the children's ward. For years, our children have been deprived of the benefits of fresh air and sunlight and we have all been conscious of the dingy surroundings of the children's ward. Through the generosity of the Woman's Board with their never-ceasing interest and zeal, an outside porch has been erected on the south side of the old children's ward on the Cantilever system, supported from the corner of the porch and the wall of the sun-parlor, consequently no light has been obstructed from the room beneath. This porch is open at the top, thus providing a flood of sunlight and warm breezes. It has been amply guarded by a high railing, making it impossible for any child to meet danger. The South end of the ward has been almost entirely removed and replaced by sashes thus providing great supply of light and air to the ward itself. The children's cribs can be wheeled out of the ward onto the porch and thus provide all the benefits of an outdoor existence.

The Alumni are urged at their next visit to the hospital to inspect these improvements and enjoy the additions of the hospital service.
CAPTAIN ISAAC E. EMERSON

In the July issue of the Bulletin mention is made of an endowment to yield $4,500 annually in support of a professorship in biological testing and $1,500 annually to maintain a fellowship in Pharmacology. This gift has attracted much interest in the pharmaceutical profession as the following extracts taken from an article in the Pharmaceutical Era, for August, 1927, attests. The notice states, that the gift to the School of Pharmacy will permit it to satisfy an urgent need and to assume leadership in a line of work which has heretofore been neglected in many schools.

Captain Emerson's endowment thus makes it possible for the Maryland school to furnish this kind of instruction in a proper manner. It is the intention of the school to provide a fully equipped laboratory for this purpose and to obtain the best trained man available to head the department.

Captain Emerson was born in Chapel Hill, N. C., July 24, 1859, and was graduated from the University of North Carolina in 1879, as a chemist. He located in Baltimore in 1881, where he established himself in the retail drug business. On May 1, 1889, he retired from the retail trade to engage in the manufacture of Bromo-Seltzer, a preparation, the formula of which he had conceived a few years previously. By 1891, the business had grown so marvelously as to necessitate the organization of the Emerson Drug Company with Captain Emerson as president. Since coming to Maryland, Captain Emerson has been closely identified with the commercial development of Baltimore. The Emerson Drug Company's Tower Building, the Emerson Hotel, the Maryland Glass Company are monuments of his creative genius. Believing that all work and no play makes Jack a dull boy, he organized the Maryland Naval Reserve in 1894 and was its commanding officer until 1901. On May 25, 1898, he was placed on active duty in the Navy for service against Spain by the National Government with the rank of lieutenant and assigned to the command of the Fifth Lighthouse District. He is an enthusiastic sportsman, an accomplished yachtsman, a genial companion, an executive of unusual ability, an influential and public spirited citizen with a happy faculty of winning friends wherever he goes. From this most generous gift it is hoped and expected that discoveries of the utmost benefit to man will result.
CAPTAIN ISAAC E. EMERSON
ALUMNI ASSOCIATION ACTIVITIES

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PRESIDENTIAL MESSAGE

Our Alumni Association during the past several years has made rapid strides forward in increasing its membership and forwarding its aims, of which we should be proud.

A comprehensive idea of just what has been accomplished may be obtained by reading the Annual Report of our Secretary, which was published in the July, 1927, issue of this periodical. And I earnestly request each graduate of the combined Schools of Medicine in Baltimore, now merged into the University of Maryland, to look up this number of our Bulletin and carefully study this report.

There are many things to be accomplished for the betterment of our Alma Mater, and our Alumni Association must push forward steadily and conservatively if it is to materially aid in accomplishing these things, and the help of every alumnus or graduate is essential to the full accomplishment of these purposes.

For this reason I am addressing this message to each alumnus, who should feel an equal interest in becoming an active member of the Alumni Association of their Alma Mater.
Many of us are prone to forget the fact that an indispensable part of our early equipment, leading to later success in our profession, was a "Diploma" from a recognized School of Medicine, consequently the past, present and future standing of our Alma Mater should interest us deeply, and we should feel proud in saying "I am an Alumnus of the University of Maryland School of Medicine, one of the oldest in the country."

You also must not forget that the young men, now and hereafter to be enrolled as students at the University of Maryland need our help in every possible way in promoting the efficiency of their training at the University. By joining our Alumni Association and taking an active part in its deliberations you can help very materially in promoting the standards that should be maintained.

Won't you become a member now by forwarding to headquarters your annual dues of three dollars? Simply fill in the form found on the upper half of the inside of the back cover of this Bulletin, and mail it with your check to the Alumni Headquarters at Lombard and Greene Streets, Baltimore City.

Frank W. Keating, M. D.,
President Medical Alumni Association,
University of Maryland.

LOYALTY*

By Frank J. Kirby, M. D.,
Baltimore, Md.

Dr. C. W. Maxson, the President of the Medical Alumni Association of the State University of Maryland, told me that I was to come here this evening and represent the Alumni of the three former Medical Schools, the Baltimore Medical College, the College of Physicians and Surgeons and the University of Maryland.

In what College any of us here studied and received our degree in medicine, it matters naught. I salute you all and bring heartiest greetings to you from your fellow-alumni in Maryland. The old boys with whom we worked in the laboratories, the dissecting rooms, the class and wards.

[*This address was delivered at the banquet of Baltimore Medical Club of New York City, April, of this year.]
And it seems but a short while ago, as those pleasant recollections and sweet memories are still young and fresh in the minds of all of us. Oh! how happy, how carefree and yet how uncertain were those times; so well expressed in the following words:

Now I lay me out to cheat,
I pray this pony I may keep;
Oh! let me pass you old exam,
For honors I don't care a damn.

But those days have passed and we are all out doing good things in the world; though many did not get any medals, whate'er they may mean; we all learned to play life's game hard, and we learned to play it clean. And the old Alma Mater is proud of her sons.

Founded back in the year 1807, the University early produced many worthy sons; later the more ambitious of them branched out, founding other schools of medicine. In Baltimore, for instance, the College of Physicians and Surgeons, the Baltimore Medical College, and some of its men, teachers in the Johns Hopkins Medical School. The two colleges first mentioned likewise did good work in the training of men in medicine, loyal, efficient and capable, an honor to the profession, and they could well be proud of them.

As the years rolled by and the exigencies of the times required, the University of Maryland, the College of Physicians and Surgeons and the Baltimore Medical College joined hands, coming together as one large family, pooling their traditions, their interests and their energies into one great cause, the cause of medical education in a State university; the University of Maryland. Feeling that in this manner, they could best serve humanity, and better teach to students the science of the conservation of health and happiness, and the art of applying its laws to mankind. Thus it was decided, and the Baltimore Medical College joined the University in the year 1913 and two years later the College of Physicians and Surgeons entered the coalition. Automatically all of us who were former students of any one of these three schools became alumni of the combination now, since 1920, the University of Maryland.

Our Alma Mater has been wonderfully prolific, since she is now the mother of over 6,000 active alumni, and is still going on with no signs of procedentia and sterility.
Such was the foresight of these wise men, and their accomplishment was a higher standard of educational preparation, a better and more thorough training and teaching in medicine of students, making of them finer material in the profession.

We have also that splendid school, the department of medicine of the Johns Hopkins University. Graduating their first class in medicine in 1897, with a high standard of requirement and excellent organization and endowment; under the leadership of our dear beloved Dr. William H. Welch, by his wise guidance and watchfulness, and its thorough system, has maintained a preeminence in medicine everywhere.

We all meet and work shoulder to shoulder in the great cause of altruism, the betterment, the benefit and uplift of mankind.

The world is more happy for having a good doctor.

We are here gathered this evening as the alumni of medical schools, celebrating and enjoying in warm, social communion, this splendid entertainment and dinner, recalling the happy years of our early introduction into medicine.

Allow me to call to your attention the names of some of these great men under whom we have worked: William Osler, William Halsted, William H. Welch, Simon Flexner, Lewellys F. Barker, Louis McLane Tiffany, John W. Chambers, John D. Blake, Robert W. Johnston, Howard A. Kelly, Isaac E. Atkinson, Thomas S. Latimer, Charles Mitchell, David Streett, Julian J. Chisolm, Francis T. Miles, Randolph Winslow, etc., and so I may go on mentioning names dear to me whose example, teaching and mastership in medicine have been to me a lifelong aid and inspiration.

But many of these men have been called into that undiscovered land, to submit their final balance sheet. May they rest in peace.

A few of them we are happy to say are still among us, rapidly approaching the Emeritus list. For thus wastes man.

Today he puts forth the tender leaves of hope;
Tomorrow blossoms; bearing his blushing honors thick upon him;
Next day comes the frost, which nips the shoot,
And while in his greatness still aspiring,
He falls like autumn leaves, to enrich our Mother Earth.
Our work, it is true, does not always reap 100 per cent. in financial gain, in paid bills, but there is a sense of comfort, of satisfaction, a fascination, spurring us on to do something for our fellow-man, often without any thought of recompense, though we sometimes get our opportunity, as sensed in the following lines:

Once upon a midnight dreary,
The Doctor slumbered, weak and weary,
And the whole town could hear him snore.
Suddenly there came a rapping,
Like a mad goat wildly knocking,
His hard head against the door.
“Get thee up” a voice cried loudly,
“Come in haste” it added proudly,
Like a man who owned a million, or much more.
But the Doctor never heeded,
Back to Dreamland fast he speeded,
For such men as those he needed,
In his practice, nevermore.
For long years, that man had owed him,
Not a cent he’d ever paid him,
And the Doctor now will dose him,
Nevermore.

The greatest asset a college has is an active, loyal alumni association. It is the strong right arm of a college, and it can make a college as big as it wills, by its loyalty, interest and activity in the college and its workings.

It is a well-known fact that the great universities of Europe and America have achieved their greatness largely through the activities of their loyal alumni.

When we finish and graduate from college, and go out into the world to work along future lines, we do not sever our connection with our Alma Mater; we are still bound to her by the ties and duties of gratitude, loyalty and foster parentage. She is the one to whom we applied for help in searching our vocational work, our college accepted us, took us in the family, and made it possible for us to attain the goal of our ambition, and she is ever watchful and solicitous of our welfare, rejoicing with keenest delight in all our successes, and sharing our sorrow in any misfortune.

It is not sufficient for one to join an Alumni Association, but we owe it to our Alma Mater to exercise a generous interest and assist-
ance in everything that pertains to her welfare, and further aggrandizement. We owe it to her as our duty to freely respond to all her invitations to visit her, to keep her advised of our accomplishments, and achievements in after life; to make efforts to find out in what manner we can add to her glory, and greatness, and to aid materially in the perpetuation and spread of her name.

The good we have done as men, the advantages, emoluments and achievements we have attained, let us bring these as gifts and lay them at her feet, receiving vital inspirations from the tender solicitude of our affectionate and benignant mother; and in parting promise her to return every year either in person or in spirit, to assure her of our love and fidelity and to extend our heartfelt gratitude to her, since it is to this mother we owe all the great and grand activities we accomplish and enjoy in this life.

One must spread abroad as well as hear her praises, feed the holy flame so that all will know which beacon is the brightest on the sea of scientific life. As we live loyal to her noble traditions, we will willingly share her burdens, go upon her errands, never permitting any earthly thing to dim the light of our educational mother, who by her traditions, her teachings, and example, has handed us our chart and compass, whereby we may safely sail upon the waters of the ocean of scientific life, spreading her truths for the benefit of the whole world.

SKILLING, DOYLE MEMORIAL

The Class of 1917 is making preparations to unveil on Armistice Day of this year, a bronze memorial to First Lieutenant John Galen Skilling, M. C., and Dr. Joseph Francis Doyle, two class-mates, who made the supreme sacrifice during the World War.
Lieutenant Skillling was a native of Maryland, born in Lonaconing on February 22, 1894, the son of Dr. W. Q. Skillling. He entered the University of Maryland School of Medicine in the fall of 1913 and was graduated with a good record in 1917. While serving as a resident physician at the Maryland General Hospital, he received his commission and left for active service in September of 1917. After a brief stay at Fort Oglethorpe, Ga., he went overseas where he served as Battalion Surgeon, First Battalion, Twenty-sixth Infantry, First Division, A. E. F. He was killed in action on November 6, 1918, at Mouzon, France, while directing the removal of wounded from exposed terrain.
Dr. Doyle was a native of New Hampshire. He was born in Manchester in 1891. On entering the University of Maryland School of Medicine in 1913 he was elected Class President of the 1917 Class. His progress through the school was rapid and he was loved by all members of the class. After graduation he returned to Hartford, Conn., where he died in St. Francis Hospital as the result of complications following an operation to enable him to qualify physically for the acceptance of a commission in the Medical Corps of the United States Army.
VISITORS

During the summer months the following Alumni have visited the office of the Alumni Association:

Dr. H. H. Haynes, Clarksburg, W. Va., University of Maryland, Class 1908.

Dr. D. E. Musgrave, Barboursville, W. Va., College of Physicians and Surgeons, Class 1902.

Dr. A. A. Lamar, Middletown, Md., Baltimore Medical College, Class 1898.

Dr. William P. Lawler, Lowell, Mass., College of Physicians and Surgeons, Class 1886.

Dr. Noah H. Short, Norton, Va., University of Maryland, Class 1916.

Dr. T. K. Oates, Martinsburg, W. Va., University of Maryland, Class 1896.

Dr. J. Frank Miller, Reisterstown, Md., Baltimore Medical College, Class 1907.

Dr. A. B. Headley, Cambridge, Ohio, College of Physicians and Surgeons, Class 1902.

DEATHS

Dr. Edward Douglas Davis, Winchester, Va.; class of 1894; aged 58; died, June 15, 1927, of carcinoma of the stomach.

Dr. Camillus P. Carrico, Elkton, Md.; class of 1898; aged 60; died, July 8, 1927, of heart disease.

Dr. Felix Villamil, Florida, New York; class of 1903; aged 50; died in July.

Dr. John Edward Buchanan, West Alexander, Pa.; B. M. C., class of 1905; aged 46; died, June 20, 1927, of myocarditis.

Dr. Bernard Purecell Muse, Baltimore, Md.; P. & S., class of 1888; aged 59; died, August 6, 1927, following a lingering illness.

Dr. Walter Benjamin Wallace, Coalgate, Okla.; P. & S., class of 1891; aged 65; died, July 3, 1927, of chronic myocarditis and nephritis.

Dr. Clement L. Maples, Asheville, N. C.; P. & S., class of 1888; aged 61; died, July 17, 1927, of tuberculosis.

Dr. William Baltzell Burch, Baltimore, Md.; class of 1890; aged 61; died, August 25, 1927. He was a son of Dr. James Cook Burch, class of 1862.
Dr. Walter S. Wilson, Lewistown, Pa.; P. & S., class of 1879; aged 72; died, June 5, 1927, of tuberculosis.

Dr. Alexander Gladstone Kennedy, Boston, Mass.; P. & S., class of 1897; aged 56; died, July 9, 1927, of cardio-renal disease.

Dr. John Sabine Biddle, Columbus, Ohio; P. & S., class of 1903; aged 59; died, July 21, 1927, of heart disease.

Dr. J. P. Whitehead, Rocky Mount, N. C.; class of 1899; aged 54; died, April 11, 1927, of acute colitis.

Dr. Walter S. Blaisdell, Punxsutawney, Pa.; P. & S., class of 1890; aged 60; died, April 28, 1927, of heart disease.

Dr. August Horn, Baltimore, Md.; class of 1888; aged 60; died, May 31, 1927. He was a son of the late Dr. Louis Horn, class of 1869.

Dr. Lewis Allen Griffith, Upper Marlboro, Md.; P. & S., class of 1879; formerly a member of the Maryland State Board of Medical Examiners; aged 68; died, June 23, 1927, of heart disease.

Dr. Bayard Thistle Keller, Cuyahoga Falls, Ohio; class of 1871; aged 77; died, May 6, 1927, of heart disease.

Dr. John Hugh Bannon, Lawrence, Mass.; B. M. C., class of 1898; aged 49; died, May 27, 1927, of carcinoma of the throat.

Dr. Edward P. Warren, Elters, Pa.; class of 1868; aged 79; died, May 18, 1927.

Dr. Robert Madison Slaughter, Washington, D. C.; P. & S., class of 1879; aged 70; died, June 3, 1927.

Dr. Robert T. Glassell, Bowling Green, Va.; class of 1886; aged 72; died, June 4, 1927, of carcinoma of the parotid gland.

Dr. Edwin Myley Schindel, Hagerstown, Md.; class of 1883; formerly mayor of Hagerstown; aged 72; died, May 7, 1927.

BOOK REVIEW.

THE NORMAL CHILD AND HOW TO KEEP IT NORMAL IN MIND AND MORALES: Suggestions for Parents, Teachers and Physicians; With a Consideration of the Influence of Psychoanalysis. By B. Sachs, M.D. (New York, etc.: Paul B. Hoeber, Inc., 1926.)

A book of 111 pages in which the author voices the findings of many years experience as a New York consultant. As the sub-title suggests, the book is written in a style which should appeal to an intelligent layman.
"Barring the small number of grossly defective and handicapped infants, every child at birth is potentially a normal creature. * * * Few realize that habits are formed during the first six months of life. Be systematic in the daily routine and at this early period do not over-stimulate the child. * * * In the family, as in the State, there is no isolated unit—the child is one of a community. * * * It is of great value in the early building-up of character, that children should mingle freely with others. The fear of occasional contagious disease should not be a deterrent. * * * The personality of the teacher leaves a powerful impression upon the growing child's mind. * * * The parent can well afford to support the efforts of the teacher who, nine times out of ten, has far greater understanding of the child's difficulties than has the parent. * * * Music is unquestionably one of the cultural delights of life just as an appreciation of the arts is: it requires much tact and good judgment to develop these finer tastes without evoking early antagonism. * * * The growing boy or girl will do far better to race up and down hill, across meadows and green pastures than to dance according to the latest jazz strain. * * * Not infrequently mothers (unintentionally) play a very pernicious role. They excite rather than pacify sex curiosity. The rule holds that between the ages of 11 and 15 years, the boy should be chiefly under male guidance and girls of about the same age should receive all the information they may require from an intelligent mother or companion."

Page 67 begins a consideration under the title: "The Evils of Psychoanalysis." Unfortunately this subject rather preoccupies the author. In the introduction, one reads: "In keeping with the tendencies of the day, child study is 'oversexed.' Undue importance has been attached to the question of sex, and while we may know a few things more than we did a decade or two ago, there is no warrant for making this the all-dominant factor of the child's life." The little book suffers from the inclusion of these criticisms. One cannot but regret statements such as "I have known mothers who were misled and made unhappy by the salacious doctrines of the Austrian school." One may even criticize "Suppression is bad—Repression is beneficial. Why not adopt the slogan, both for children and adults, 'Repress yourself so that your neighbor may express himself?" The fear of repression is largely due to the writings
of the Freudians.” The reviewer believes that Dr. Sachs has encountered too much of the products of “wild analysis,” and that his contribution has suffered the more in that it may be taken as propaganda.

Harry Stack Sullivan,
The Sheppard and Enoch Pratt Hospital.

Addresses Wanted

Any information about these men will be much appreciated. They are lost to us and with the sources at our command we are unable to locate them.

Hines, Leo J. .......................... 1905
Hinkel, Henry J.—Dr. Barrett. 1900
Hitzrob, H. W. ..................... 1880
Hoidt, G. A. .......................... 1895
Hofge, Richard D. ................. 1887
Holliday, Charles H. ............... 1904
Holmes, A. M. ....................... 1885
Holmes, Joseph N. .................. 1883
Holt, H. P. ........................... 1886
Holtzapple, Milton H. .............. 1893
Hopkins, Henry C. ................... 1878
Horn, J. A. ........................... 1879
Horn, S. W. ........................... 1891
Hovis, J. Frank ...................... 1883
Howard, C. I. ........................ 1884
Howard, Thomas M. .................. 1873
Howard, William R. ................. 1879
Howlett, Thomas W. ................. 1897
Hubbard, G. W. ...................... 1894
Hudson, Benj. V. ..................... 1883
Huggins, Thomas ..................... 1878
Hughes, John C. ..................... 1888
Hughes, Samuel B. ................. 1892
Hughes, Thomas M. .................. 1879
Hume, William W. ................... 1889
Humphrey, Victor G. ............... 1913
Hunt, Charles W. ................... 1880
Hunt, Joseph R. ..................... 1888
Hunter, Robert R. ................... 1886
Huntley, Abel B. ..................... 1879
Husler, John T. ...................... 1886
Hutcheson, F. K. .................... 1894
Hutto, A. Lanton .................... 1885
Inners, John E. .......................... 1902
Jackson, T. J. ....................... 1881
Jarengan, J. Eugene ................. 1886
Jennings, Gainor ..................... 1884
Jenson, Charles ...................... 1898
Johnson, F. L. ...................... 1889
Johnson, Joseph B. ................. 1874
Johnson, J. S. ...................... 1876
Johnson, L. H. ...................... 1884
Johnson, W. W. ...................... 1908
Johnston, C. A. ..................... 1889
Johnston, R. E. ...................... 1894
Johnston, Joseph E. ................ 1891
Jolley, B. B. ........................ 1881
Jones, A. Fielding ................... 1885
Jones, D. H. ........................ 1884
Jones, Edwin E. .................... 1883
Jones, E. J. ........................ 1892
Jones, John F. ...................... 1882
Jones, W. Preston ................... 1886
Jordan, A. C. ........................ 1881
Joye, Thomas A. .................... 1875
Kamel, Faris M. .................... 1906
Karagulla, Naaman Joseph ........ 1906
Kean, Thomas, Jr. .................. 1891
Kechijan, N. B. ..................... 1898
Keefer, Charles W. ................ 1877
Keeler, E. A. ........................ 1880
Keilt, E. George .................... 1881
Keimerer, John R .................... 1885
Kellman, William D. ................ 1886
Kello, Samuel B. .................... 1878
Kelly, Carl M. ...................... 1884
Kennedy, J. Ellis ................... 1886
Kennedy, A. E. ...................... 1893
Kennedy, Laurentio V ................ 1887
Kennedy, W. R. ...................... 1895
Kenny, James P. .................... 1874
Keyton, Payton K. .................. 1888
Khalfeyan, H. N. ................... 1898
Kibbe, Alonzo B ..................... 1885
Kidd, W. W. ........................ 1878
King, Frank L. 1883
King, J. N. 1901
King, John H. 1882
Kinker, Napoleon B. 1879
Kirkpatrick, Samuel 1882
Kline, Ga. B. 1887
Kline, Orlando 1883
Knapp, G. W. 1880
Knox, R. S. 1880
Knowles, J. C. 1897
Koehlert, W. H. 1897
Koonce, Andrew Jacob 1887
Koonce, Howard 1896
Kornman, L. F. 1895
Kousa, Khalil Y. 1898
Kousa, M. Y. 1905
Koyner, W. W. Worin 1906
Krumm, F. W. 1893
Krystall, Berthold B. 1886
Kuhlmam, W. S. 1880
Kunkel, Asaph T. 1883
La Boute, L. D. 1894
Lafferty, J. Henderson 1881
Laham, Nedim T. 1910
Lamb, A. L. 1905
Lamb, T. A. 1896
Lankford, Ga. A. 1892
Langier, A. R. 1914
Lankton, L. S. 1897
Lany, Anthony W. 1908
Lape, F. T. 1896
Laughman, Andrew J. 1901
Lawrence, George B. 1885
Lawrence, J. C. H. 1888
Lee, George L. 1882
Lee, Oscar P. 1874

Leievre, Andrew L. 1885
Leib, Joseph H. 1879
Lewis, H. G. 1873
Lewis, J. Roland 1888
Lewis, William M. 1892
Lilly, Fred E. 1890
Lilly, L. L. 1892
Limerick, Oliver Victor 1893
Lincoln, Samuel Worcester 1879
Line, L. M. 1884
Linthicum, J. M. 1878
Lippincott, Thomas S. 1888
Littlejohn, F. W. 1883
Logan, Hugh M. 1879
Long, James E. 1881
Long, W. F. 1894
Loughbridge, John P. 1884
Lovelace, Thomas B. 1883
Lowe, J. W. 1880
Lowe, T. L. 1897
Lynch, W. J. 1894
Lyman, G. Byron 1878

Maben, William S. 1885
Mace, J. C. 1891
Macjerrow, D. A. 1894
Maddox, William J. 1875
Marshburn, H. H. 1876
Marsteller, A. A. 1873
Martin, G. L. 1877
Martin, Isaac J., Jr. 1884
Mathews, C. O. 1884
Matheson, R. C. 1891
Maucher, A. J. 1881
Maucher, William 1890
McAllister, William 1874
McCall, Robert C. 1881
McCand, William J. 1881
McCleary, William D. 1882
McClintock, H. C. 1877

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Accuracy in diagnosis depends primarily on the care and thoroughness with which the patient’s symptoms are elicited. In the management of esophageal diseases there is a tendency to belittle the history and yet accuracy of interpreting symptoms is of paramount value in diagnosis.

When one considers the fact that practically every disease of the esophagus causes narrowing of its lumen with resultant obstruction to the passage of food into the stomach, the significance of dysphagia at once becomes apparent. It is also true that almost every patient suffering from dysphagia has an intra-esophageal lesion. Disease of the esophagus is seldom accurately diagnosed by the general practitioner and the majority of these diagnostic errors could probably be averted by realization of the fact that in most instances dysphagia signifies esophageal obstruction and that the determination of the duration and type of dysphagia alone leads to accurate differentiation of the various causes of obstruction.

*University of Maryland, Class of 1914.
It is the purpose here to point out some of the characteristics of dysphagia in the more common diseases of the esophagus. Carcinoma of the esophagus is, of course, the most frequent cause of esophageal obstruction, and the earliest symptom is difficulty in swallowing solid food, the point of obstruction depending on the site of the lesion. This symptom is not present until the tube is considerably narrowed, and the onset depends on the care the patient used in the selection and mastication of his food. A patient who ingests coarse food and masticates it poorly will experience difficulty earlier than one who ingests softer food and chews it thoroughly. In this disease there is increasing narrowing of the esophageal lumen with progression of dysphagia until soft food passes the obstruction with difficulty and finally fluids will not pass. From the onset of dysphagia to complete esophageal obstruction, there is usually an interval of about seven months.

Carcinoma of the esophagus usually occurs in men during or after the fourth decade of life. Therefore, it can be assumed that if a man more than forty has had progressive dysphagia for less than a year beginning with difficulty in swallowing solid food with gradual restriction to semisolids and finally to liquids, with no history of trauma to the esophagus, the cause of the obstruction is carcinoma.

In cicatricial stricture of the esophagus, dysphagia is usually progressive, but in 90 per cent of the cases there is a definite etiologic factor, such as ingestion of lye. In the remaining 10 per cent of the cases of benign esophageal stricture, the cause is not apparent, but in these cases dysphagia has been present for more than a year.

Cardiospasm is a common cause of esophageal obstruction and in this disease epigastric pain frequently antedates dysphagia. When obstruction to food begins, there is usually as much trouble with liquids as with solids and the point of obstruction is located at the cardia. Obstruction to the passage of cold water is frequently the first evidence of esophageal disease. Although constantly present, the intensity of the dysphagia may vary considerably. At times food can be swallowed with a fair degree of
comfort while at others esophageal closure may be complete and
the salivary secretion will be retained in the esophagus or
regurgitated. In the case of one of my patients, complete ob-
struction due to cardiospasm persisted constantly for eighteen
years, the patient taking all her food through a gastrostomy
opening. Mild spasm at the cardia may cause dysphagia similar
to that seen in cardiospasm but it is not so pronounced and clos-
ure is never complete. The average duration of dysphagia in
cases of cardiospasm is seven years.

In a case of pharyngo-esophageal diverticulum, the patient
locates the esophageal obstruction high in the esophagus and
solid or liquid foods become obstructed. The symptoms are
usually present for several years with slow progression and
rarely marked obstruction. The patient frequently describes “a
noise in the throat” on swallowing.

Hysterical dysphagia is a rare disease and fear of swallowing
solid food of any type is the predominating symptom. Dysphagia is not progressive and is present for many years.

Various neurologic conditions, such as bulbar palsy, myas-
thenia gravis and multiple sclerosis may be associated with
dysphagia, but in these diseases there is strangulation from
aspiration, and nasal regurgitation rather than actual obstruc-
tion to food in the esophagus.

Strangling and coughing a few seconds after the ingestion of
fluids is suggestive of an esophagotracheal fistula. This compi-
lation occasionally results from perforation of esophageal car-
cinoma into the air passages.

Aneurysm and other mediastinal tumors rarely produce
dysphagia because of the elasticity of the esophagus.

The ordinary “lump in the throat” or globus hystericus must
not be confused with difficulty in the swallowing of food. Nerv-
ous persons having such a symptom have difficulty in swallowing
the lump but can swallow any type of food without obstruction.
In rare instances, there is difficulty in distinguishing obstruction
at the cardia from that at the pylorus by the history alone.
In cases of esophageal obstruction from foreign body, there is usually a history of the swallowing of a foreign body and the degree of dysphagia varies from slight discomfort on swallowing to complete esophageal obstruction.

Benign tumors, blastomycosis, syphilis and tuberculosis rarely involve the esophagus but when they do, dysphagia is the most prominent symptom.

Infections and neoplasms of the mouth and hypopharynx may produce obstruction to the entrance of food into the esophagus and in cases of dysphagia such lesions must always be considered as possible causative factors.

In case of complete congenital stricture of the esophagus, death ensues shortly after birth but in the case of partial stricture, dysphagia dates from the nursing period or from the time the patient begins to take soft or solid food, depending on the size of the lumen of the stricture. Complete closure is rare unless the patient carelessly swallows a solid particle which may occlude the lumen.

Diverticula of the lower portion of the esophagus, hernias of the stomach through the esophageal opening of the diaphragm, and diverticula of the cardiac end of the stomach are rare but may produce varying degrees of dysphagia that cannot be distinguished by the history from other esophageal diseases.

**Summary**

Dysphagia is the most common symptom in diseases of the esophagus. From a knowledge of the duration and type of dysphagia alone, the cause can be determined with great accuracy. Esophageal or pharyngeal lesions can usually be demonstrated if patients complain of dysphagia. Extra-esophageal lesions rarely cause difficulty in swallowing.
A case of chronic arsenic poisoning is presented, the pathology in the case of this patient limiting itself practically in its entirety to the skin and causing a remarkable and quite typical form of dermatitis. While the condition is a comparatively rare one, there are a goodly number of well-described cases in the literature. It is certain, however, that the average physician will see but very few such cases in a lifetime. Yet, despite its rarity, it presents such a characteristic and typical picture that it should be recognized quite readily.

A summary of the case history follows: The patient is thirty-one years old and a mechanic. His father died of lead poisoning.
There is nothing of note in his past history save for the fact that since he was two years old he has had asthmatic attacks. He has been subjected to many and various forms of treatment but in the last few years had fallen back on various proprietary remedies. About one and a half to two years ago he found one of these nostrums which apparently gave him considerable relief.
He took anywhere from seven to fifteen drops of this two to three times daily, off and on for at least a year and probably more. About five to six months back he noticed that he was getting a dirty brown, mottled discoloration of the skin of the lower abdomen, and this, according to him, began to spread upward to the chest and neck and to appear on the extremities. The palms of his hands (see Fig. I) and the soles of his feet (see Fig. II) had, he thought, been somewhat hard and callous for some time, but he realized they were getting much harder and rougher and that wart-like growths began to appear in these areas. The onset of a fresh asthmatic attack, together with the skin discoloration, caused him to seek medical attention and he was sent to Baltimore by his physician. There is nothing else of note in his history save that, negatively, he did not have any of the systemic symptoms seen in arsenic poisoning, such as gastric upsets, diarrhea, vertigo, edema or salivation.

Passing over the general physical examination, the skin revealed striking changes: On the face and the lower arms and legs the skin was relatively normal. However, everything else—that is, the abdomen, chest, neck, back, and the upper and inner aspect of the thighs and arms—all presented a remarkable pigmentation. This was of a dirty brown color, varying in shade from a slate to almost a bronze tint. It was not applied evenly but appeared in macular, irregular spotted areas, many coalescing and with here and there the white, apparently normal skin showing thru and giving the whole a quite mottled appearance. There was no desquamation and the skin felt quite normal to the touch. There was some accentuation of the normal pigment of the areolae of the nipples, groins, etc. There was no deposition of pigment in the mucous membrane of the mouth or elsewhere. Although the lower arms and legs were free of the pigmentation the palms of the hands and the soles of the feet presented a very distinctive abnormality. Here there was a remarkable spotty hyperkeratosis. While the entire area showed a certain amount of diffuse thickening and callosity, yet the striking thing was the further piling up of tissue in the form of innumerable small, scattered areas of "corn-like," warty skin.
In a number of places there were, indeed, very typical warts. Several longitudinal fissures ran thru the entire area. The keratotic spots extended somewhat between the fingers and even on the dorsum of the hand. The nails of the fingers and toes appeared normal.

This thickening, particularly of the palms of the hands, had lately so bothered the patient that, being somewhat sensitive as to the appearance of his hands he had been accustomed to shave off the “high spots” with a razor and then rub the remainder down nicely with sandpaper!

All of the laboratory work on the patient, including the blood, urine, kidney and liver function tests, van den Bergh, etc., were negative.

In the face of such a classical picture of pigmentation and hyperkeratosis, chronic arsenical intoxication was thought of and, naturally, the proprietary preparation, which the man had taken steadily for at least a year, came under suspicion. A quantity was obtained and subjected to chemical examination. The Bureau of Chemistry reported that the preparation contained in its maximum dose (which our patient was taking two to three times daily) an amount of arsenic equal to about four times the U.S.P. dose of Fowler’s Solution (3 minims). Thus was definitely proved the long-continued ingestion of arsenic which caused this characteristic skin-picture in our patient.

While acute arsenic poisoning may cause most any of the many varieties of skin lesions,—the chronic poisoning by arsenic usually limits itself to one of the following: An erythematous rash may come on fairly early. Herpes zoster and nail pathology are sometimes described. Occasionally hyperidrosis comes on after prolonged arsenic ingestion. But the most common, the latest and the most typical manifestation is the classical combination of mottled pigmentation of the trunk and cephalad portions of the extremities together with hyperkeratosis of the palms of the hands and soles of the feet,—as shown so well by our patient. When seen to any marked degree the diagnosis should be quite easy.
In the reported cases of this condition the drug ingested has usually been some form of arsenic proper—not one of the salvarsan preparations. The drug has been taken frequently for skin eruptions, especially psoriasis,—for asthma or even as a "blood purifier." The dosage has often been excessive (as in this case) but not necessarily so. The duration of the ingestion has in practically all cases been excessive, although a few reported cases apparently showed an idiosyncrasy to the drug bringing on typical lesions rather early. Certainly, however, the pigmentation and especially the keratoses do not ordinarily come on unless arsenic has been taken for a matter of months.

The actual skin pathology is interesting and has recently been carefully studied. Arsenic stimulates the production of pigment (made up of lipoids and melanin) and this is found resting mostly in the corium. The arsenic itself,—once thought not to be present in the skin,—is now known to be often present in the papillary and sub-papillary layers, and even in the hyperkeratotic areas it has been shown to lie between the cells.

It is now known, too, that contrary to the old belief, chronic arsenic poisoning may cause very definite pigmentation of the mucous membrane of the mouth and elsewhere.

The liability of the keratotic areas becoming malignant with epitheliomata formation is well known and should be stressed. Up to the year 1921 about fifteen cases of epitheliomata of this nature have been reported and a number of cases of amputation and of deaths from this cause are recorded.

As to treatment, the pigmentation, if not too far advanced, may clear up on the withdrawal of the arsenic. This is not usually the case with the keratosis and because of the tendancy to malignancy, efforts should be made to remove the thickened skin by salicylic preparations, X-ray, etc.

Because arsenic has been demonstrated even in the hyperkeratotic areas, sodium thiosulphate should be given a thorough trial.

1908 West Lexington Street.
SYPHILIS OF THE STOMACH

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BALTIMORE, Md.

Gastric lesions produced by syphilis are rare compared with gastric symptoms occurring in syphilitic patients. Anorexia and epigastric distress are marked in acute febrile syphilis, gastric hemorrhage may be a result of early hepatic involvement, and persistent vomiting be the most evident symptom of acute involvement of the central nervous system.

A number of scarred abdomens prove the misinterpretation of tabetic crises and other manifestations of neurosyphilis. Although rare, a group of ulcerative, sclerotic and obstructive gastric lesions are known to exist, and to be the result of syphilitic disease of the stomach wall.

Eusterman (American Journal of Syphilis, April, 1918, vol. 2, p. 206) describes a luetic gastritis where the diffuse catarrhal inflammation may subside under specific treatment without residual change in the structure or function of the stomach.

The ulcerative and nodular lesions as well as the residual deformities produced by cicatricial fibrosis and perigastric adhesions are more easily recognized. Most often the problem is to distinguish between luetic and neoplastic lesions.

Stokes (Modern Clinical Syphilology, Saunders, Phila., 1927, p. 740) believes that an increasing proportion of solitary ulcers, including the peptic type, will ultimately be brought into the field of syphilitic gastric ulcer. Duodenal ulcer, on the other hand, he excludes from the syphilitic manifestations.

Gastric syphilides include diffuse and circumscribed gummatous infiltration, solitary gummas and single or multiple ulcerative processes. Accompanying these lesions there is more or less interstitial fibrosis, perigastric lymph-adenitis and inflammatory adhesions.

Most often the process involves the pyloric end of the stomach extending along the lesser curvature, although involvement of
the greater curvature is not rare and lesions at the cardia do occur. The ulcers are so often multiple that this fact has become of diagnostic value. The eventual fibrosis with thickening, shrinkage, and destruction of parenchyma produces changes in contour and function of the stomach, the extent of which depends on the area of the organ involved in the pathological process.

The symptoms vary with the character of the lesions. The nodulo-ulcerative lesions seem responsible for the pain which usually is the initial symptom. The pain is most marked soon after eating and may be severe at night. Diet and alkalies may give comfort, but the period of relief is never a long one. Fibrosis as well as spasm lead to a sense of gastric fullness even after small meals and later to retention and vomiting. Hemorrhage is less frequently noted than in cases of simple ulcer and of carcinoma, although Raymond (La Progres Medical, 1920, p. 7) gives violent hematemesis as the most conspicuous symptom in the large majority of cases. Fatal hemorrhage has been reported (Downes & LeWald, J. A. M. A., May 29, 1915, vol. 64, p. 1825).

Loss of weight is common and usually is pronounced, some of the patients become extremely emaciated. This loss is not so rapid in syphilis as it is in cancer, and as a rule there is not the same cachectic appearance. In some cases, however, the victim of gastric syphilis appears both cachectic and emaciated.

A palpable mass may be present but is more common in carcinoma than in syphilis of the stomach. Pyloric or mid-gastric obstruction from gumma or fibrosis leads to retention or vomiting. The obstruction is partial and moderate more often than severe in degree.

A severe secondary anaemia develops gradually in syphilis rather than rapidly as in cancer. The test meal usually shows a diminished acidity of the gastric juice, even a complete achylia. X-ray examination shows a filling defect, a deformed stomach with diminished capacity, a stiffened gastric wall with little or no peristaltic activity and no evidence of a niche or accessory
pocket. The presence of a filling defect without a palpable mass considered with other symptoms probably is the best point in the differentiation of gastric lues from carcinoma.

Evidences of syphilis in other structures and an authentic history of previous primary and secondary lesions are of value in raising a suspicion of the luetic nature of the gastric disease. However, we must remember that infection with syphilis does not give immunity to other diseases and that many patients suffering from late syphilis are unable to give a history of the earlier stages.

A positive blood-Wassermann reaction is a trustworthy guide in the diagnosis of gastric syphilis. A repeatedly negative Wassermann reaction is the strongest possible presumptive evidence against gastric syphilis (Stokes, p. 742).

The therapeutic test may be the final convincing proof of a correct diagnosis in a case of syphilis of the stomach. Gastric lesions respond promptly to anti-luetic treatment. Relief from pain as a rule follows the administration of the first dose of arsphenamine, and progressive improvement in nutrition occurs with ability to take and retain food without discomfort. Proper combination of arsenical and mercurial therapy leads to the most satisfactory results. The chemical composition of the gastric juice returns to normal, many deformities of the stomach disappear while strictures and other obstructive lesions are relaxed sufficiently to permit the establishment of good motor function.

There may be delay in the response to treatment in certain cases of gastric syphilis, just as there may be some improvement in certain cases of carcinoma, after the administration of arsphenamine, especially in cases of slow-growing cancer where the patient also has syphilis.

In all doubtful cases the apparent operability or inoperability of the gastric lesion determines the length of time which should be given a diagnostic test. With an apparently operable lesion, unless there is distinct and great improvement under treatment within ten days, an exploration should be done.
Evidences of cure of the gastric lesions are the disappearance of pain and indigestion, the restoration of the chemical composition of the gastric juice within normal limits, structural improvement of the deformed stomach as shown by the X-ray, and change in the blood-Wassermann reaction.

A resistant Wassermann reaction in the blood is common. Fibrotic contracture may be changed so little or so slowly that surgical intervention becomes necessary. The operation should always be limited to the simplest procedure which will overcome the effects of the contracture. Too much importance must not be given to persistence of deformity as shown by the X-ray examination. Many permanent symptomatic cures take place with little or no change in the stomach demonstrable by the X-ray (Stokes, p. 751).

The following is a summary of the history of a case of syphilis of the stomach which came under my care at the Mercy Hospital, Baltimore:

The patient, a white man, aged 51 years, was admitted April 14th, 1926, complaining of pain in the epigastrium with nausea and vomiting, great loss of strength and weight. For two years previous to his admission he had suffered from pain and dyspepsia, and had been given ambulant treatment for gastric ulcer. During the last six months of this time he had a feeling of fullness in his stomach, regurgitation of food, progressive weakness, loss of weight, with noticeable pallor and sallow skin.

When admitted he was markedly emaciated, the mucous membranes pale and the skin dry and yellowish. He had hiccough and vomited coffee ground material. He complained of severe pain in the upper portion of the abdomen, especially in the right side. His blood pressure was 106/62, pulse fast but regular. A blood count showed 2,576,000 red cells with 34 per cent hemaglobin. The thin abdomen was held tight and there was considerable spasm in the upper part of the right rectus muscle. No masses could be felt. A peristaltic wave was visible moving across the upper abdomen from left to right.
The patient's condition was grave. He continued to vomit or regurgitate a large quantity of coffee ground material. He was given salt solution subcutaneously and glucose solution by rectum. On April 20th, he was given a transfusion of 600 c.c. of blood. After the transfusion he showed considerable improvement. There was less pain, the vomiting ceased and he began to take food.

X-ray examination made on April 30th showed a filling defect with dilatation of the terminal portion of the pylorus. The duodenal cap was not shown and the cardiac and mid-gastric areas were normal in appearance. There was retention both at six and twenty-four hour observations.

Considering the filling defect without palpable tumor and the positive blood-Wassermann reaction, a diagnosis of gastric syphilis was considered probable. The poor general condition of the patient made exploration inadvisable and therefore antiluetic treatment was given.

On May 7th he was given .4 neo-arsphenamine and the dose repeated on May 12th. On May 14th he was free from pain and took soft food with a good appetite.

Mercurial innunctions and arsphenamine were continued with steady improvement. There were occasional attacks of pain usually at night, but none were intense and there was no further vomiting. When he left the hospital June 2nd, 1926, he was walking about, taking a full diet without discomfort and had gained weight and strength.

During the summer he received several doses of arsphenamine at irregular intervals in the outpatient department.

He reentered the hospital September 22nd, 1926. At this time his general condition though poor was better than at his first admission. The emaciation was less and his color better. There was irregularity of the pupils, but normal reactions to light and accommodation, and no abnormality was noted in the opthalmoscopic examination. There was a difference of opinion regarding the existence of a palpable mass in the pyloric region. The left to right peristaltic wave was visible in the epigastrium and other waves were seen below the umbilicus. The blood-
Wassermann reaction was strongly positive, the blood count showed 3,240,000 red cells with 39 per cent hemoglobin.

X-ray examination showed pyloric stenosis without any filling defect. The duodenal cap was deformed and the pre-pyloric area would not fill out completely. There was a large six hour retention.

Examination of the gastric juice showed total acidity of 68 and free hydrochloric acid 32.

Occult blood was found in the feces.

Because of the persistence of obstructive symptoms and the recurrence of abdominal pain after meals, operation was advised. Two doses of arsphenamine were given preliminary to the operation which was performed on October 6th. A large mass was felt rather than seen in the region of the pylorus. The liver was covered with adhesions. The duodenum, liver and pylorus were matted together so that they could not be separated with safety. The stomach was dilated. Posterior gastro-jejunostomy was done, and the abdomen closed.

The patient made a good recovery from the operation. The wound healed without any complications. He gained three pounds in weight during the first week he was out of bed. He was discharged November 9th to receive further anti-luetic treatment as an outpatient. He reported at irregular intervals until early in January, 1927, when he left Baltimore to visit Florida.

He returned for observation on May 23rd, 1927. At this time he weighed 126 pounds, his height is 64 inches, his blood count showed 4,280,000 red cells with 85 per cent hemaglobin. The blood-Wassermann was strongly positive. The gastric symptoms were relieved.

We believe this man's gastric lesion is luetic and not carcinoma because of the clinical picture and X-ray findings, the prompt relief and great improvement under anti-syphilitic treatment and the absence of the ordinary gross evidences of cancer when the abdomen was explored.

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THE CARDIAC PATIENT AS A SURGICAL RISK*

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One should approach the problem of the cardiovascular patient who becomes a surgical risk from the viewpoints of pre-operative preparation, choice of anaesthetic, operative risk, and post-operative complications. I shall attempt a classification of cardiac diseases and discuss each separately. For this purpose, the following terminology will be used: Chronic valvular disease of the heart presumably of rheumatic origin; syphilitic cardiovascular disease; arteriosclerotic cardiovascular disease; essential hypertension, thyreotoxic cardiovascular disease.

Valvular heart disease, in which there is no history of failure, and in which there are no present symptoms, requires no preparation for operation and offers a good surgical risk. This type of disease is most commonly noted in younger patients. There is an impression that mitral stenosis is a contra-indication to a general anaesthesia. I have not seen one case that has not taken ether well. There is a possibility, however, that auricular fibrillation may occur, and also mural thrombosis is not uncommon in advanced lesions making it possible that emboli may become detached and lodge in the lungs or brain. I would stress particularly in regard to these patients the lack of any indication for digitalization and point out that through careless use of this drug, heart block may be produced and other abnormal rhythms caused.

I would call attention to the fact that there are many murmurs, especially those systolic in time heard at the apex and in the pulmonic region, which are unassociated with any other evidence of heart disease and which are without significance. It is needless to say that patients having such murmurs require no treatment.

Patients of the rheumatic group who have symptoms such as shortness of breath on moderate exercise, and may even show some physical signs of failure, usually do well and can be rated as fairly

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good risks. Of course, it is better if possible, to postpone the operation until compensation has been restored. If operation is to be postponed, such patients may be digitalized. If immediate operation is necessary digitalis should not be used, for small doses are without effect and massive doses are attended with a certain amount of danger. In large amounts digitalis may produce arrhythmias. Even those patients with advanced failure bear surgical procedures better than one would expect, but they are more subject to post-operative complications. To prevent shock they may be infused during the operation. If there is need of an emergency cardiac stimulant, caffeine usually gives the best results. The treatment after operation depends upon the degree of failure. They may then be digitalized.

In syphilitic cardiovascular disease, the preparation of the patient and the prognosis depend upon the presence or absence of evidences of heart failure. Simple aortitis does not increase the risk and requires no special treatment. Remarks already made upon heart failure apply also to this disease.

Patients with arteriosclerotic cardiovascular disease offer a more serious risk. This disease occurs in elderly people, people who are more subject to post-operative complications. The condition of the myocardium is the important factor. The best insight into this can be gained by a combination of clinical study and electrocardiography. Coronary occlusion is often present in these patients and this condition has a fairly typical electrocardiogram. These arteriosclerotic patients may have a coronary thrombosis occur during the operation or during convalescence. With the thrombosis they may develop abnormal rhythms. Such patients may have auricular fibrillation. They are particularly susceptible to digitalis poisoning and it should be used cautiously; otherwise heart-block and ventricular tachycardias may be caused. Massive doses of the drug should not be used in this condition. It has been shown experimentally that theophyllin increases the coronary flow and some good results have been obtained in its clinical use. These arteriosclerotic patients should be gotten into a semi-upright position as soon after operation as possible and shifted from side to side in an effort to prevent hypostatic pneumonia. Should coronary thrombosis occur the patient should
be kept well under morphia. Digitalis may be of benefit immediately after the thrombosis but it is conceivable that after softening of the area of infarction has taken place that its use might cause rupture of the heart.

There is but little to say about essential hypertension. So long as the myocardium is healthy the high blood pressure does not add appreciably to the surgical risk. No preparation for operation is necessary, and no drug therapy is indicated. If heart failure is present statements already made apply to its occurrence in hypertensive patients. There is a feeling that ether should not be given to those with hypertension. It has been claimed that the blood pressure may be sufficiently raised to lead to accidents. I have never seen this occur. Indeed, in a properly given anaesthetic there should be no marked rise in the blood pressure. Hypertension associated with renal disease is primarily a disease of the kidneys and will not be discussed here.

Those patients with thyrotoxicosis present a number of interesting cardiac complications. Arrhythmias and tachycardia are of common occurrence, yet very few of these patients die a cardiac death. The simple tachycardia of hyperthyroidism is best controlled by proper treatment of the underlying disease. It has been repeatedly shown that digitalis has no effect upon such a tachycardia, and that when it is strenuously pushed it may give rise to ventricular arrhythmias, psychoses, and cerebral oedema. Paroxysmal tachycardia not infrequently occurs in thyroid patients. This arrhythmia may develop either before or after operation. It can usually be readily broken by a single dose of quinidine, 7 or 8 grains are given by mouth. This may be repeated in several hours if necessary.

Auricular fibrillation is a common cardiac complication of hyperthyroidism. In this type of arrhythmia, whether occurring in thyroid disease or in other cardiac disease, the most gratifying results from digitalis therapy are obtained. Enough should be given to hold the pulse rate to 80 beats per minute. The amount necessary to accomplish this varies in different patients. When giving fairly large amounts signs and symptoms of poisoning such as coupled ventricular extrasystoles, increasing tachycardia, gastric symptoms, and delirium may appear. Then the digitalis should be
discontinued for several days and given again in smaller amounts. Flutter of the auricles can be converted to fibrillation by digitalis and treated as such. It is true that at times the ventricular rate cannot be controlled by digitalis. If advanced heart failure is present in such a patient, then one should consider either ligation of the thyroid arteries or X-ray therapy. Often after one of these procedures, the heart rate may be brought under control, and the failure compensated. If failure persists, operation in spite of its presence should be considered. While the risk is greater in such patients, yet it is surprising how well they stand operation. Auricular fibrillation is itself no contra-indication to surgery. The important factor is the presence or absence of heart failure. Following thyroidectomy, the arrhythmia may spontaneously end; if it does not, quinidine therapy should be tried after convalescence.

Deaths occurring in post-operative hyperthyroid crises cannot be considered as cardiac in origin. Boothby and Willius, in their study of the heart in exophthalmic and adenomatous goiters found only one instance in which death could be attributed to cardiac failure.

In selecting an anaesthetic, two considerations should be borne in mind; first, what effect, if any, will it have directly upon the heart, and second, what indirect effect it may have. It seems scarcely necessary to mention chloroform. It has been shown that animals under chloroform anaesthesia are particularly prone to develop ventricular fibrillation, and this doubtless explains many sudden deaths occurring during its clinical use. It should never be given to a patient suffering with heart disease. Nitrous-oxide anaesthesia is commonly attended by some degree of anoxemia, which is to be avoided in cardiac patients. Ether is the anaesthetic of choice, and is itself a heart stimulant.

Post-operative circulatory complications of note not already discussed are acute heart failure, pulmonary oedema, shock, and embolism. Patients who develop acute failure should be kept well under morphia. Venesection and withdrawal of from 400 to 600 cc of blood may prove life-saving, and especially resort should be had to this procedure if there is evidence of impending pulmonary oedema. Digitalis is of secondary importance. This should be given moder-
ately rapidly, taking from two to three days to produce full digitalization. This may be accomplished by considering that it will take a drachm of the tincture for every twenty-five pounds of body weight. Half of this total dose may be given the first day and the remainder on the second or it may be divided into three days. After this dosage, it takes about 30 minims of the tincture a day to keep a patient digitalized. The various hypodermic preparations are equivalent to not more than 15 or 20 minims of the tincture per cubic centimeter, and it is not to be hoped that the administration of one or two such doses will be of any material benefit. Caffein is the best drug to use when an immediate effect is necessary. Camphor in oil has little or no effect upon the heart. In impending pulmonary oedema atropin in doses of 1/50 of a grain may be given every fifteen minutes for three or four doses.

I shall not discuss the treatment of shock. There are many papers available on this subject.

In a recent report from the Mayo Clinic, an effort was made to discover the cause of post-operative embolism. It was found that it occurred most commonly in elderly stout people, and practically never in cases of hyperthyroidism. On this basis, it has been suggested that thyroid extract could be given to prevent the formation of thrombi. It is also reported that thyroid extract does delay coagulation. After embolism has occurred, no matter where it may have lodged, the most important therapeutic measure is absolute rest. Morphia in sufficient doses to produce this should be given.

Phelps has reported a series of 28 cardiac patients undergoing major surgical procedures. There were three deaths. Only one died of typical heart failure, the other two had attacks which may have been coronary thrombosis.

In conclusion, I would stress these points:

1. Routine digitalization of surgical patients is unnecessary and is attended by some danger.

2. The immediate operative risk in cardiac patients is not dependent upon the presence of murmurs, but rather upon the functional ability of the myocardium.
3. Decompensated patients bear surgical procedures surprisingly well.

REFERENCES:

THE SIGNIFICANCE OF SYMPTOMS AND SIGNS IN LOBAR PNEUMONIA
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The study at the bedside of symptoms and signs in a case of lobar pneumonia is more fruitful if undertaken with the purpose of obtaining helpful indications for treatment and for prognosis.

For the purpose of treatment and of prognosis we are especially anxious to get information as to:

1. The extent, type and severity of the infection.
2. The character and the extent of the interference with the function of respiration.
3. The status of the circulation.

I. There was a time when the bedside study of a case of pneumonia was capable of yielding all the information concerning the extent, type and severity of the infection which the most careful physician required for the best use of the therapeutic agents then available. It must be acknowledged at the outset that this is no longer true. In those days our therapeutic efforts against the infection were limited to non-specifics. Today, however, we are in a period when specific sera are already available and are being rapidly improved. There is no doubt that the future of the treatment of pneumonia lies with this form of therapy. Its proper use, however,
requires knowledge of the type of pneumococcus involved and of its presence or absence in the blood stream. These are not facts that can be learned at the bedside. Nevertheless we can learn at the bedside of the pneumonia patient a great deal which is helpful concerning the extent and severity of the infection. The data so gained are quite as indispensable as the laboratory data. Only the laboratory, for instance, can tell us whether bacteremia is present but only study of the patient will inform us whether this bacteremia has led to a secondary meningitis, arthritis, peritonitis, endo- or pericarditis.

It is important to estimate the extent of the consolidation in the lungs and its progress. The prognosis bears a direct relation to the number of lobes involved.

The toxemia of the disease cannot be accurately measured but we can estimate its severity by the presence or absence of certain of its effects. Consideration of the mental state of the patient is helpful in estimating toxemia. A clear and tranquil mind in the later days of the disease is most reassuring; whereas mental cloudiness or delirium, especially if occurring with a low degree of fever, is of ominous significance. Where marked cyanosis is present some of the mental changes may be attributable to anoxemia and so be susceptible of relief by oxygen therapy.

The toxemia of the disease is also measurable to some extent by the condition of the digestive tract. Persistence of vomiting after the onset, gastric distention, hiccup, severe intestinal distention with constipation and depleting diarrhoea all may be observed and are evidences of severe toxemia. The case is less clear as to jaundice. While usually found only in severe cases, occasional mild epidemics occur in which jaundice is of frequent occurrence.

Other evidences of toxemic damage such as meningismus and albuminuria have little relation apparently to the severity of the disease or to the prognosis.

Toxemia plays a very important part in the disturbances of the respiratory and circulatory mechanism but other factors play a role here too and the part due to toxemia cannot be accurately assigned.

Discovery of the evidence of serious toxemia, as evidenced by mental and gastro-intestinal manifestations, should lead to active
efforts to increase elimination through the various channels by the forcing up of the fluid intake. At the same time treatment of the symptoms (such as sedatives for delirium, gastric lavage, stupes, etc.) may be urgently indicated. It must, however, be stressed again that even in the present rather unsatisfactory status of serum therapy in pneumonia we are not giving to our patient all the aid possible in combating his infection if we do not use serum treatment, when it is indicated. What, at the present time, the indications for serum treatment are, is too lengthy a matter to discuss in a paper whose purpose it is to evaluate clinical symptoms and signs. Certainly however, there will be agreement as to the advisability of employing the serum in all cases of Type I bacteremia, and the majority of clinicians will also agree as to the advisability of the use of Type I serum in cases of Type I pneumonia without bacteremia during the first two or three days of the disease.

II. Character and Extent of the Interference with the Function of Respiration.

The interference with the exchange of oxygen and carbondioxide in the lungs and secondarily throughout the whole body in pneumonia constitutes one of the most serious aspects of this disease. It is an effect of the disease which can be combated with some success by proper therapy. There is, therefore, a real obligation on the part of the physician to study with care the symptoms and signs which throw light upon the character and extent of the interference with gas exchange present.

If an interference with respiratory function attains a certain grade there will result a diminished oxygen saturation of the circulating blood, or anoxemia. The study of experimentally produced anoxemia shows that it leads to an attempt at compensation by increased respiration and that as the anoxemia becomes more severe the pulse accelerates, the blood pressure falls, cardiac arrhythmias develop and headache, drowsiness and delirium appear. At a certain stage in progressive anoxemia, cyanosis of the skin and mucous membranes becomes apparent due to the increased proportion of unoxygenated or venous blood in the superficial vessels.
In pneumonia, as in experimental anoxemia, there is to be observed an apparent attempt at compensation by means of rapid breathing. If the compensation fails and anoxemia increases, cyanosis appears and the condition of the patient begins to exhibit many of the phenomena seen in the severer grades of experimental anoxemia; the respiratory rate goes up, the blood pressure tends to fall, the pulse rate increases and mental anxiety, confusion and delirium become accentuated. From the time when cyanosis becomes manifest, it may therefore be said that the patient's resistance is being subjected to a double attack; the vital tissues of the medullary centers, controlling respiration and circulation, the hard worked muscles of respiration, the heart muscle are suffering not only from the toxins of the pneumococcus but also from a deficient supply of oxygen and its consequences. Cyanosis, it has been shown, can usually be definitely detected when the degree of oxygen saturation of the circulating arterial blood falls to 85 per cent or less of total saturation. This is about the degree of oxygen lack which is experienced by those who have reached the top of a 14,000 foot mountain, where, even to a strong man, exertion means breathlessness, a pounding heart, and perhaps headache, dizziness, nausea and the other phenomena of "mountain sickness." Thought on this analogy should spur the physician to detect early, and to relieve if possible, this added handicap of the pneumonia patient.

The laboratory methods for the detection of anoxemia are not feasible for general use. We must therefore depend upon such evidence as we can collect at the bedside. Cyanosis must be carefully looked for at each visit. It is best seen in strong daylight. The dusky red of the ear-lobes, lips and cheeks is apt to be the most striking change early; but the increasing leaden blue of the finger tips and eventually of the whole face and dependent portions of the trunk indicates the more advanced grades of anoxemia. Of course, where manifest heart failure is present, as in some elderly patients, some of the cyanosis may be attributable to venous congestion; and in occasional very toxic patients towards the end there is a cyanotic blotchiness of the skin of the trunk, as in any case of virulent sepsis, which is caused by loss of vasomotor control with stasis in dilated skin vessels. Neither this cardiac nor this vasomotor form of cyano-
sis is due to general anoxemia. They play, however, only an occasional and subsidiary part in the cyanosis of pneumonia. It will be to the interest of the patient to make a rule of treating cyanosis in this disease as indicating lack of oxygen.

The rate of respiration also furnishes information of value as to the degree of disturbance of the respiratory exchange in the lungs. It is to be looked upon, however, as an attempt at compensation. If by means of this accelerated rate the necessary gas exchange is effected then serious anoxemia with cyanosis will not develop; but if the increased rate is ineffective, cyanosis will appear in spite of it. It is important to note that when such a failure of compensation has occurred the increasing gravity of the anoxemia is not necessarily met by any further proportionate increase of respiratory rate; whereas it is accompanied by a proportionate deepening of the cyanosis. To be more concrete, a patient may have a respiratory rate of forty per minute and be free of cyanosis and a few days later with the same respiratory rate may be deeply cyanotic. The respiratory rate is, therefore, not of as much value as a measure of anoxemia as it is of value as a warning of increasing anoxemia. When the patient's respirations are under thirty we may feel that no serious call is being made upon the compensatory mechanism; but if the rate of respiration is steadily rising, we may conclude that there is increasing interference with gas exchange; and if the rate, in an adult, surpasses forty, even though cyanosis be not yet present, we may infer that it is imminent. Such high rates, moreover, cannot be maintained over many days because they exhaust the patient. Hence their early appearance has an especially unfavorable significance.

Before discussing the treatment of anoxemia in lobar pneumonia, it will be well to say a word about its causes.

(a) As in all febrile diseases the metabolism is elevated, i.e., there is increased oxygen need in proportion to the fever. This increase of metabolism is estimated at 7.2 per cent. for each degree of fever. Hence a case of pneumonia with a temperature of 104 degrees will need at least 38 per cent more oxygen per minute than a normal person. In the attempt to obtain oxygen by forced breathing the exercise involved still further raises the oxygen requirements above normal.
(b) A significant fraction of lung tissue is consolidated and cannot serve for gas exchange. The importance of this handicap will depend, of course, upon the extent of the pneumonic process. That it is usually not the predominating factor is shown by the restoration of respiratory equilibrium in a few hours after the crisis in spite of unaltered consolidation.

(c) The unconsolidated portion of the lung is thought by some to be less efficient in gas exchange than normally because of increased moisture, toxic damage to alveolar epithelium, etc. There is no proof for this theory but it seems probable that it is correct.

(d) The type of compensatory breathing which develops in pneumonia is abnormal and less effectual in aerating the alveoli of the lungs. This probably is a very important factor in the production of anoxemia. Compensatory breathing to increase gas exchange in the lungs to be effectual must bring fresh outside air as close to the alveoli as possible and replace it as rapidly as possible. This demand is usually met by increased depth of breathing and by increased rate of breathing. In pneumonia the increased rate of breathing is constantly seen and is often excessive; but an increased depth of breathing is unusual. Indeed, in many cases the breathing is noticeably shallow. Factors extraneous to the disease itself may sometimes explain this shallowness of breathing. Obesity or abdominal distention may impede the full descent of the diaphragm. Emphysema with an ankylosed thoracic cage may prevent full costal excursion. Again the pain of pleurisy may temporarily lead to guarded shallow breathing. But the same type of breathing is often seen when none of these conditions is present to explain it. There is as yet no proof as to the cause of this abnormality. Some have chosen to assume some damage to the respiratory center due to the toxemia of the disease. Toxemia of other diseases does not, however, cause this changed form of breathing. The pneumococcus toxin can scarcely be said to have any specific action on the respiratory center since such a massive infection as pneumococcus peritonitis has no characteristic respiratory effects. On the whole it seems most likely that the inflammatory condition in the lung may, through viscero-sensory nerve tracts to the respiratory center, cut short the stimulus to inspiratory muscles. The shallow breathing of pneumonia would thus be similar.
in mechanism to the shallow breathing of pleurisy—and like it protective in purpose; that is it would tend to keep the affected tissue at rest.

In summary then the anoxemia of lobar pneumonia is caused by greatly increased oxygen demands, diminution of available lung tissue, and an ineffective form of breathing.

In attacking the problem of anoxemia therapeutically the following points should be considered in prevention and in treatment:

(a) The air of the room should be as fresh as possible. Keep the windows up. Cold is usually grateful and leads to quieter breathing. Of course protection from direct draft or from excessive chilling must be maintained.

(b) Try the patient in various positions to determine in which he breathes most comfortably. If a back rest is used be sure he does not slump down at the foot of it in an awkward doubled-up position.

(c) Keep the bowels gently open from the start and combat abdominal distention vigorously.

(d) Avoid plasters, heavy jackets, poultices and other appliances tending to encumber the chest.

(e) Use morphine to quiet the respirations—to lower the rate and deepen the breathing—and to give the patient rest.

(f) If cyanosis develops use oxygen freely by the most effective method available. If an oxygen tent cannot be had the nasal catheter method should be restored to. To a high pressure tank a reducing valve may be attached, preferably calibrated so that it can be set to insure a flow of two litres per minute. From the reducing valve the oxygen is led through an ordinary wash bottle, and thence through a catheter. This catheter is passed through the nose to the back of the pharynx, and fastened in place. Oxygen delivered at this rate of flow into the pharynx will insure concentration in the air breathed of approximately 30 per cent (Barach). A single high pressured tank will keep up a regular flow at this rate for nearly two days.
III. The Status of the Circulation.

In pneumonia, as in any febrile disease, there are increased demands upon the circulation. In the first place there is a more active demand for the transport of oxygen and carbon dioxide and in the second place there is more heat to be carried from the center to the periphery of the body. The accomplishment of this more active circulation in itself increases the normal work of the heart. The heart, moreover, is handicapped in at least three ways in pneumonia.

(a) The toxemia of the disease damages the heart muscle and affects adversely the vasomotor regulation necessary to maintain an efficient distribution of the blood.

(b) Anoxemia, when it occurs, still further impairs the function of the heart muscle and of the regulatory mechanism.

(c) There is a disproportionate burden on the right heart due to the narrowing of the pulmonary vascular bed by consolidation of a portion of the lungs.

It is not surprising, therefore, when one considers the increased work and the serious handicaps, that circulatory failure is common in pneumonia.

It manifests itself by falling blood pressure and rising pulse rate and enfeeblement of the heart sounds primarily, and terminally by increased cyanosis and edema of the lungs.

There is no disease in which the pulse, its rate, its volume, its tension, and its rhythm gives more valuable indication than in pneumonia. As long as the pulse is well sustained, and under 120 per minute, even great respiratory difficulty and extensive lung involvement do not wear so hopeless an aspect. A pulse rate rising above this level, especially if the blood pressure shows a serious fall, has an ominous significance. It is not so much the level of blood pressure at the moment as its trend downward which indicates a failing circulation in pneumonia. Occasionally the appearance of fibrillation, or of block, points to toxic damage to the conduction system. The muffling of originally clean-struck vigorous heart sounds, the soften-
ing of the earlier sharply accentuated second pulmonic, may be observed as further evidence of myocardial weakness. Changes in percussion contour of the heart seldom furnish accurate indications.

Our most effective treatment of the heart in pneumonia is the treatment we use for the toxemia and anoxemia of the disease. If these methods of treatment are ineffectual we cannot hope to accomplish much by stimulation of the heart itself. We can, however, do much to save the heart any unnecessary strain by sparing the patient even slight exertion through careful nursing; we can hold racking cough in check and secure sleep. These are vital gains to the patient. Digitalization during the disease has the sanction of a majority of clinicians. It is difficult to estimate its real value. In a disease in which crisis may occur at a most desperate stage, it is always justifiable to use any form of stimulation in the hope of prolonging life.

Summary

In studying patients during the course of lobar pneumonia there is much to be learned from clinical symptoms and signs. An analysis of the significance of these symptoms and signs has been briefly presented. Through the information they furnish as to the status of the infection itself of the respiratory function, and of the circulatory efficiency, useful indications for therapy and a more accurate prognosis may be attained.

MULTIPLE FOREIGN BODIES IN THE VAGINA

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Although there are medical records of quite a number of single instances of foreign bodies being found in the vagina, nevertheless such cases have been observed so infrequently as to warrant a brief report of the following case.

M. B., a feeble-minded woman, aged 27, was admitted to the University Hospital, July 28, 1927, because she had been having a foul bloody vaginal discharge for a period of two months. The
family and general past history had no bearing on her present condition. The patient was not married and had never been pregnant. The menstrual periods had started when she was eleven years of age and had occurred regularly until two months before she was admitted to the hospital. During these two months she had a continuous flow of dark red, foul smelling blood. It was difficult because of the patient's mental condition to determine just how much pain she had during this time but she did occasionally complain of discomfort in the lower abdomen.

Examination: The patient is a feeble-minded young woman in apparently no pain. The general physical examination is entirely negative. Pelvic examination: The external genitalia appear normal. There is a moderate amount of bloody discharge coming from the vagina. As soon as the hand of the examiner entered the vagina it encountered numerous metal objects. Realizing that we were dealing with a case of foreign bodies that had been inserted into the vagina, by an insane patient, the more detailed examination was deferred until after the patient could be anesthetized.

Operation, July 29, 1927: After the patient had been anesthetized, it was possible with the help of several retractors to see that the vagina was literally choked with foreign bodies. Most of these were safety pins, some were closed, others open with their ends spread far apart. By using great care and working slowly, we were able to extract all of the safety pins without injuring either the anterior or posterior vaginal walls. What made this especially difficult to do was the fact that the open ends of the different safety pins were tightly interwoven with each other. When the lower two-thirds of the vagina had been cleared of foreign bodies we found that we had removed thirteen safety pins, six open and seven closed, three pieces of cotton and a large screw. We were then surprised to find that high in the vaginal vault there was tightly wedged another foreign body of an entirely different character, namely a large piece of hard coal. After this had been removed the entire vagina was painted with 5 per cent mercurochrome and the patient again X-rayed, so as to be sure that we had not left in the patient any foreign bodies that had worked their way out of the vagina into the surrounding tissue.
On now receiving a negative X-ray report we sent the patient back to the ward, where she made a satisfactory recovery and later was transferred to a psychiatric institution.

The report of this case in addition to being of some interest, because of its unusual nature, is of some practical value as it emphasizes the fact that foreign bodies left in the vagina must always be thought of as one of the possible explanations whenever one has under his care a case of irregular vaginal bleeding.
There are certain ages or cycles which seem to bring into prominence one or two particular diseases, and in which the cause is generally some environmental factor. Witness, for instance, the prevalence of syphilis in the late fifteenth and the whole of the sixteenth century, occurring, to a great extent, as a result of the marked sexual promiscuity of that age; or consider the late war, and the incidence of pediculosis vestimentorum (cooties or body lice) and scabies (the itch) due undoubtedly to the massed grouping of men, and the lack of proper washing facilities in the trenches, etc.

And, again, for a few moments, let us consider a condition of our present decade known as epidermomycosis or epidermophytosis. This is a condition which manifests itself as a very chronic, difficult-to-cure, and recurrent skin disease attacking principally the hairless portion of the skin (palms and soles) and following as a natural sequence to common and popular sports and activities of today, especially to that very adjunct of cleanliness * * * the shower bath, which is known to be one of the worst offending factors.

History

Prior to 1910, the practitioner of medicine faced a group of skin diseases known to dermatologists under such various names as dysidrosis, pompholyx, vesicular eczema (of the hands and feet), eczema intertrigo, eczema marginatum, etc. The most difficult of these conditions to cure was found to be that of dysidrosis, or pompholyx, which Jonathan Hutchinson, in 1871, attributed to disease of the sweat glands. It was not very long before it was shown that the majority of these cases of dysidrosis

*A lecture delivered to the Senior Class at the University of Maryland.
had no association whatever with the sweat apparatus, and although still known by the above name, they were put under the classification of unknown etiology. In 1908, Whitfield published a report of five cases in one family, and demonstrated the cause of the condition to be a mycotic organism. This report was followed in 1910, by Sabouraud, who wrote a very thorough treatise on the whole subject of tinea cruris and its allied lesions. Since this time, and particularly within the last five years, with the marked increase in the incidence of the disease, the interest in the condition has grown to such an extent, that dermatologists over this entire country, and in Europe, are endeavoring to determine more exactly the etiological factors, and the varieties, of this interesting group of diseases, and to discover, if possible, a specific remedy.

Incidence:—

Epidermomycosis, or ringworm of the blister type, has become one of the commonest and most prevalent skin diseases in this part of the world. It is met with as frequently in the cleanly as in those not so prone to soap and water. It is as commonly seen in the wealthy as in those of more moderate means, and in women as in men, although the preponderance of incidence is in men.

In the years prior to 1910, this condition was not seen or recognized as frequently as today; now, no group of men is ever met with without finding that a considerable number are affected with this disease. White, of Boston, has reported an increase of such cases in his private practice, from three in 1910 to one hundred fifty-six in 1924; Allison, of Columbia, S. C., asserts that 40 per cent of his practice is due to the mycoses, and Kirby-Smith claims 33⅓ per cent. Two-thirds of the members of this present senior class have admitted this infection to some extent, nor has the writer escaped.

The reason for this marked increase is not so hard to understand, when various factors necessary to the growth and spread of the organism are realized. The first of these is that the spores and mycelium of the disease thrive best and longest in leather, wool, silk, and moisture. Secondly, that shower baths provide
a mode of contagion by their platform, and that these baths are increasing in the frequency of their use; that woolen stockings are affected by working men and golf enthusiasts alike, and that leather shoes are worn by practically all of us. Add to this group the leather straps in the street car, which we all, more or less, grasp and rub our hands on, and the coinage of the realm, and one can then begin to grasp the reason for the unusual prevalence of epidermomycosis. One factor already mentioned should be stressed, namely, the shower bath: at numerous halls for social gatherings notably the Y. M. C. A., Y. M. H. A. K. of C., etc.; the shower bath is an inviting and refreshing boon, but each person infected with epidermomycosis of the sole, can, and usually does, leave behind him sufficient organisms on the floor of the shower bath, to infect several bathers following, and these in turn may infect many more. Lastly, a word about Jock straps; and that only to remark that it is almost unbelievable that men will so readily exchange such intimate articles without considering the numerous diseases that may thus be contracted.

Symptoms:

Objective—

The most common, but least noticed, features are the small splits, or vesicles between the toes, and the minute vesicles seen on the sides of the fingers and the palms. Being mild in character, little attention is paid to them until the condition has spread and becomes annoyingly evident.

There are three types of the disease:

1. The vesicular (in which are found a few, or numerous, variously sized blisters on the palms and soles).
2. The intertrigenous (the moist, scaly areas with fissures, and apparent soft corns between the fingers and toes).
3. The keratotic (the callosities and thickened skin so frequently seen on the toes and occasionally on the palms).

Actually these three types are one. Beginning practically as a vesicle, superficial or deep-seated, and responding to the various factors of location, they change, apparently, to different forms. When the vesicles are superficial they rupture easily, and
then one sees either the small splits with exfoliating or peeling margins, or what appears to be an exploded bubble of the skin. The usual appearance, in the early type, is that of a few or many minute blisters usually unbroken and closely grouped appearing on the hairless portion of the hands, usually on the inner sides of the fingers and having the appearance to some extent of a dermatitis venenata. Occasionally the blisters coalesce, and on breaking, form a patch, eczematous in appearance and partially defined in outline, with margins that show definite exfoliation. When these same blisters appear on the inner surface of the toes and the webbed portion of the fingers, they are often influenced by the moisture of the sweat glands, the heat of that part, and by maceration of movement, and, consequently become soggy, white, moist patches showing most often the usual exfoliating margins, but sometimes appearing as soft corns.

Between the fingers, this latter variety, due to the constant washing of the hands, becomes a raw area with little or no exudation, and known as erosio-interdigitalis blastomycetica. On the other hand, the deeper-seated blisters are not so easily ruptured, particularly when seen on the soles, and very frequently become hornified or keratotic areas, which are called callosities, but, on removal, show generally a ringworm base.

In addition to the above, the organism has been found associated in eczematous patches involving the hairless, as well as the hairy regions. Ordinarily, this variety is partially well-defined in outline, but occasionally an ill-defined patch may be seen, which is found, nevertheless, to be a mycotic condition.

_Etiology_

The organism first demonstrated was called the epidermophyton inguinale. Later investigations have demonstrated that many varieties may be the causative factor, and in a review of the literature by Weidman and from his personal investigation, the causative factors were divided into three groups:

(1) Bacterial (in which staphylococcus, streptococcus, and diphtheria germs have been found in large numbers).
(2) Blastomycetic (in which crypto-coccic and saccharomyecetic organisms have been found).

(3) Hyphomycetic (in which sporotrichotic, epidermophytic, and trichophytic organisms have been demonstrated).

Of these three groups, the latter is the most important, for organisms of this group have been most constantly found; and the most frequently found in this group being the tricophyton inter-digitalae, the epidermophyton cruris (or inguinale), the tricophyton rubrum, the tricophyton gypsum, and the oidium albicans.

Contributing factors:—

As has already been mentioned, the contributing etiological factors are shower baths, and other places of congregation in which men and women walk barefoot in large numbers (such as gymnasiums), leather shoes, woolen socks and silks; and these form an important element in the dissemination of this disease.

Diagnosis

The diagnosis of epidermomycosis should, in the final analysis, always rest with the demonstration of the organism, but this is not always easy, and there are, therefore, numerous dermatologists, among whom are White & Guy, and Jacobs, who diagnose and treat upon clinical symptoms alone. Certainly, the organism has been found so frequently in the so-called dysidrosis, and pompholyx conditions, that one does not hesitate very long in diagnosing this condition without resorting to the tedious demonstration of the organism.

The small, peeling splits between the toes, the raw areas on the webbed portion of the fingers, the small or large blisters on the palms, soles and sides of the fingers and toes are symptoms that one can practically always diagnose as epidermomycosis. Frequently, the condition is so mild, and with so few symptoms, that the patient is unaware of having the disease.

Treatment

While this condition is much easier to cure than in the days before the offending organism was demonstrated, difficulty is
continually found in curing many of the patients of this disease; and to date, no specific treatment has been found which is beneficial in even a majority of the cases. As a result of this, there are almost as many cures for the disease as there are dermatologists.

As a rule, the majority of the cases rest, for their cure, upon the exfoliation of the diseased tissue which contains the organisms, and the hoping for a de-sensitization in the patient against the fungi. In certain cases, X-ray will cause the disappearance of all the inflammatory irritation, only to have the condition rise up again after a short period of rest. In other cases, ultra-violet ray has been found very beneficial. In the chronic, eczematous types strong salicylic acid ointment, with, or without, benzoic acid (this latter combination being Whitfield’s) is generally helpful. White, of Boston, has suggested mercurochrome, but this, as a rule, has been found of no avail. In the erosio-interdigitalis type, Black Wash has been used with good results.

At the last meeting of the Dermatological Association, volatile oils were much discussed and good effects prophesied from its use. Pure phenol, without the neutralizing effects of alcohol, has been much used and in many cases found to be beneficial. In conclusion, it should be remembered that there is more than one variety of organism involved, and that, therefore, it is possible that the same medication will not relieve all clinical lesions.

Prognosis

White reports one case of thirty years duration, without appreciable remission, and, while this is quite extreme, it is not unusual to find patients who have been afflicted with epidermomycosis for at least ten years.

When one considers the fact that it is difficult to determine when there are no longer mycelium and spores present on the feet or in the shoes or stockings, it can be seen why recurrences are frequent. Besides, it has been shown that the organisms
have remained alive in wearing apparel from twenty days to eight months; so that, unless one shuts oneself up, away from all contact, it should be expected that re-infection will be frequent.

_Prophylaxis_

As many procedures as will destroy organisms should be used. Prime among these should be the sterilization of all towels in bathing places and athletic associations, the use of wood, paper maché, or rubber bathing slippers when taking a shower bath, refraining from grinding in the organisms from street car leather straps, or enamel posts, and the boiling of all stockings before re-use.
THOMAS CASPAR GILCHRIST.

Thomas Caspar Gilchrist, M.B., M.D., Professor of Dermatology in the University of Maryland, died November 14th, 1927.

An able teacher, a skillful practitioner and a wise investigator, Doctor Gilchrist occupied a high position in the medical profession, while he added to the dignity and importance of his specialty.

Born in Crewe, England, June 15th, 1862, he received his major education at Victoria University of Manchester, graduating in 1886 with the degree of Bachelor of Medicine. After a few years of practice in England, Doctor Gilchrist came to Baltimore in 1890, and began his work in the Johns Hopkins and University of Maryland, becoming Clinical Professor of Dermatology in both schools seven years later. The University of Maryland granted him an honorary degree of Doctor of Medicine in 1907.

Doctor Gilchrist was an active member of many Dermatological Societies. He was vice-president and later president of the American Dermatological Association, vice-president of the Dermatological Section of the British Medical Association, president of the Baltimore and Washington Dermatological Association, and an honorary member of many of the Continental Dermatological Societies. His principal researches were in the study of blastomycosis and of the bacteriology of acne. He published many articles relating to these researches as well as on the clinical aspects of diseases of the skin.
In 1894, Doctor Gilchrist married Miss Anne McKurrow Hall of Manchester. Mrs. Gilchrist and two daughters survive him. His home life was charming, brightened by his artistic accomplishments. He was a pianist of more than usual ability with a great appreciation of fine music, and had considerable skill in making pen and ink sketches. His collection of etchings is much admired.

In the death of Doctor Gilchrist the Medical Profession has lost a valuable member, Dermatology one of its leaders, the University of Maryland an accomplished teacher, and those of us who knew him well, a good friend.

DR. CHARLES E. SIMON.

Dr. Charles E. Simon, Professor of Filterable Viruses in the School of Hygiene and Public Health, Johns Hopkins University, died at his home in Baltimore on November 8th, 1927, in his sixty-second year.

Dr. Simon was born in Baltimore on September 23rd, 1866, the son of Mr. Charles Simon, Jr., a well-known merchant of the city. His primary and secondary education was all received in Germany, where he lived from his sixth to his eighteenth year, attending school at Baden-Baden and later on the gymnasium at Hanover. Some of this German training remained with him throughout life, exhibiting itself in occasional German modes of expression and coloring his ideals of scientific work.

On his return to Baltimore he entered the collegiate department of the Johns Hopkins University. After graduation as a Bachelor of Arts in 1888, Dr. Simon took up the study of medicine, first in the medical department of the University of Pennsylvania, but later transferring to the University of Maryland, from which he received the degree of Doctor of Medicine in 1890.

The Johns Hopkins Hospital had just been started (1889), and Simon was fortunate enough to receive an appointment as assistant resident physician in the medical service under Dr. Osler. He thus came under the influence of that stimulating personality, and like the other young men in the enthusiastic group gathered
in the new hospital, he became and remained a devoted admirer of Osler. It was under his advice and with some expectation of a future position in the hospital that Simon spent a year in 1891 in Paris, doing special work with Gautier in physiological chemistry. Three months were spent also at Basel working with Bunge. It may be surmised that this choice was not influenced solely by the great reputation of Bunge as an authority in physiological chemistry, for it was in Basel that the young lady lived who was to be his wife. He met there Miss Lina Stumm. Their engagement followed quickly, and they were married in the spring of 1892. Throughout their married life of thirty-five years she was his true comrade and helper, sharing alike in his work and his play. The young couple returned to Baltimore in 1892. The position at the hospital did not materialize, except that he was allowed the use of a room under one of the wards as a laboratory and was given the opportunity of offering a special course to the so-called post-graduate students. He set up in practice, specializing in gastro-intestinal diseases. With the valuable assistance of Dr. Salzer, then a prominent physician of Baltimore, his practice prospered and gave every promise for the future. Meanwhile he was busy also in the preparation of the manuscript of his Manual of Clinical Diagnosis. This was published in 1896, and has since gone through ten editions. It has been one of the standard text-books on the subject in this country.

Just about the time of the completion of this book he suffered a serious breakdown in health. His sensitive nervous system succumbed to his intensive method of work, and for a period of perhaps ten years he was afflicted with a species of phobia that made it practically impossible to continue the life of a practitioner. The future for himself and his wife must have looked very gloomy at that time, but fortunately Osler, who was giving him medical attention, suggested a way out. “There is a stable,” he said, “in the rear of your house. Get the landlord to fix it up and start a diagnostic laboratory.” This he did. It was the first laboratory of the kind in Baltimore, probably one of the first in the country. It was welcomed by the local physi-
cians, and its reputation soon spread to other parts of the country. His activity was not confined to teaching and the making of diagnostic reports. These were necessary for his support, but in addition he took up the investigation of scientific problems which he pushed with all the vigor that his physical condition permitted. He made numerous contributions to scientific journals which established his reputation as an investigator and won for him the recognition of membership in some of the leading scientific societies.

The strenuous work carried on in his laboratory during the winter months must often have taxed his physical powers to the limit of their endurance, but he made a systematic attempt to restore the balance and win back a condition of normal health by living a life in the open during the summer months. He had acquired a place at Chester, Nova Scotia, and here he spent four or five months every year, giving the time in part to his writing and his books, but in large measure also to sailing, walking and other forms of recreation.

In the course of time this good outdoor life for part of the year had the effect that he hoped for. There was a restoration of physical vigor, an approximation at least to a condition of normal health. He was able to increase his scientific activity in the laboratory, to prepare new editions of his manual, and to write a new book on Physiological Chemistry. His increasing reputation as an authority on clinical diagnostic methods brought to him an offer from the College of Physicians and Surgeons of Baltimore to take charge of the instruction in this subject. The offer was accepted with some misgivings as to whether he would be able to stand the emotional strain that it would put upon him, for he was conscious that with his temperament he could not take such work easily. It proved to be successful. He was finally made Professor of Clinical Pathology in this school and later in the University of Maryland, when the two schools were merged. The students who sat under him must have enjoyed the best of instruction. Simon was a master of his subject and a devoted and enthusiastic teacher, throwing himself into his work with an emotional intensity that must
have aroused a response in the minds of the dullest witted among them. One can imagine that his students went out into practice with a thoroughly sound knowledge of the methods of clinical diagnosis. During this period he published two additional books, one on "Infection and Immunity," 1912, and one on "Human Infection Carriers," 1919.

This phase of his history was interrupted more or less accidentally by the establishment of the School of Hygiene and Public Health of the Johns Hopkins University in 1918. He was not connected with the school at the time of its founding, but owing to his interest in and knowledge of some of the parasitic diseases, it happened that he was consulted in an advisory capacity in connection with the medical phases of the work in parasitology. He became much interested in the department of medical zoology, and visited and worked in its laboratories at first as a guest, but finally as a member of the department with the title of Lecturer. The relationship thus established soon became more intimate. He gave to the department more and more of his time, and the value of his services was recognized by a permanent appointment as Resident Lecturer and eventually as Professor of Filterable Viruses. This latter subject he had taken as his special field of work. He demonstrated to the satisfaction of the authorities that it was a suitable subject for independent treatment in a school of public health, so that a separate department was created and he was placed in charge. The last few years of his life were devoted entirely to this work. Instruction in filterable viruses was made one of the major courses in the school, and so far as is known, this marked the first recognition of the subject as a separate branch of instruction in a medical or public health curriculum. The course was popular with the students, and he and his assistants and special students published numerous papers on the diagnosis of smallpox, the experimental study of measles, cell inclusions in varicella, the formation of the guarnieri bodies, the origin of malignant growths, etc. Men that he trained were called to other institutions for similar work, and it may be said with justice that he became a leading authority in his field.
Dr. Simon was closely connected with another phase of the work of the School of Hygiene and Public Health. In 1921 the school decided to found the American Journal of Hygiene as an organ for the publication of technical researches in public health and preventive medicine. The Journal was issued under the editorship of Dr. Welch and with a list of distinguished scientists as associates, but Dr. Simon was selected for the responsible position of managing editor. The actual labor of inaugurating and carrying forward the Journal fell mainly upon his shoulders. He took up this work with his usual enthusiasm and devotion, and was unremitting in his attention to all the details connected with the selection and editing of the papers. Under his guidance the Journal has established itself as one of the leading organs of scientific research in the field of hygiene. His co-workers in the enterprise willingly give to him the chief credit for this success. The seven volumes now completed, together with the accompanying monographs and special supplements, will stand as a monument to his memory.

On the personal side Dr. Simon was a man with marked characteristics. Impulsive and emotional by nature he entered into everything that interested him with great intensity. He was no Laodicean. His convictions on all matters of importance were strong, and he held it to be the part of cowardice to conceal his opinions, religious, political or otherwise, if they happened to run counter to those of the majority. At the beginning of the war he suffered some harsh criticism on this score, since his early life in Germany had given him an affection for that nation which he was at no pains to disguise; in fact, he openly proclaimed his sympathies whenever and wherever the subject was discussed. But it should be added that when this country went into the war he stood with his own people, for he was first of all a loyal American. Generally speaking, political affairs made little appeal to him. His chief and absorbing interest was in science. The summum bonum for him was to add something of importance to human knowledge. To work at some problem in his science and to keep in touch with the work of others gave him his greatest joy. The many physical ills that he had to
endure had in nowise soured his nature. He was discouraged at times, as all workers in science must be when they reflect upon how little they have accomplished, but usually he was buoyant and hopeful, and far from being a pessimist. He could rail in extravagant terms at the deceitfulness of man and the hypocrisies of the unco guid, but his heart was warm and generous, his sentimental side was easily touched, and no one was more ready with help and sympathy for those in distress. He was in truth a lovable man, upright and honorable in his dealings and his scientific work, and with an almost quixotic adherence to the principles of conduct that he had adopted as a guide to life.

W. H. Howell.
THE LIBRARY

The University of Maryland was the first medical college in this country to establish a library. The foundation of our present collection dates from 1813. For over a century the growth of the library was very slow. Occasionally small donations were made, or private collections were left by will, but there were no funds available for the systematic purchase of books.

Nevertheless, the library gradually came into possession of quite a large number of valuable medical works. The earlier medical authors are especially well represented. Many items of great historical interest, connected with the development of the school, have been preserved. There are, for example, the series of bound theses presented by candidates for the degree from 1817 to 1886. There are autographed letters of many celebrities: busts and portraits of members of the early faculties, and provosts of the University; the Lafayette memorial flag; the records of our Alumni in the World War. These are irreplaceable and priceless heirlooms.

In recent years an attempt has been made to develop this old collection into an adequate working library for our students and faculty. In 1907 an old church was converted into a temporary home for the joined libraries of medicine and law, and given the name of Davidge Hall. It has been necessary since to build a gallery around the main reading-room and to add three smaller conference-rooms.

The limited funds available for the purchase of new books have been wisely spent in subscriptions to the more important scientific and clinical journals. The growing files of these journals are in constant use.

The services of a trained and a devoted librarian has been of the greatest use in preserving the library's inheritance from the past and directing its more recent development.

There is urgent need, however, for better quarters for the library, and for supplementing the still quite inadequate number of modern texts. The present building is far too cramped. The protection from fire is nil. The open stacks lead to the loss of
valuable books. The reference volumes are far too few. Too many important journals are missing. We are still far then from the goal of a working library worthy of our students and of our faculty.

The generosity of the Medical and Chirurgical Faculty, which enables our students to avail themselves of the splendid library uptown, only in part compensates for the real loss in efficiency, and in stimulus to study which the school suffers, through the present handicaps of our own library.

N.W.

DEDICATION SKILLING-DOYLE MEMORIAL.

In every national crisis, graduates of the medical department of the University of Maryland have rushed to the aid of the Government. This is a heritage of which any institution may be justly proud. The World War proved no exception to the
rule. Literally hundreds of its alumni were mustered into the military services. Of those participating in such a holocaust, it is only natural that some should pay the supreme penalty. Among these were Lieutenant John Galen Skilling and Dr. Joseph Francis Doyle, both of the 1917 class. That their sacrifice might not be in vain and the ideals for which they stood should be perpetuated their classmates caused to be erected a bronze tablet and had it placed in the main corridor of the University building. The site selected is most appropriate, for daily our young men and women pass by the spot and of necessity must be influenced and inspired by the honorable though brief careers of these two men. This tablet was dedicated Armistice Day with most solemn and impressive exercises. The occasion was graced by a notable gathering of alumni, citizens, and representatives from military and patriotic orders. Dr. H. Lawrence Wheeler, chairman of the memorial committee, acted as master of ceremonies. The program was as follows:

Invocation .................. Reverend Hugh Birckhead, D.D.
Address .......................... Dr. Arthur M. Shipley
Address .......................... Dr. James M. H. Rowland
Presentation of Tablet ........ Dr. H. Lawrence Wheeler
Unveiling of Tablet ............ Mrs. John Galen Skilling,
                                 widow of Lieutenant Skilling, and Miss Gertrude Doyle, a sister of Dr. Doyle.
Acceptance of Tablet ........... Dr. James M. H. Rowland
Benediction ..................... Reverend Hugh Birckhead

The class of 1917 and its committee, Doctors H. Lawrence Wheeler, Frank N. Ogden and D. Edgar Fay, are to be congratulated most heartily upon the conception, execution and completion of this tribute of love to their departed classmates, and the University authorities upon the acquisition of this beautiful and glorious testimonial to the memory of such worthy sons, who, when put to the test, proved true to the motto of the Medical Alumni Association, "Filius sim dignus ista digna parente."
In honor of his long years of professional service to the community in the alleviation of man's infirmities and of his efforts for the betterment and advancement of the medical profession, Dr. Randolph Winslow, of the class of 1873, emeritus professor of surgery in his alma mater, was tendered a surprise party by 134 of his medical confreres on the eve of his 75th birthday anniversary, Saturday, October 22, 1927.

Among those present were Sir John Broadbent, of St. Mary's Hospital, England, and Dr. H. Carrasquillo, of Porto Rico.

Commenting on the occasion, the Baltimore Sun, in its editorial columns, paid Dr. Winslow the following glowing compliment: "To have one's seventy-fifth birthday acclaimed in such fashion is a rare occurrence in human life. The man who deserves it must be a real man, and must have done real things that deserve such special remembrance. Dr. Winslow belongs to a long line of eminent physicians who have made Baltimore famous as a medical center, and who in their day and generation carried hope and comfort to thousands of suffering bodies and anguished minds—ministering medical angels to the weaknesses of the flesh.

"The roll is too long to call in detail, but it is a proud thing for any man to be added to this legion of honor. Dr. Winslow has a right to be happy today."

Dr. Winslow was born at Hertford, North Carolina, October 22, 1852. He received his Bachelor of Arts degree from Haverford College in 1871, and his Master's degree three years later. He was graduated in medicine from the University of Maryland in 1873. From 1880 to 1886 he was demonstrator of anatomy at the University of Maryland, and from 1882 to 1893 professor of surgery in the Woman's Medical College of Baltimore. From 1891 to 1902 he was professor of anatomy and clinical surgery in the University of Maryland, and from 1902 to 1920 professor of surgery, since which time he has held the rank of emeritus professor of surgery. In 1896 he was elected one of the vice-presidents of the Medical and Chirurgical Faculty of the State of Maryland, and in 1914 became its presiding officer.
BOOK REVIEWS.


Those interested in the subject of blood transfusion will find this book a very reliable source of information concerning its indications and methods of application. Blood transfusion has today such a wide field of applicability and is of so inestimable a value in all fields of medicine that a work of the character before us should prove a most welcome addition to the library of every physician and especially so to those dealing with surgical, chronic medical and obstetrical problems. Dr. Feinblatt has covered in a concise way all phases of this highly valuable and oftentimes life-saving procedure, viz., the physiologic considerations relating to blood transfusion, blood groups, blood donors, indications, dangers, technic. For those who desire a broader insight into the subject an added attraction is the bibliography appended to each section into which the volume is subdivided. We can recommend the book to our readers as a thoroughly reliable and trustworthy guide in the sphere it covers.

CLINICAL CASE TAKING. By George R. Herrmann. 1927. C. V. Mosby Company.

This book was written primarily for the medical student. It is an adequate but terse summary of the principal items to be kept in mind in a systematic history and physical examination. Dr. Herrmann believes that students can be trained in systematic approach to clinical medicine without sacrifice of individuality. He urges that the student approach the patient as an individual, listen to his story, and win his confidence. After doing this, he should note the clinical facts in an orderly sequence, in order to ensure completeness.

Obviously, any book of this type must either be constructed as a dictionary of medical syndromes and terminology, or as an
outline suggesting to the student's mind medical knowledge already obtained in his courses. This work is of the outline type; the facts entered in the book have been culled with considerable care in order to limit the contents to important details.

It is beyond the scope of the work to attempt definition of medical terminology. Purely objective findings in the physical examination or objective facts of the history are mingled more or less indiscriminately with symptoms which represent the summation of objective items. In his general remarks, Dr. Herrmann emphasizes the importance of gaining the cooperation of the patient in taking the history, but he does not require the student to note in the history an estimation of the degree of cooperation which he obtained.

To summarize: This book, "Clinical Case Taking," represents a well-balanced attitude toward the subject of clinical records, an orderly, adequate clinical outline and a careful selection of clinical items. It makes no attempt at definition or limitation of medical terminology and offers no solution for the practical achievement of completeness in notation which it advocates.

H. L. D.
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State Senator Walter J. Mitchell, of La Plata, speaker of the evening, made a plea for young physicians to settle in country districts. He made the following statements:

"A survey of conditions in Southern Maryland has disclosed that the average age of the country doctor in that territory is 55. The increase in the average age of country doctors is due to young physicians and surgeons remaining in the cities.

"Although good roads and automobiles have placed the city hospitals within reach of the county residents, there always will be a need for the country doctor.

"It is hoped that those making the care of mankind their life work will not overlook the need of medical attention by those unable to go to the larger centers of population."

W.W.
MEMPHIS

On Alumni night, Tuesday, November 15th, during the annual meeting of the Southern Medical Association, the Medical Alumni of the University of Maryland held a banquet at the Peabody Hotel in Memphis. Dr. Vincent J. Demarco, of the Class of 1915, was in charge and, according to the men from Baltimore, staged a very delightful affair.

Dr. W. Houston Toulson, of Baltimore, represented President Frank W. Keating, of the Association, and made an appropriate address.

Those present were:

Dr. J. F. Huey, Hillsboro, Ala..............................P. & S. 1887
Dr. Julius Friedenwald, Baltimore, Md..............................P. & S. 1890
Dr. W. L. Champion, Atlanta, Ga..............................P. & S. 1891
Dr. W. C. Ashworth, Greensboro, N. C..............................P. & S. 1892
Dr. Charles E. Copeland, Charleston, W. Va..............................U. of M. 1893
Dr. C. M. Grigsby, Dallas, Texas..............................P. & S. 1893
Dr. J. B. McElroy, Memphis, Tenn..............................P. & S. 1893
Dr. J. W. Preston, Roanoke, Va..............................P. & S. 1893
Dr. Joseph M. Postelle, Oklahoma City, Okla..............................B. M. C. 1894
Dr. Henry M. Fitzhugh, Westminster, Md..............................U. of M. 1897
Dr. Page Edmunds, Baltimore, Md..............................U. of M. 1898
Dr. S. L. Edwards, Memphis, Tenn..............................U. of M. 1899
Dr. James N. Brawner, Atlanta, Ga..............................P. & S. 1899
Dr. E. G. Ballenger, Atlanta, Ga..............................U. of M. 1901
Dr. R. M. Little, Martin, Tenn..............................U. of M. 1901
Dr. F. Clifton Moor, Tallahassee, Fla..............................U. of M. 1903
Dr. C. Christ, Orlando, Fla..............................P. & S. 1905
Dr. Henry J. Walton, Baltimore, Md..............................B. M. C. 1906
Dr. C. A. Andrews, Tampa, Fla..............................P. & S. 1909
Dr. Ralph L. Taylor, Davisboro, Ga..............................U. of M. 1911
Dr. Albert E. Goldstein, Baltimore, Md..............................P. & S. 1912
Dr. Edward A. Looper, Baltimore, Md..............................U. of M. 1912
Dr. Frank W. Walke, Shreveport, La..............................U. of M. 1912
Dr. W. Houston Toulson, Baltimore, Md..............................U. of M. 1913
Dr. Cleveland Whelchel, Gainsville, Ga..............................U. of M. 1913
Dr. Charles A. Young, Roanoke, Va..............................U. of M. 1914
Dr. Vincent J. Demarco, Memphis, Tenn..............................U. of M. 1915
Dr. L. Carl Sanders, Memphis, Tenn..............................U. of M. 1915
NORFOLK

Friday, November 18th, 1927, the University of Maryland Alumni Association of Tidewater Virginia held a banquet at the Monticello Hotel in Norfolk. In response to an invitation from Dr. Charles H. Lupton, past president of the local society and chairman on arrangements, our President asked Dr. Randolph Winslow, emeritus professor of surgery, to go to the meeting as representative of our Executive Committee, and he kindly consented to do so. As proof of the success of the meeting we are quoting from reports in the Norfolk papers.

"Dr. Randolph Winslow, of Baltimore, emeritus professor of surgery at the University of Maryland, and Prof. R. M. Watkins, of the academic department of the university at College Park, were the principal speakers last night before the annual banquet of the University of Maryland Alumni Association of Tidewater Virginia, held in the Monticello Hotel ballroom.

"Dr. Winslow, who is the oldest living professor of the University and one of the oldest living alumni of the institution with 55 years of continuous service to his credit, spoke to the graduates and their guests on the history of the school of medicine and surgery and gave an account of its usefulness to the country.

"Professor Watkins, representing the academic department, is a member of the staff in the department of public speaking. He addressed the alumni on the activities of the university proper and asked their continued interest in their alma mater. Dr. Albert E. Wilson, president of the Tidewater association, presided and introduced the speakers.

"Dr. Charles H. Lupton, past president and chairman on arrangements, spoke briefly upon the possibilities of the local organization in creating interest in the university and in supporting it with their best efforts. He urged the association to create a permanent scholarship to the university to be awarded some local boy. This move, he explained, was begun last year when the club was first organized but has not materialized."
“Officers of the alumni association are Dr. Albert E. Wilson, president; Dr. E. P. Beadles, vice-president; Dr. J. Pilcher Bradshaw, secretary; Dr. Franklin Davis Wilson, treasurer; and Dr. L. A. Bragg, Dr. R. P. Simmons and Dr. Charles H. Lupton, members of the executive committee.”

MEMBERSHIP

A committee on membership, founded for the purpose of obtaining, as members, as large a percentage as possible of our graduates practicing in Baltimore, has been formed with Dr. Edward P. Smith as chairman. Although no report has been received from them as yet, we sincerely trust their efforts will be crowned with unbounded success, because we want every alumnus in the fold as an active member.

We cannot stress too frequently the need of a University for the support and interest of its graduates and that this University deserves and should receive such support from each and every one of us. It seems obvious that the standing of the source of our professional life is a vital, practical consideration when considered simply from a selfish viewpoint. There is, however, another side, that of the young men now attempting to fit themselves for a medical career; when we help our alma mater we help them.

Will you not assist us and aid the school by becoming an ACTIVE member at once. Send in the application on the inside of the back cover of this issue together with a check for three ($3.00) dollars, covering one year’s dues. We want members!

DO IT NOW!

TRIBUTE TO DR. CARRICO

The following minute on the late Dr. C. P. Carrico, class of 1898, was adopted by the Cecil County Medical Society at a special meeting held on Monday:

Dr. Camillus P. Carrico, a member of this society, and an ex-president, died at his home, in Elkton, Md., on Friday, July 8, 1927, aged sixty years.
In this age of medical specialization and development, by scientific experiment and research, with a true sense of values, he kept abreast with the spirit of the times, but never lost sight of the human element in the practice of medicine.

* * * *

Fitting it is, that his last resting place may be found under the shadows and amid the scenes that were dearest, of all, in life, to him—his home, his church, the school and the hospital (Cecil County Medical).

The committee, in behalf of the society, dedicates a page in its minutes for the inscription of this tribute, and extends a heart-felt sympathy to his devoted wife, in whose sorrow it shall ever reverently share.

DR. T. J. CONREY,
DR. W. D. CAWLEY,
DR. HOWARD BRATTON.

DEATHS

Dr. William S. Phillips, Grand Junction, Tenn.; P. & S., class of 1889; aged 65; died, September 22, 1927.

Dr. William Earl Grim, Cameron, W. Va.; B. M. C., class of 1898; served during the World War; aged 52; died, October 7, 1927, following a long illness.

Dr. Mortimer F. Hansbrough, Front Royal, Va.; P. & S., class of 1874; aged 78; died, October 5, 1927, of cerebral hemorrhage.

Dr. Scott Kennedy Wilson, Baltimore, Md.; class of 1879; aged 68; died, November 21, 1927, of complications following an operation done several weeks previously.

Dr. William Brinton Perry, Baltimore, Md.; B. M. C. class of 1889; former professor of clinical gynecology in the University of Maryland; served during the World War in the medical corps of the United States Army with the rank of captain; aged 61; died, November 25, 1927, following a lingering illness.

Dr. David H. Rowe, Washington C. H., Ohio; P. & S., class of 1892; aged 63; died, October 21, 1927, of heart disease.

Dr. Harry Boyd, Baltimore, Md.; class of 1888; aged 61; died, November 30, 1927, after a lingering illness.

Dr. George Augustus McQueen, Keyser, W. Va.; B. M. C., class of 1906; past president of the West Virginia Medical Association; served during the World War; aged 48; died, September 17, 1927, of myocarditis.
Dr. Eugene W. Heyde, Parkton, Md.; 1892; aged 57; died, November 14, 1927, of lobar pneumonia.

Dr. Joseph T. White, Atlantic City, N. J.; B. M. C., class of 1903; served during the World War; aged 52; died, November 14, 1927, of cirrhosis of the liver and diabetes.

Dr. O. L. Hollar, Hickory, N. C.; B. M. C., class of 1892; aged 58; died, October 15, 1927, of cerebral hemorrhage.

Dr. Herbert Huskisson Cornforth, DeKalb, Ill.; B. M. C., class of 1909; aged 41; died, October 14, 1927, in Paris, France, of cerebral embolism while attending the convention of the American Legion.

Dr. Walter W. Bucklew, Tunnelton, W. Va.; B. M. C., class of 1909; aged 45; died, September 26, 1927.

Dr. John Mace, Cambridge, Md.; class of 1887; aged 66; died, September 26, 1927, of paralysis agitans.

Dr. Bertrand I. Darmond, Brooklyn, N. Y.; B. M. C., class of 1904; aged 53; died, April 26, 1927, on the U. S. S. New York while en route from New York to Boston.

Dr. Joshua W. Kemp, Westminster, Md.; class of 1858; aged 92; died, October 13, 1927. He served as a surgeon in the Civil War in the Nineteenth Pennsylvania Regiment.

Dr. Charles E. Sadler, Baltimore, Md.; class of 1873; aged 76; died, September 9, 1927, of a complication of diseases.

Dr. Louis Simon Blumberg, Newark, N. J.; B. M. C., class of 1907; served during the World War; aged 47; died, July 16, 1927.

Dr. William Thomas Swanson, Callands, Va.; P. & S., class of 1877; aged 77; died, August 4, 1927, of pneumonia.

Dr. Bernard Purcell Muse, Baltimore, Md.; P. & S., class of 1888; professor of clinical obstetrics, University of Maryland; aged 59; died, August 6, 1927, of lymphosarcoma.

Dr. Alfred Loomis McAnally, Baltimore, Md.; class of 1925; an interne, St. Joseph's Hospital, Baltimore; aged 27; died, July 19, 1927.

Dr. William Baltzell Burch, Baltimore, Md.; class of 1890; aged 61; died, August 25, 1927.

Dr. William Edward Eustace Little, Kingston, N. Y.; P. & S., class of 1884; aged 65; died, July 23, 1927, of myocarditis.

Dr. George Sidney Clark, Dumont, N. J.; B. M. C., class of 1897; aged 55; died, January 4, 1927, of cerebral hemorrhage.

Dr. Elmer F. Frasher, Smicksburg, Pa.; class of 1887; aged 65; died, recently, of tuberculosis.

Dr. William S. Maxwell, Still Pond, Md.; class of 1873; aged 77; died, September 16, 1927, of a complication of diseases.

Dr. George C. Kinard, Lincoln, Pa.; class of 1885; aged 66; died, September 13, 1927, of cerebral hemorrhage.

Dr. Harry McDaniel, High Spire, Pa.; P. & S., class of 1883; aged 76; died, August 22, 1927, of angina pectoris.
Dr. John J. Sullivan, Scranton, Pa.; P. & S., class of 1882; aged 70; died, August 16, 1927, of acute intestinal obstruction.

Dr. George W. Stark, Charlottesville, Va.; Washington University School of Medicine, class of 1877; aged 72! died, August 7, 1927.

Dr. Iber J. Burgess, Anderson, S. C.; B. M. C., class of 1898; aged 56; died, June 23, 1927, of acute myocarditis and nephritis.

Dr. James S. Lafferty, Concord, N. C.; class of 1881; aged 74; died, September 12, 1927, of cerebral hemorrhage.

Dr. Charles Lafayette Morgan, Alliance, Ohio; P. & S., class of 1879; aged 69; died, recently, of chronic cholecystitis.

Dr. Clarence Irving Sparks, Eastport, Mass.; B. M. C., class of 1898; aged 50; died, September 15, 1927.

Dr. Thomas Caspar Gilchrist, Baltimore, Md.; aged 65; died, November 14, 1927, of cirrhosis of the liver. Dr. Gilchrist received the degree of B. M. from Victoria University, Manchester, England, in 1886, and the same year became the licentiate in surgery of the Royal College of Surgeons, London. At the centennial celebration of the University of Maryland in 1907 he was given the honorary degree of doctor of medicine. Since 1897 he has been head of the department of dermatology in the University of Maryland and at the time of his death held the rank of professor of dermatology.

Dr. Charles Edmund Simon, Baltimore, Md.; class of 1890; aged 61; died, November 8, 1927, following a lingering illness. In 1908 he was made professor of clinical pathology in the College of Physicians and Surgeons and when that institution merged with the University of Maryland in 1916, he retained the same title in the combined schools until 1920 when he resigned, to accept a lectureship on medical zoology in the Johns Hopkins University School of Hygiene and Public Health. He held this position for two years. In 1922, he was appointed resident lecturer in filterable viruses which led in June of this year to a full professorship.

Dr. Thomas Henry Redmond, Lawrence, Mass.; B. M. C., class of 1897; aged 56; died, November 4, 1927, of cerebral hemorrhage.

Dr. James A. Wise, Hapeville, Ga.; P. & S., class of 1886; Civil War veteran; aged 80; died, October 18, 1927, following a prostatectomy.

Dr. William Burns, Goldston, N. C.; P. & S., class of 1878; aged 74; died, October 21, 1927.

Dr. William Booth, Canon City, Colorado; class of 1865; aged 85; died, November 13, 1927, of carcinoma of the liver.

Dr. William Henry Bash, Castlegate, Utah; P. & S., 1915; served during the World War; aged 38; died, November 28, 1927, of pneumonia following a gall-bladder operation.

Dr. Thomas Edward Sears, Baltimore, Md.; class of 1874; aged 72; died, December 21, 1927, of heart disease.

Dr. Scott Kennedy Wilson, Baltimore, Md.; class of 1879; aged 68; died, November 21, 1927, following an operation.
Dr. Paul Reed Rockwood, State University of Iowa College of Medicine, class of 1921 and assistant professor of medicine, University of Maryland; aged 30; died, about December 27, 1927, of asphyxiation.

Dr. Harry Carrick, Baltimore, Md.; class of 1889; aged 61; died, January 2, 1928.

Dr. George F. Chambers, Lusby, Md.; class of 1896; aged 64; died, recently, of cerebral hemorrhage.

Dr. Peyton H. Keaton, Damascus, Ga.; P. & S., class of 1888; aged 64; was found dead, December 7, 1927, of an overdose of chloroform, taken accidentally.
ADDRESSES WANTED

Any information about these men will be much appreciated. They are lost to us and with the sources at our command we are unable to locate them.

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Notify Secretary, Medical Alumni Association, University of Maryland, Lombard and Greene Streets, Baltimore, Md.
REMARKS ON THE DIABETIC AFFECTIONS OF THE EYE

HARRY FRIEDENWALD, M.D.

BALTIMORE, MD.

The ocular changes found in diabetic patients are of great variety. This results from the fact that diabetes not only presents changes in the sugar content, but other changes in the blood as well and thus causes secondary alterations in the general nutrition, in the vascular system, etc. Each of these facts may affect the sensitive ocular apparatus in a peculiar manner.

In order to survey the subject we may for convenience consider three groups of lesions in the eye which we may classify as diabetic:

1. Those resulting from changes in the composition of the blood.
2. Those resulting from the secondary changes in the blood vessels of the eye and of the brain.
3. Those resulting from lowered resistance of the ocular tissues to infections.

1. The alterations in the blood may cause ocular changes in several ways.
a. Impaired or altered nutrition. Under this head we think of diabetic cataract, rapid changes in the refraction of the eyes and in the power of accommodation.

Diabetic cataract is generally placed first in frequency among the ocular changes in diabetes. About one-third of the cases are in persons under the age of fifty, and therefore, before the period of senile cataracts. Their diabetic character is easily established for there are but few other conditions which cause cataract in this period of life. But in persons over fifty the increasing frequency of senile cataract makes it difficult to determine the influence which the presence of diabetes plays. It may be that diabetes which tends to hasten senile changes, in this way contributes in some measure to the development of cataract in those past middle life.

Changes in refraction are of the type of myopia and these may develop rapidly with or without the appearance of cataractous opacities. Changes in the power of accommodation produce the symptoms of presbyopia in younger persons or of rapid and marked increase of presbyopia in older persons. These conditions are most often observed in diabetics, who are rapidly placed under very rigorous diet. In a few days the patient finds that he cannot read and that stronger convex glasses are needed. These conditions are usually transient.

b. Changes of the composition of the blood probably account for many of those cases of disturbance of function of the ocular nerves, which are generally regarded as neuritic and conveniently classed as toxic. The most important of these is retro-bulbar optic neuritis; it is characterized by impairment of vision in the center of the field of vision, i.e., central scotoma. This type is similar to that of the toxic retro-bulbar neuritis due to alcohol and tobacco. Indeed, the frequent association of these causes with diabetes has led to the conviction that diabetes predisposes the users of alcohol and tobacco to this form of visual impairment. But diabetic retro-bulbar optic neuritis also occurs in those who do not indulge in alcohol or in tobacco and this is one of the reasons for regarding the diabetic affection of the optic nerves as likewise toxic.

Neuritis of the ocular motor nerves and lesions of their nuclei result in very varied paralyses of the extrinsic and intrinsic ocular muscles. Diabetes must be looked for in patients suffering with
diplopia. There is a group of cases rarely seen but exceedingly characteristic, of sudden and complete paralysis of accommodation due to diabetes. This condition is quite like the post-diphtheritic paralysis of accommodation. It may be present without any involvement of the pupillary musculature.

c. Diabetic lipaemia produces the characteristic retinal picture in which the blood vessels appear not red but yellowish.

d. Under changes in the composition of the blood we must finally include the remarkable lowering of the tension of the eyeball, which is found in diabetic coma, a condition almost unique. It is the result of general dehydration.

2. The second group of ocular changes may be looked upon as due chiefly to the vascular lesions that are so common in diabetic patients after middle life. As a result of these we find hemorrhages occurring under the conjunctiva, in the lids, in the retina and in the vitreous, where they may become organized and produce bands and masses of connective tissue, generally described under the name of proliferating retinitis. The sclerotic changes in the vessels are often clearly recognizable in the retina. In extreme cases thrombosis of the central artery and more frequently in the central vein may occur.

A retinal affection which is more characteristic is that known as diabetic punctate retinitis. In the experience of the writer it is the ocular change most frequently met with in diabetes. It differs greatly from nephritic retinitis. In the diabetic form the characteristic lesions are small sharply defined bright white spots arranged in groups, sometimes coalescing into larger masses,—and found especially in the region of and around the macula lutea. Fine hemorrhages are usually present. Diabetic retinitis is found only in the old. There are a few cases that have been reported before the age of fifty. This form of retinitis is not pathognomonic of diabetes. It is also found in arteriosclerosis without diabetes. But it is seen about twice as often in association with diabetes as without. It is well to bear in mind that the prognosis of diabetic retinitis is much better both as to vision and as to the probable length of life than of nephritic retinitis.

3. The third group of ocular affections due to diabetes embraces those depending upon a lowered resistance of the ocular tissues to
infection. In this group we include hordeoli and abscesses of the lids, ulcers of the cornea and especially iritis. We may also make mention of the increased liability of purulent infection after operations upon the eye, especially cataract operations. It is, therefore, advisable to have the patient made sugar free before the cataract operation is performed.

TULAREMIA
REPORT OF CASE
Joseph Pokorny, M.D.
Baltimore, Md.

The object of reporting this case is to bring to the attention of the physicians of this State the fact that tularemia is present in Maryland and, perhaps, in the next few years it will become more frequently recognized.

The disease is not, by any means, a rare one. Many cases have been reported in this country, especially from the Western and Southern States. It seems to be of infrequent occurrence in this State, however; the case here reported being the second or third brought to the attention of the City Health Department. In all, up to the present writing, not over ten, verified cases have been observed in Maryland.

Definition: According to Dr. Edward Francis, tularemia is an infectious disease caused by the Bacterium tularense. It occurs primarily as a fatal bacteremia of wild rodents, especially rabbits, hares, and ground squirrels. Secondarily it is a disease of man, transmitted either directly, by contact with the internal organs of the infected rodent; or indirectly, by being carried to man by some infected blood-sucking fly or tick.

History: Early cases of this disease were reported by different observers and each gave to it a different name. G. W. McCoy, in 1911, reported, "a plague-like disease of rodents," prevalent in ground squirrels of California. The same year McCoy and Chapin isolated the organism that was responsible for this epidemic and named it the Bacterium tularense, after Tulare County, Calif., where the disease was first observed in squirrels.
About this time, there was a disease occurring in Utah, infectious in nature, that was proven to be carried to man by the parasitic fly, chrysops discalis (Deer Fly), so it was called "deer-fly fever." Six cases were reported as such, in 1911, by R. A. Pearse.¹

The first human case diagnosed bacteriologically was that of Dr. D. T. Vail,⁵ of Ohio, in 1914. His patient had an ulcerative conjunctivitis of one eye and the Bacterium tularense was isolated by Wherry and Lamb.⁶ The latter also pointed out the danger of transmitting this disease from rabbits to man.

In 1919, Dr. Edward Francis,⁷ isolated the organism from human cases in Utah. He gave the disease its name of tularemia and cleared up the confusion existing about deer-fly fever and the plague-like disease of rodents.

O. Hara,⁸ a Japanese investigator, in 1925, reported fifteen cases of an acute febrile disease in man, transmitted by wild rabbits. One of these cases was an experimental one, in which, Mrs. O. Hara allowed her husband to rub some of the blood of a rabbit, found dead in an infected district, on the back of her hand. Two days later she developed typical signs and symptoms of tularemia. This was later proven to be tularemia by Doctors Francis and Moore,⁸ who found her serum to agglutinate the Bacterium tularense in a dilution of 1:40. Other sera, of Dr. O. Hara’s patients, sent to Doctors Francis and Moore, agglutinated the organism in a dilution as high as 1:320.

Mode of Infection in Man: Infection may occur in man:

1. By handling the viscera of infected rodents, such as, wild rabbits, hares, ground squirrels, guinea pigs, or mice. Laboratory workers are quite often infected unless they undertake extreme precautions. Six cases are reported by G. C. Lake and Edward Francis.⁹

2. By being bitten by an animal that may have eaten an infected rodent and have the germ on its teeth. Such as two cases reported by Dr. Francis¹ in which the infection was transmitted by the bite of a coyote and of a hog, respectively.

3. By being bitten by an infected parasitic fly, usually the deer-fly (chrysops discalis), commonly found on cattle. Wood ticks, of the species dermacentor andersoni¹ and the bed bug (cimex lectularius)
may also transmit it from rodent to man. It is probably carried from rabbit to rabbit by the rabbit louse, haemodipsus ventricosus, as shown by Doctors Lake and Francis.¹⁰

4. By being infected by an individual ill of the disease. This is very rare, only one case has been reported in which infection occurred in this way. Dr. Francis¹ reports a case where a mother became infected dressing the primary lesion of her tularemic son. Very many physicians have dressed these cases and have never become infected.

**Bacteriology:** According to Dr. E. Francis,¹ the Bacterium tularense is a small, aerobic, gram negative, non-motile, non-spore bearing, pleomorphic organism which in young cultures shows, chiefly bacillary forms but as the culture grows older the coccoidal forms predominate. As soon as the culture is transferred to fresh media the coccoidal forms germinate into bacillary forms. The germ does not grow on ordinary agar media, an interesting feature is the cystin requirement for growth.¹¹ It is very resistant to drying but is quickly killed by heat, a temperature of 58° C. for ten minutes renders a culture sterile and cooking infected meat makes it non-infectious.

**Clinical Types:** The disease may manifest itself as one of four types.¹

1. The ulcero-glandular form, which is, perhaps, the most common. In this type there is a primary lesion or ulcer with the regional lymph nodes enlarged, painful and tender.

2. The glandular, which is the same as above, except there is no primary lesion formed by the organism as it enters the skin.

3. The oculo-glandular, in which the portal of entry is the conjunctiva. The latter shows several small ulcers with marked signs of inflammation and enlargement of the pre-auricular and cervical glands.

4. The typhoidal type, in which there is no primary lesion discernible, no enlarged glands. Fever, continuous in character, is the prominent symptom.

**Symptoms and Signs:** I shall describe the ulcero-glandular type which is the most common.

**Incubation Period** varies from one to nine days with an average of four days.
Onset is sudden, with fever, chills, headache, bodily pains, prostration and occasionally vomiting.

Course—About two days after the onset of symptoms the patient begins to complain of pain at the site of infection and in the regional lymph glands. The primary lesion appears as a papule which quickly becomes a pustule and the latter breaks down, forming a punched-out ulcer, with elevated angry-looking edges. There are, usually, signs of inflammation about the ulcer with red streaks marking the course of the lymphatics to the regional glands. The latter are swollen, firm, tender and painful. They may remain thus for several months and slowly return to normal or they may break down after several weeks and drain as they usually do. Subcutaneous nodules may form along the course of the lymphatics and they may suppurate eventually.

Temperature is usually of the continuous type, but cases running a septic temperature have been reported. It usually lasts for two or three weeks with extreme prostration, sweats and bodily pains. In quite a few cases there is a remission in the temperature about the fourth day soon followed by a secondary rise and return of symptoms.

Pulse is not characteristic. In fulminating cases is rapid and weak. In the case here reported it was exceptionally slow in proportion to the temperature.

Laboratory Findings: Urine may show a trace of albumin, otherwise is usually negative.

The blood picture usually shows a mild leucocytosis, 10,000 to 12,000 per c.mm., with the polymorphonuclears slightly increased. Quite often the white count may be normal. The red count and hemoglobin are normal. The blood culture may be positive the first week, later it becomes negative.

The Agglutination Test is very specific. It is usually negative the first week, but agglutinins soon appear and rapidly increase. They reach their height about the end of the fourth week when they start to decline. However, they may still be found in the blood after several years.12

Complement Fixation Test: The serum of a tularemic patient will also respond to complement fixation tests using the Bacterium
tularense as an antigen. However, the agglutination test is the most practical and most positive.

Animal Inoculation: This test is more practical than taking a blood culture in the early stages of the disease when the agglutination test is negative. Blood from the patient may be injected into rabbits or guinea pigs, or swabs taken from the primary lesion may be washed with sterile salt solution and then the washings injected into the test animals. This can only be done when we have a primary lesion. When the test is positive, the animals usually die within a week and at autopsy show many small, discrete, white foci of necrosis scattered throughout the enlarged liver and spleen.

Complications: Usually are none. The enlarged glands may suppurate and discharge for a while. A relapse may occur occasionally, but is rather mild. Skin eruptions have been noticed in several cases; it may be macular, papular or pustular. Dr. L. H. Rutledge reported a fatal case that developed a papulo-pustular eruption about the second week of the disease.

Immunity: Usually the infection confers an immunity against a subsequent attack. However, one case is reported by Dr. E. Francis in which a laboratory worker, having had tularemia, two years later developed a papule on his finger with lymphangitis and axillary adenitis, without fever. The Bacterium tularense was isolated from the papule.

Differential Diagnosis: This condition may be confused with a severe pyogenic infection. However, the intensity of the symptoms in tularemia and the chronicity of the ulcer should rule this out. A careful history will usually bring out the fact that the symptoms preceded the appearance of the primary lesion in tularemia which is very important. Glanders may easily be confused with this condition, both as to the local lesion and constitutional reaction. However, in the former the ulcer is more destructive, its discharge yellowish and more profuse, and the ulcer is surrounded by vesicles or pustules. The presence of the Bacillus mallei in blood culture or in animal inoculation will confirm the diagnosis. When the patient is seen late, after the symptoms have subsided, the ulcer may be confused with tuberculosis, syphilis, sporotrichosis, actinomycosis, blastomycosis or anthrax. However, again in
these cases, a careful history is of prime importance. In tularemia, the ulcer shows more acute inflammatory changes and is more painful. In lues the dark field may be used; in sporotrichosis the diagnosis may be very confusing. In this disease subcutaneous nodules which later break down and form abscesses along the lymphatics and the character of the ulcer may simulate tularemia. Finding the sporothrix is a great aid. In the mycoses the usual absence of pain and the discovery of the blastomycete or the actinomyces will make the diagnosis. The ulcer of anthrax usually is surrounded by vesicles, and covered by black crusts.

The oculo-glandular type of tularemia may be confused with the different varieties of ulcerative conjunctivitis, animal inoculation is very serviceable here.

The typhoidal type may be extremely difficult to diagnose. This condition simulates typhoid fever very closely and the only means of differentiating the two is by the specific agglutination tests and blood culture. Dr. J. R. Verbruyce reported a case that closely resembled a cholangitis with jaundice, but was later proven to be tularemia.

The glandular type must be differentiated from other forms of regional lymphadenopathy. A careful history, with excision of the gland or aspiration of its contents with subsequent animal inoculation should aid here.

**Pathology:** Grossly and microscopically the primary lesion closely resembles tuberculosis and it has been reported as such. As stated by Dr. E. Francis there is a central area of necrosis surrounded by a radial arrangement of epithelioid cells and fibroblasts intermingled in which are giant cells.

**Prognosis:** Is doubtful, there is not much material in the literature, upon which to base any conclusions. Dr. E. Francis states that it usually is good. The cases reported in Maryland show a mortality close to 20 per cent. Perhaps this is due to the fact that many mild cases go unrecognized.

**Treatment:** Is chiefly symptomatic, no specific vaccine or antiserum has been devised. Dr. S. Shelton reported a case in which he used quinin in large doses, but his patient seemed to run the usual course. In the case here reported, the treatment was, rest in bed, forced fluids, hot boric acid compresses to the local
lesion, tonics by mouth, and when the axillary gland became very soft it was opened and drained.

CASE REPORT.

Mr. G. K., 925 North Duncan Street; age 36; white; occupation, huckster; became ill on January 4, 1928, with fever, chills, headache, and prostration. My first visit was on January 6th. His temperature was 102.5° F.; pulse 90; in addition to symptoms enumerated above, complained of diffuse bodily pains with violent headache. Physical examination was negative, with the exception of a markedly coated tongue and numerous small white ulcers distributed over hard and soft palate.

He was next seen on January 9th. At this time he complained of pain in right ring finger. On examination this finger presented a pustule about one-half inch in diameter. The skin around the pustule was inflamed and red streaks following the course of the lymph vessels were present on the volar aspect of his fore-arm as far as the elbow. His epitrochlear and axillary glands were enlarged, firm, and tender. The temperature 101° F. and pulse comparatively slow, 78 per minute.

On questioning patient he stated his occupation to be huckstering, and that on December 31, 1927 (four days before the onset of his symptoms), he thought he pricked his finger with a piece of bone while skinning rabbits for a customer. The finger did not cause him much inconvenience until I saw him the second time. He also stated that on January 8th (fourth day of illness) he felt rather well, and gave this as a reason for not calling a physician until the following day, when his temperature became elevated again, as noted above. This was probably a remission in the temperature that commonly occurs about the fourth day in this disease.

These facts suggested that the case might be an ulceroglandular type of tularemia and the next day (January 10th) Dr. Joseph Franklin, of the Baltimore Health Department, and I obtained a specimen of blood for agglutination purposes, and by means of sterile swabs, obtained material from the pustule for guinea pig inoculation. The blood and swabs were sent by Dr. Wm. R.
Initial Lesion Tip Right Fourth Digit
Stokes, of the City Health Department, to Dr. Edward Francis, of the Government Hygienic Laboratory, in Washington, D. C., who reported that there were no agglutinins in the blood (too early), but that guinea pigs inoculated with washings from the swabs had died on the fifth day, and at autopsy had shown the typical lesions of tularemia, i. e., liver and spleen spotted with numerous miliary gray nodules. A differential count and urinalysis at this time were negative with the exception of a slight leucocytosis.

The patient's temperature declined by lysis and became normal on January 15th (tenth day of illness). An interesting feature of the illness was the pulse, which never went above 90 per minute, and most of the time was practically normal, notwithstanding the fact that his temperature was comparatively high, 102° F. and 103° F. at the time. The pustule by this time had broken down and left an ulcer, a little over one-half inch in diameter. This ulcer had a central area of necrosis, surrounded by an elevated rim of granulation tissue, interspersed in this tissue were small areas of necrosis. The surrounding skin still showed some inflammatory changes.

On January 17th a second specimen of blood was obtained and sent to Dr. E. Francis, who reported that the serum agglutinated the Bacterium tularense in a dilution of 1:40.

On January 31st, a third specimen of blood was obtained and this now agglutinated the Bacterium tularense in a dilution as high as 1:640. A Wassermann test at this time was negative.

At the present writing, which is about eight weeks after the onset of the illness, the ulcer has just healed. His enlarged axillary gland became soft and was incised and drained about the seventh week of his illness. The two papules on the dorsum of his hand ruptured spontaneously about the same time.

His temperature has remained normal, with the exception that he had an elevation of 101° F. on January 18th and 19th, which he attributed to the fact that his young daughter accidently struck his ulcerated finger, which made the pain worse for a couple of days. From this observation, perhaps, tularemia begins as a bacteremia as soon as the organism enters the skin, but, as the bodily defenses become active, the organisms are walled off at the site of the initial lesion and an ulcer, chronic in its nature, results. Any
Enlarged Right Axillary Gland
injury or laceration of this ulcer, perhaps disorganizes the local resistance that nature has thrown around the organisms and they escape into the circulation in large numbers, which cause this elevation of pulse and temperature until they are destroyed by the antibodies and nature readjusts matters locally.

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2200 E. MADISON STREET.
The discovery of insulin in 1921 led to a more intensive study of carbohydrate metabolism, acidosis and diabetes. Very naturally the obstetrician is reviewing his experience with diabetes as met with in pregnancy. In such a study certain questions naturally arise, such as the incidence of pregnancy in women with diabetes; the incidence of diabetes in the course of pregnancy; the rôle of diabetes in the causation of sterility, male and female; the prognosis for both mother and child; the advisability of the diabetic avoiding pregnancy, and, in the event of conception occurring, whether or not gestation should be allowed to go on. It is generally conceded that the diabetic who becomes pregnant is a bad risk. How much will modern treatment, including diet, insulin and such drugs as are now available, improve the outlook for these cases? It would also be interesting to know what opinions are held as to the heritability of diabetes.

During the past two or three years there have been published in several medical and scientific journals, articles dealing with this subject in its various phases. It is possible that a cursory review of some of these will be of interest.

With regard to the frequency of pregnancy in diabetes all authors are agreed that the incidence is small. For example, Parsons, Randall and Wilder (1) state that "Women with diabetes do not usually become pregnant. Our records since 1922 contain but eleven instances among 285 women of the child-bearing age; Joslin encountered only eleven instances in his large practice, and von Noorden only twenty-two among 427 women. Reasons for this are apparent. Amenorrhoea is so common as to be the rule in incompletely controlled severe diabetes, and sterility in such cases may be presumed

*Read before the Obstetrical Society of the University of Maryland, January 23, 1928.
to be due to failure of ovulation. Young diabetic men are often impotent, and in them atrophy of the testicles has been demonstrated (Naunyn). Similar atrophy of the ovaries in women may be expected. But even if the menses are uninterrupted fertilization may be prevented by the abnormal secretions resulting from vulvitis, vaginitis, and cervicitis. And, finally, in many cases conception is avoided by intent, such action being prompted by the patient's or her medical advisor's fear that pregnancy will be badly borne."

As to the occurrence of diabetes in the course of pregnancy a number of authors have recently presented contributions to the literature. The study by Lambie (2) is of outstanding importance. He says: "When diabetes occurs for the first time during pregnancy, it usually manifests itself about the fifth or sixth month. It begins insidiously, as a rule, but, owing to the special tendency to ketosis, an attack of coma may be the first intimation of its existence. It is rare for the condition to be diagnosed before the fourth month, while the onset is exceptional after the eighth month. No doubt many of the cases so discovered have been mild or unrecognized diabetics before the pregnancy began. . . . A family history of diabetes is often obtained."

"It is generally recognized that the prognosis is better when diabetes begins during pregnancy than when pregnancy occurs in an individual already suffering from diabetes. This may be due, partly to the difficulty in distinguishing between marked cases of late alimentary glycosuria and pancreatic diabetes, and partly to the fact that a pancreas already damaged would be more vulnerable and liable to suffer greater injury and loss of function than one affected for the first time. The necessity for giving a diet relatively high in carbohydrate, in order to ward off acidosis, makes it difficult if not impossible to rest the pancreas in the pregnant diabetic. This difficulty would to some extent be overcome by the use of insulin, which would make it possible to give the extra carbohydrate without causing hyperglycemia. In the cases treated with insulin so far recorded, the prognosis with respect to the mother has been immensely improved, . . . ; but the results have not been uniformly favorable as affecting the child nor as regards the further progress of the diabetes."
Perhaps too much stress has been laid upon very severe cases, and most of our data refer to the period before modern blood chemistry and before the development of modern methods in the treatment of diabetes. It seems likely that, in the past, many deaths from coma have been due to cutting down the carbohydrate in the diet without simultaneous reduction in the fat—a procedure dangerous enough in the ordinary diabetic but much more so in the pregnant.

Stander and Peckham (3) made a study of the metabolism of several diabetic patients during the course of repeated pregnancies. Patients were hospitalized for two weeks at intervals during their pregnancies, also for as long a period as possible after delivery. These cases were studied through four and five consecutive pregnancies and were put to bed on a carefully regulated diet. "Daily determinations were made of the amount of sugar, acetone, diacetic acid and total nitrogen in the urine, while the blood was analyzed at frequent intervals for nonprotein nitrogen, sugar, and CO\textsuperscript{2} combining power. The amount of food taken by the patient was carefully recorded and a complete metabolism chart kept."

The conclusions of Stander and Peckham are as follows:

1. The diabetic woman may undergo a change for the better during the second half of pregnancy.

2. This improvement may be due to the action of fetal pancreatic hormone, to an excessive utilization of maternal carbohydrate by the fetus, as well as to some unknown change in the maternal carbohydrate metabolism which takes place in the latter stages of gravidity.

3. Under careful hospital supervision as to diet, with frequent urine and blood analyses, and with insulin treatment if necessary, the diabetic patient may often go to term and be successfully delivered of a living child, without aggravation of the diabetic condition or indeed with a temporary disappearance of all symptoms during a part of the period of lactation. Of course, it would be unwise to anticipate such an outcome in extremely advanced cases of diabetes.

4. In patients with diabetes mellitus the first half of pregnancy appears to be the precarious period for the fetus, and without any benefit to the mother.
5. The excessive size of children born of diabetic mothers is probably due to the increased supply of maternal blood sugar, as the fetus undoubtedly makes a heavy demand on the maternal carbohydrates not only for its sugar requirements but also in order to build its fats and to supply its own energy."

An interesting review of a group of cases of pregnancy with diabetes, illustrating various aspects of this relationship, was recently made by Bowen (4). Case records were published followed by a discussion from which the following was taken:

"Of the seven cases reported, five required insulin before, during, and after pregnancy and therefore must be classified as severe cases. Two of them were especially so, as their insulin dosage was large. In these five cases pregnancy would have been impossible without insulin as the diabetes was of several years duration. The two patients who did not need insulin were obese, in the obese stage of diabetes insulin is rarely required, as the tolerance remains good until a great amount of weight is lost."

Bowen was unable to decide whether the tolerance for carbohydrate was affected, since three of his cases required increased doses of insulin during pregnancy, but after delivery were able to do well on reduced doses. Rather different reactions were expected by him because of a knowledge of the observations made on dogs, after pancreatectomy, by Carlson and Ginsberg (Am. Jour. of Physiol., 1914). Reference will be made again to this and to other work on dogs.

The article by Bowen referred to suggests the possibility of an hereditary factor in diabetes. The author says: "... we cannot be unmindful of the possibility of increasing the number of diabetics by the sanction of diabetic mothers to bear offspring. That diabetes runs in certain families cannot be gainsaid. ... Two instances of simultaneous diabetes in the mother and fetus have recently been reported."

Dr. Bowen presents the following conclusions from his study:

"1. Diabetes complicated by pregnancy, particularly if the diabetes be mild, can be carried through successfully if the patient is kept under the strictest supervision. This may be impossible."
2. Acidosis and coma may arise suddenly even though the patient is kept free from glycosuria. Such a possibility is always ground for apprehension.

3. In the event of serious complications the pregnancy should be terminated immediately, preferably by cesarian section.

4. The foetal mortality is apparently high.

5. Pregnancy, especially in the severe diabetic patient, is still a somewhat hazardous undertaking, and, aside from the standpoint of eugenics and human economics, should be considered very seriously."

The article of Lambie, to which attention has already been directed, discusses various phases of the complication of pregnancy and diabetes. Several paragraphs are worth quoting. Regarding the fertility of the diabetic he has this to say:

"Whether as the result of the impaired nutrition of the tissues or through lack of the physiological stimulus of the pancreatic hormone, diabetes gives rise to a functional disturbance of ovulation and, in long standing cases, to atrophic and sclerotic changes in the ovaries and uterus. Associated with these changes, there may be sterility, disturbances of menstruation, sexual frigidity, and, in some cases, obesity.

"Menstruation is absent in about 50 per cent. of diabetics and disturbed in 65 per cent.

"Not more than 1 to 5 per cent. of diabetic women become pregnant, and, according to some the percentage is smaller.

"Reports are already available which indicate that the treatment of the diabetic condition with insulin may in some cases restore the reproductive functions. . . . . The occurrence of pregnancy in completely depancreatized animals treated with insulin has also been noted.

"As menstruation and fertility do not return in some individuals in spite of the efficient control of the diabetes, the administration of insulin and the good general condition of the patient, it may be inferred that, in these cases, organic changes have occurred which render the return of these functions impossible."

The tolerance of pregnant diabetics for carbohydrate seems to vary with the individual, and the conclusions of different observers
are not in agreement. On this problem Lambie enters into the following discussion:

"There is no uniformity in the reports of different observers regarding the changes in sugar tolerance at different periods of pregnancy and the puerperium. Some have noted a progressive deterioration of tolerance as pregnancy advanced which was continued during the puerperium and afterwards. On the other hand, Joslin and Maase have observed an improvement in tolerance towards the end of pregnancy, even in severe diabetics, while Williams has noted that often in diabetic women the glycosuria disappears in the later months. After delivery, or after the death of the foetus in utero, in contrast to what happens in the toxemias of pregnancy, there may be an exacerbation of the condition, but many cases are on record in which a decided improvement in tolerance occurred after delivery. The clinical evidence is therefore conflicting, which is not surprising considering the many factors capable of modifying a glycosuria.

"The question of the improvement in tolerance toward the end of pregnancy has attracted the interest of physiologists. Thus, Carlson and his co-workers found that pancreatectomy in the pregnant bitch near term did not give rise to glycosuria so long as the fetuses were alive and the placental connections intact. After delivery of the pups, or on their death in utero, acute diabetes ending in death ensued. These findings have been confirmed. The absence of glycosuria before parturition was ascribed by Carlson to the passage of the internal secretion of the foetal pancreas through the placenta to the mother. Allen, however, failed to find evidence in support of this view.

"Whether or not the severance of the placental connexion has the significance ascribed to it by Carlson, there is no doubt about the danger attending parturition in the pregnant diabetic. During labor, increasing mobilization of the glycogen in the liver and muscles takes place, while, owing to the severe muscular exertion, sugar is rapidly burnt up in the muscles, with the result that the available supplies of carbohydrate in the body soon become exhausted. This may give rise to acetonuria even in the normal individual, but in the diabetic, whose glycogen reserves are small,
it may precipitate an attack of coma. Among additional factors acting in the same direction are the administration of anesthetics, especially chloroform, also hemorrhage and pain.

"These dangers are usually over in about forty-eight hours after delivery; but then, in insulin treated cases, another danger may arise in the shape of hyperglycemia.

"In the diabetic, the disturbance in the ketogenic, antiketogenic balance, normal to pregnancy, is accentuated owing to the diminished ability to oxidise carbohydrate."

The above emphasis of the dangers attending parturition in diabetes is well stated. The rapid utilization of stored carbohydrate which takes place during labor is a very positive menace to the life of the diabetic woman whose glycogen reserve may be expected to be low.

In this place it seems well to insert a few pointed briefs from the same author:

"The maternal mortality of pregnant diabetics has been estimated at between 25 and 50 per cent. . . . Williams found the death rate in his series to be 27 per cent. during pregnancy and 23 per cent. during the two years following it.

"Pregnancy is interrupted spontaneously between the sixth and eighth month in about a third of the cases.

"Labor is apt to be not only premature but difficult owing to the large size of the foetus. . . .

"Puerperal infection is frequent and severe, and usually terminates in coma.

"The child. The foetal mortality (including not only infants which die in utero, but those which succumb as the result of difficult labor) is estimated as about 50 per cent. The future of those which survive is also bad, 80 per cent. dying in the first few days after birth (Cron).

"Hydramnios is of frequent occurrence."

The reason for the increased tolerance for carbohydrate by some pregnant diabetics has been sought in the fetal pancreas. Striking examples of apparent insular responses are set forth by Lambie in what follows:
"The hypertrophy and hyperplasia of the islets of Langerhans in the foetal pancreas, already referred to, was first noted by Dubreuil and Anderodias, who described the islets as "large compact epithelial masses occupying about a quarter of the field of the microscope and about twenty or thirty times the normal size." Recently, Gray and Freemster have reported a similar case in which there was approximately 24 times as much insular tissue as in the normal pancreas. The child . . . . died on the fourth day after birth. On the third day, the child's blood sugar had been 0.067 per cent. and these authors suggest that the cause of death may have been hypoglycoemia, the result of excessive production of insulin by the enlarged islets.

"If the islets do, indeed, produce such an excess of insulin, it would have some bearing upon the question previously raised, as to whether all the insulin secreted by the foetal pancreas is used by the foetus itself or whether some of the excess passes to the mother. It may be mentioned, however, that the figure for blood sugar is comparable with those found in premature infants, apart from diabetes. As might be expected, from the facts just cited, diabetes is a very exceptional occurrence in a child born of a diabetic mother. Sugar may be found in the urine of the newly born child owing to the hyperglycemia present before birth."

There has been considerable discussion as to the relation of the pancreas to the other glands of internal secretion. This subject has been taken up by Wiener, Sloane Hospital for Women, New York (5). Wiener asserts that "The thyroid, the anterior lobe of the pituitary, as well as the chromaffin system hypertrophy in pregnancy, and the increased activity of these sugar-mobilizing organs might be expected to affect the glycolytic function of the pancreas. There is also apparently a reciprocal influence between the gonads and the pancreas, for in diabetes mellitus disturbances of sexual function such as amenorrhoea, sterility, and impotence are common. Changes in the islands of Langerhans in pregnancy have been described, and similar changes have been found in the pancreas of castrated animals. The pancreatic activity is no doubt modified in normal pregnancy, yet permanent pancreatic damage is very rare. In fact it is doubtful whether diabetes mellitus ever develops in pregnancy uncomplicated by toxemia."
The importance of early treatment of the incipient diabetic is stressed by John, of the Cleveland Clinic (6), who bases his views upon experimental work on dogs as well as upon clinical observation. He says:

“When glycosuria is discovered during pregnancy it may be, and often is, a sign of the initiation of the diabetic status, when the earliest changes—hydromic degeneration of the beta cells of the islands of Langerhans—are taking place. If the condition is cared for at this stage, the patient stands a good chance for recovery, of the restoration of the islands to a normal or nearly normal status, as Copp and Barclay have shown in their work with dogs at the Physiatric Institute. These investigators undertook to discover the conditions under which the cells of the islands of Langerhans would regenerate. To this end they ablated about four-fifths of the pancreas in each of a group of dogs and let the wound heal, thus rendering the dogs potentially diabetic. As long as these dogs were kept on a regulated diet, there was sugar in the urine and the blood sugar level remained normal. But when these potentially diabetic dogs were overfed, the blood sugar increased and the dogs began to excrete large quantities of sugar in the urine and to show the signs of general physical failure, such as are exhibited by uncontrolled diabetic patients. After the animals had been subjected to this overfeeding for from 7 to 9 weeks, the authors excised a piece of the pancreas in which they were able to demonstrate the hydromic degeneration of the beta cells.

“The dogs were then placed on proper diet and insulin administered. The urine promptly became sugar free and the blood sugar normal. After they had been subjected to this control regimen for from 7 to 9 weeks, again a portion of the pancreas was excised and examined and the cells of the islands of Langerhans were found to be restored.

“These findings prove a concrete demonstration of what we have repeatedly seen clinically, that is, that when diabetes is treated early in its development, there is a good chance of restoration of the insulogenic function; but if the treatment is postponed until the islands are gone—fibrosed—nothing will bring about their regeneration.
“It is for this reason that when glycosuria occurs during pregnancy, it should never be ignored as a chance occurrence, as due ‘perhaps to sugar of milk,’ but the patient should be subjected to a rigid examination to determine the exact status.”

Differentiation between true diabetes, alimentary glycosuria, renal glycosuria, transient glycosuria and lactosuria always should be attempted. Both glucose and lactose reduce the copper reagents, but if the reaction is slow one should suspect the presence of lactose. Absolute differentiation can be made by fermentation, polarization and by the phenylhydrazine test. Estimation of the blood sugar and of the glucose tolerance will give valuable information.

With reference to this question of differentiation Stansfield (7) states that "... it is impossible to divide sharply the diabetic from the non-diabetic patient, whether by history, physical status or blood reactions. The passing of time seems to be the final diagnostic factor.

“It is obvious, as Schenck remarks, that extreme caution must be used in the treatment of these cases, and that it is wisest to treat them as diabetic, until observation shows them to be non-diabetic.”

The treatment of diabetes in pregnancy like that of diabetes in general has advanced tremendously since the introduction of insulin. The contrast between the older and the newer methods is well expressed by the following statements from the Mayo Clinic article previously quoted:

“It is doubtful whether patients with severe diabetes ever survived pregnancy in the pre-insulin era.

“With the introduction of insulin the treatment of diabetes improved so much that the prognosis of pregnancy in diabetes should now be improved. This is to be hoped for, especially since the incidence of pregnancy in diabetic women is likely to increase.”

**Summary**

This resume would seem to emphasize the ensuing chief points:
1. Diabetes tends to cause sterility in both females and males.
2. Many untreated females have amenorrhoea. Treated cases may menstruate and conceive if atrophy of the ovaries has not progressed to complete destruction of the follicles.
3. Testicular atrophy has been observed in male diabetics (Naunyn).

4. The existence of diabetes is very hazardous for both mother and fetus.

5. Diabetes occurring in the course of pregnancy has a better prognosis than pregnancy occurring in the presence of diabetes.

6. Treatment by carefully regulated diet and insulin, where the tolerance requires insulin, improves the prognosis for both mother and fetus.

7. A family history of diabetes is occasionally obtained.

8. The risk of pregnancy had better not be incurred, and therapeutic abortion should be considered.

9. The first half of pregnancy is precarious for the fetus.

10. The diabetic woman may improve during the second half of pregnancy, due to hypertrophy and hyperplasia of the islands of Langerhans in the pancreas of the fetus. This clinical observation, though disputed, has been reproduced in animal experimentation. Some cases become progressively worse.

11. Hyperglycemia may develop in the child, postpartum, presumably due to island response to maternal hyperglycemia.

12. Hyperglycemia may develop postpartum, in the insulin treated mother.

13. The strain of delivery may bring about an acidosis in the mother.

14. Labor is apt to be premature, the baby large, and hydramnios present.

15. Maternal resistance to infection is lowered.

16. Diabetes, when discovered early and treated effectively, may show clinical improvement in tolerance to carbohydrates, and this may be due to restoration of the beta cells of the islands of Langerhans as recorded in the work of Copp and Barclay.

17. The diabetic cannot always be sharply divided from the non-diabetic—some cases are borderline and should be regarded as potentially diabetic until proved otherwise. In no case should the presence of sugar in the urine during the course of pregnancy be considered as lactosuria until proven so by differential tests.
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ORAL CHOLECYSTOGRAPHY, WITH SPECIAL REFERENCE TO DATA OBTAINED FROM EXPERIMENTS IN ANIMALS*†

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Gall bladder visualization as practiced by the oral method following the administration of tetraiodophenolphthalein is now a routine measure in most roentgenological clinics. While it is recognized that the oral procedure is somewhat less accurate than the intravenous method, its advantages as well as its ease of administration outweighs its disadvantages. The percentage of inaccuracy however may be further reduced by thoroughness in technic.

One of the principal difficulties lies in the variation in the amount of dye absorbed from the gastro-intestinal tract. This uncertainty, however, has never interfered with the proper filling of the gall bladder in our experience, since we administer larger doses of the dye than is ordinarily advocated, on the theory that sufficient will pass through the stomach in an unaltered form in order to be absorbed. Although satisfactory results may be obtained with smaller doses in many instances, the administration of larger doses precludes any uncertainty in this regard.

*From the Gastro-Enterological Clinic of the Department of Medicine, University of Maryland.
†Read before the Baltimore City Medical Society, January 20, 1928.
It has been proven that the gastric acidity does interfere with gall bladder visualization. In experiments performed on dogs by Friedenwald, Kearney and myself, it was shown conclusively that in these animals the gall bladder cannot be visualized when the dye is given orally and is only occasionally visualized when the dye is injected into the small intestines; but when the stomach is totally excluded by tying off the duodenum the gall bladder could then always be visualized. This is interpreted as indicating that the gastric and intestinal acidity in the dog interferes with the gall bladder visualization by changing the soluble tetraiodophenolphthalein into its insoluble salt.

Tetraiodophenolphthalein with a pH of 8.4 cannot be absorbed from an intestinal tract of an acid content. The pH of the intestinal tract as determined by Grayzel and Miller in dogs is as follows: stomach 3.68, duodenum 5.91, upper small intestines 5.99, middle small intestines 6.27, lower small intestines 6.36, cecum 6.57, colon 6.84.

In the presence of high gastric acidity, faintness of the gall bladder shadow or shadows of lessened density should be diagnosed with caution as pathological, since this finding may be due to lack of proper absorption of the dye.

Enteric coated capsules are not entirely essential in visualizing the gall bladder but are best utilized for the oral administration as they partially eliminate the nausea and vomiting due to the irritation of the gastric mucosa. It has been demonstrated experimentally in many instances in dogs that the enteric coating disintegrates within ten minutes after the administration of the capsules. Our results in cholecystography were alike whether the dye was given in liquid form or in plain capsules, but we are under the impression that an enteric coated capsule offers an ideal preparation for uniform results. Failure of certain of the capsules to disintegrate does not interfere, however, with the normal visualization according to our experiments.

The administration of the dye in cereals has been found satisfactory, while Fantus, experimenting with the dye, observed that when the precipitated dye was given in colloidal form excellent shadows were obtained. He is under the impression that this preparation of the dye is non-irritating to the gastric and intestinal
mucosa. In an effort to produce a dye that is non-irritant, non-toxic, and a stable compound not affected by the acidity of the stomach, Kendall of the Mayo Clinic introduced Di-ethyl-di-salicyl phthalein, which was administered by Kirklin to twenty-five patients with good results. No experimental data, however, have been brought forth to indicate that this drug has any further advantage over tetraiodophenolphthalein. Pribrim advocated the use of iodo-atophan, an insoluble compound of atophan and iodine, from which he obtained satisfactory gall bladder shadows, but on account of its marked toxic effects, this drug has been abandoned by the manufacturer.

**Technic.**

Accuracy of this test depends to a large degree upon the proper roentgen technic. Simplicity of the test is necessary for successful and uniform results. We have therefore standardized the technic as follows: without any previous preparation, two plain films are taken of the gall bladder area; the dye is administered in divided doses, half the quantity being taken with a light evening meal and half two hours later. We have found this plan eliminates to a large degree the vomiting that frequently occurs following the dye. After sixteen hours a series of five films are obtained, in both inspiration and expiration. This procedure is important as it places the gall bladder in various positions which eliminates overshadowing from the hepatic fлексture and the ribs. This also aids in determining whether or not a shadow within the gall bladder area moves with the visualized gall bladder. If the gall bladder fails to fill the examination is concluded. When the gall bladder is visualized, two films are made from one to two hours after eating a fatty meal. Occasionally it may become necessary to obtain an oblique film when the gall bladder is overshadowed by the vertebra.

Contraction of the gall bladder one to two hours following a fatty meal is regarded as an important roentgen sign of normal function. In most instances contraction of the gall bladder occurs, the contracted vesicle varying from one-sixteenth to one-half of its original size, but occasionally complete emptying is observed on the roentgen films, as is indicated by an absence of a shadow, in apparently normal gall bladders. Whether this is a normal phenomenon or due to a marked irritability of the organ or to adhesions has as yet not been
determined. Contraction of the gall bladder in response to food has been demonstrated by many observers. This organ may empty intermittently or irregularly, but differences of opinion as to the mechanism of emptying with numerous theories in this respect are reported in the literature. According to Whitaker the gall bladder contracts in animals in waves similar to peristalsis and that complete emptying depends on two essential factors, (1) intrinsic contractile power, (2) relaxation of the sphincter of Oddi in response to food. Hamrick also concludes that muscular contraction and sphincter control at the lower end of the common duct are factors in regulating the flow of bile. While according to Kodama the gall bladder never empties itself at one time following the ingestion of food. The elasticity of the gall bladder wall and the inside pressure of the gall
bladder being important factors in this process. Burget, on the other hand, has produced evidence to indicate that the gall bladder plays but a passive role in the flow of bile, the regulation being due to the tonicity and peristalsis of the duodenum with elasticity of the gall bladder as an auxiliary factor. Mechanical, respiratory squeeze, suction and intra-abdominal pressure are also mentioned as possible factors.

Illustrates a faintly outlined gall bladder filled with a large number of small positive stone shadows.

Gall bladder adhesions are frequently not determined by cholecystography, as simple adhesions are compatible with normal visualization and function. In many instances in our series no evidence of adhesions is observed on the films, while adhesions were found at operation. Distortions in the shape and contour of the gall bladder is frequently the result of adhesions. Adhesions, however,
can be determined indirectly in many instances by the combination of cholecystography and the usual gastro-intestinal x-ray examination. In adhesions between the gall bladder and hepatic flexure it will be found that the intestines are pulled up under the gall bladder, moving with the gall bladder on respiration and cannot be sepa-

![Distorted Gall Bladder](image)

Shows an irregular shaped gall bladder, due to adhesions, with a negative shadow of a gall stone.

rated even by manipulation under the fluoroscope. Various changes in the shape and contour of the gall bladder are usually due to adhesions, as in one instance a fish-hook type of gall bladder was observed which on operation proved to be due to adhesions. The indirect signs of adhesions in the right upper quadrant are fre-
quently observed in the examination of the gastro-intestinal tract, such as pressure on the pylorus and duodenum, fixation of the duodenum, fixation of the hepatic flexure, will often aid in the diagnosis. Conflicting differences in the percentage of accuracy of oral cholecystography in various clinics may be attributed to the following conditions: (1) improper roentgen technic, (2) faulty interpretation, (3) insufficient dose, (4) improper cooperation of the patient.

Summary.

Cholecystography by the oral method of administration of tetraiodophenolphthalein offers the most satisfactory means as a routine method of examination of the gall bladder. With larger doses of the dye and better roentgen technic a larger percentage of correct diagnoses may be made. The acidity of the gastric content does not ordinarily interfere with the proper visualization of the gall bladder in the human subject. Various forms and combinations of the dye have been advocated but thus far better and more uniform results are secured by the administration of the pure dye in an enteric coated capsule. Complete emptying following a fatty meal, apparently in the normal gall bladder as observed roentgenologically is a frequent finding, but in most instances the gall bladder contracts from one-sixteenth to one-half of its original size. Adhesions are not readily determined in cholecystography, unless the function of the gall bladder is interfered with, or when distortions in shape or contour are observed. The combination of the gall bladder visualization test, together with a routine gastro-intestinal x-ray examination, is the most satisfactory method at hand in the investigation of affections involving the right upper quadrant.
THE DIAGNOSIS AND TREATMENT OF PITUITARY SYNDROMES

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There has never been an innovation in medicine which suggested something in the nature of a therapeutic revelation that has not been fraught with considerable danger. This is certainly true with respect to Endocrinology—a subject which is being extensively investigated but still poorly understood. In order to comprehend the present situation one need only call attention to the fact that the subject has received more attention during the past decade or two from the standpoint of physiological, pathological, biochemical, pharmacological and clinical research than any other domain in medicine. As a result a mass of literature has accumulated, much of which is so conflicting that it is almost impossible for the uninitiated to bring order out of chaos. In regard to the character of the literature, Hoskins says "for its vagaries, fantastic exuberance and wholesale marvel-mongering, it is without a peer in the history of modern science." The object of this brief discussion is to emphasize certain facts gleaned from these researches as they apply to the diagnosis and treatment of disorders of the pituitary gland. It is only by establishing a diagnosis of the various syndromes based on well-established facts that rational therapy can be instituted and the evils of promiscuous and harmful medication overcome.

The most familiar examples of glandular syndromes are those referable to the thyroid. What is more characteristic than the clinical picture of outspoken cases of cretinism and myxoedema due to an arrested or deficient function and Grave's disease due to a state of over function of the thyroid gland? The almost equally characteristic syndromes due to pituitary insufficiency on the one hand and over activity on the other hand seem to be less familiar. These conditions are by no means uncommon. Laboratory research, especially pituitary feeding and animal experimentation have done much to solve the problem. By improvement in surgical technique it has become possible to extirpate portions of the gland without causing death to the animal, thus affording an opportunity to study
the physiological activities of the two lobes independently. These experiments have demonstrated the effect of the arrest or impairment of function, upon skeletal growth, fat distribution, influence on the development of the reproductive organs, appearance of secondary sex characteristics, impairment of metabolic processes, intellectual capacity and alteration of psychic behavior. The results obtained experimentally on animals by surgical methods may be summed up as follows:

1. Removal of the whole gland results in death to the animal, after producing such symptoms as tremor, fibrillating muscles, hypothermia, bradycardia, diminution of respiratory rate, stupor and coma.

2. Death does not follow complete removal of the posterior lobe but causes a lowering of the blood pressure, increased sugar tolerance, a fall in the basal metabolic rate and asthenia.

3. Complete removal of the anterior lobe causes a sudden cachexia which terminates in death.

4. Partial removal of the anterior lobe causes obesity, hypoplasia of external genitalia, retarded skeletal growth and subnormal temperature. The latter can be prevented by injection of extract of anterior lobe. These observations form a basis which explains the development of the deficiency syndromes.

In states of over functioning or hyperpituitarism the symptoms manifested are the antithesis of those of under functioning or hypopituitarism. As a clinical entity gigantism and acromegaly result from over functioning and Fröhlich’s syndrome or dystrophia adiposogenitalis from under functioning.

The syndrome of acromegaly was first described by P. Marie in 1886. Minkowski in 1887 and later Cushing and Marinesco demonstrated definite lesions in the hypophysis to which they ascribed the cause. The fact that the chief disturbance is confined to the osseous system indicates that it is due to hypersecretion of the anterior lobe. If the disease develops in early life before the epiphyses are closed, gigantism results. If it develops later in life, acromegaly is produced.

An acromegalic presents an interesting picture, one which can be easily recognized. The hands and feet are greatly enlarged but not deformed. The cranial vault increases in size but not in propor-
tion to the face in which the acra are very prominent. The malars, supraorbital prominences and the jaws are specially involved. The lower jaw usually projects beyond the upper mandibular prognathism. The upturned chin, broad nose and hexagonal face sometimes called the “nut cracker profile of Punch” are characteristic; the teeth are spaced and known as hag teeth which results from the enlargement of the maxillary bones. Changes also occur in the base of the skull and especially in the sella turcica, as revealed by X-ray. Marked kyphosis of the thoracic spine is a common feature. The soft tissues also share in the enlargement to some extent. Hypergenitalism and hypertrichosis often develop. In gigantism there is less deformity; the overgrowth is confined largely to the bones of the extremities, which are enormously increased in length.

In 1901 Fröhlich described the syndrome to which Bartels later gave the name of dystrophia adiposogentialis. In his original report Fröhlich emphasized obesity and genital hypoplasia as the two most striking symptoms. These symptoms vary somewhat according to the age and sex of the individual. If the condition occurs in early life before puberty, skeletal changes also occur which frequently lead to dwarfism. The obesity may be enormous. A peculiar type of fat distribution occurs in which there is a predilection for deposits about the hips, gluteals, upper thighs, mons, etc. This is spoken of as girdle adiposity. In other instances the distribution is more general and involves in addition the mammae, shoulders and scapular regions. Ordinarily the distal portions of the extremities, hands, feet, forearms and legs below the knees, and face and neck remain unchanged. Integumental changes occur. The skin is remarkably delicate in texture. The fair complexion described as the “peaches and cream” variety may persist in both sexes long after adolescence. In the severe forms it may take on an alabaster hue. The nutrition of the nails is good but the crescents are frequently absent. There is scantiness or complete absence of axillary and pubic hair. In the male there is a feminine distribution with a horizontal outline of the crines pubis and absence of hair on the face. The external genitalia are rudimentary and remain under-developed and the secondary sex characters fail to appear at the time of puberty. In the male there is frequently a reversal of sex type. The feminine characteristics are gracile extremities, small delicate hands and feet,
tapering fingers, round limbs, genu valgum and broad pelvis. Besides they possess a soft delicate skin, feminine voice and remain beardless. Females sometimes show masculine features with tendency to grow beards. In young individuals dwarfism often occurs in addition to adiposity and sexual infantilism. Cases have been reported in which skeletal growth was arrested as early as five years of age. According to Bell hypopituitarism in early life may develop into three fairly distinct types:

(a) Infantilism, somatic and sexual without adiposity (Lorain type).

(b) Stunted growth with sexual infantilism and adiposity (Brissaud type).

(c) Overgrowth with some adiposity and genital inactivity (Neurath-Cushing type).

If the disease occurs after pubescence as it frequently does, especially in women, the clinical picture is somewhat different. There are no skeletal defects but the obesity is quite characteristic. The genitals, which may have been normally developed, undergo retrogressive changes and amenorrhoea, frigidity and sterility usually result.

_Nervous and Mental Symptoms:_

Headache is a frequent complaint. It is usually severe and intractable, occurring in paroxysms and described as being located between the temples or behind the eyeballs. If due to tumor it is associated with other signs of intra-cranial pressure, such as vertigo, projectile vomiting and visual defects. Among the latter are optic atrophy, choked disc, strabismus and bitemporal hemianopsia.

In 1899, Hughlings Jackson described a curious type of epileptic seizures which are caused by pressure upon the uncinate gyrus. They are characterized by certain movements of the mouth and tongue and preceded by gustatory or olfactory aura. These episodes frequently occur in dystrophia adiposogenitalis due to hypophyseal tumors and are designated uncinate seizures. In severe cases certain mental symptoms develop, varying from a mild psychosis to severe forms of insanity. Mental retardation with periods of drowsiness, stupor and apathy are common symptoms. These patients are often dull, languid and irritable and lack self control.
Skull: Alteration in the size and outline of the sella turcica are frequently demonstrated by X-ray. Polyuria, either transient or permanent often occurs. Lesions in the neighborhood of the hypophysis involving the chiasm and subthalamic region may develop diabetes insipidus.

The metabolic processes are retarded. Carbohydrate tolerance is increased and hypoglycaemia may develop. There is a diminution of oxygen consumption, carbon dioxide exchange and nitrogen balance. The temperature is subnormal; pulse and respiration decreased and the blood pressure lowered. The red blood cells may only show a slight reduction but the hemoglobin is more appreciably diminished. There is usually a leucopenia with a tendency to mononucleosis.

Glandular Therapy.

As organotherapy in reality is substitution therapy, little hope of success can be entertained in acromegaly and gigantism. On the basis that these disorders may possibly be due to a dysfunction or a qualitative instead of a quantitative abnormality of secretion as has been suggested, pituitary therapy may occasionally be of benefit. Reports indicate that it has aided in controlling the severe headaches from which these patients often complain. However, the chief indications for glandular therapy occur in the deficiency syndromes and particularly those due to deficiency of the anterior lobe secretion. These indications are as follows:

1. Overcome obesity and re-distribute fat.
2. Stimulate skeletal growth.
3. Promote genital development.
4. Prevent delayed puberty.
5. Re-establish menstrual function in amenorrhoea.
6. Counteract sterility and frigidity in the adult female.
7. Restore potentio and libido in the adult male.
8. Improve the power of the intellect and prevent delinquency.
9. Control the pituitary headache.
10. Lessen uncinate seizures.
11. Diminish polyuria in diabetes insipidus.

A number of these indications have been successfully met by organotherapy in my personal experience. There have been many
signal failures. However, the results have been sufficiently encouraging to warrant their use in carefully selected cases which require a thorough examination in order to ascertain the exact nature of endocrine disturbance. When this is determined, treatment should not be undertaken unless the patient is willing to continue under observation for a minimum period of six months.

One must bear in mind that the pituitary gland is only a single unit in a remarkably complex system—the hormonopoetic system and like the hemopoetic system in which certain lesions of the spleen, lymph glands or bone marrow impairs the system as a whole so a disordered function of any one of the endocrine glands may affect one or more of the series of glands comprising the chain.

Thus the gonads do not function properly if the thyroid, pituitary or adrenal cortex is subnormal. The removal of the thyroid and probably the gonads affects the pituitary. The administration of thyroid stimulates the adrenals, pituitary and gonads. Owing to this action on the gonads the thyroid has been called a sex gland. Tumors of the adrenals induce sexual precocity. Removal of the gonads delays thymus atrophy and leads to changes in the pituitary and suprarenal cortex.

Owing to these reciprocal functional activities it is hardly conceivable that a purely monoglandular syndrome is possible. Careful clinical investigation nearly always reveals evidence of pluriglandular involvement. Dystrophia adiposogenitalis is an example. This condition, while primarily due to anterior pituitary lobe deficiency also presents a characteristic genital syndrome. These facts would seem to warrant the judicious administration of several glands simultaneously in many cases of hypopituitarism. However, no standard formula should be used as in every patient the tolerance for each individual gland substance must be ascertained in order to establish the proper dosage. Thyroid combined with anterior pituitary lobe has proved a valuable adjunct in the treatment of hypopituitary states. This is due to the action of thyroid in accelerating the general metabolism and its stimulating effects upon other endocrine glands, especially the pituitary and gonads. Moreover, as there is usually evidence of diminution of thyroid activity it supplies this demand.
One of the most interesting effects of organotherapy is the redistribution of fat in the hypophyseal type of girdle adiposity. Change in weight alone is no criterion of the effect of therapy. Mensuration is more important. A series of circumference measurements taken before treatment is instituted and subsequently at intervals of a month, serves as a guide to the progress of treatment. The most important measurements are the axillary, minimum waist and maximum hips. Treatment is usually begun by administering thyroid in doses of 3⁄4 to 1⁄2 grains three times daily. If there are no untoward effects from the thyroid in a week or two, anterior pituitary lobe, from 5 to 7 1⁄2 grains daily is added. If the treatment is continued for a sufficient length of time, at least 50 per cent of the girdle type of obesity will show a redistribution of fat, i.e., the measurements above the waist will increase and those below the waist will decrease. In those patients with marked general obesity there will be a reduction of weight as well as an improvement of the general condition.

In pituitary dwarfism due to arrest of skeletal growth anterior pituitary lobe or the whole gland may cause a renewal of growth of the epiphyses if the long bones are still ununited.

Crofton reports a boy, aged seventeen, in whom growth was arrested. After the administration of anterior pituitary lobe he grew five inches in less than a year. Beverly Tucker reports a boy with a pituitary tumor who grew nine inches in his sixteenth year and a boy with congenital syphilis who grew thirteen inches in thirteen months. In my personal experience somewhat similar results have been observed in patients with stunted growth as illustrated in the following case: A boy, aged seventeen, ceased to grow at the age of eight years. He measured 130 cm. in height and weighed 51 pounds. Besides arrested growth he presented other symptoms of hypopituitarism, viz., maxillary prognathism, absence of hair on the face, axillas and pubes, soft delicate skin, juvenile voice, genital hypoplasia, delayed epiphyseal union and sellar deformity. On whole pituitary gland, gr. 2 to gr. 6 daily, he increased twelve pounds in weight and grew 7 cm. (almost three inches) in eleven months. Whole gland was used on account of asthma, which was also relieved.

Genital Hypoplasia: The stimulating effect of anterior pituitary lobe on growth is not confined to the skeleton alone. It
also stimulates genital growth in cases of sexual infantilism. It has been shown that rats fed with anterior pituitary lobe matured sexually much earlier than their controls, according to Goetsch in one-third of the time, whereas posterior lobe has an inhibiting effect upon growth and development. In boys with hypoplastic genitalia associated with other signs of pituitary insufficiency such as slow growth and failure of secondary sex characters to appear at time of puberty, very satisfactory results have been obtained in a number of cases by organotherapy. In most of these patients the genitalia developed to normal size, there was increased rate in body growth and puberty became well established. Small doses of thyroid, in addition to the anterior pituitary lobe, proved to be beneficial.

In pituitary infantilism in girls with delayed puberty or amenorrhea the results have not been quite as satisfactory. However, in the majority of the cases treated menstruation appeared. In the treatment for amenorrhea and sterility in adult women suffering with hypophyseal obesity the results are often disappointing. Occasionally menstruation and fertility returns with the general improvement of the patient. Loss of libido and potentiа in the male if due to pituitary insufficiency usually fails to respond to this mode of treatment.

In cases of hypopituitarism complicated with epileptiform episodes, relief occasionally follows organotherapy. Cushing first called attention to the fact that this symptom was ameliorated in certain cases by pituitary feeding. Beverly Tucker and others also reported cases which were benefited by the treatment. In our series the seizures became completely arrested in three cases, all of which were associated with well-marked symptoms of dystrophia adiposogenitalis. One of these was a boy who at the age of eleven following influenza developed frequent epileptiform attacks characterized by loss of consciousness, tonic and clonic spasms. These attacks alternated with milder attacks. For a time they occurred almost daily. Upon the administration of thyroid and anterior pituitary lobe they subsided and he has not had a recurrence for eight years. He received no other medication. The other two cases have had no seizures during the past two or three years.

The mental symptoms in children suffering with dystrophia adiposogenitalis are usually not as pronounced as they are in
cretinism. However, they often show evidence of retarded mental development and delinquency at school. Usually the disease begins to manifest itself at about the school age of six years and continues to progress until puberty when the average child completes the elementary grades. Many of them are grouped as backward children and are unable to keep up with the intellectual standards of their age. We have a number of cases on record in which mentality was restored to normal so that they were able to pass their grades with credit. To cite some examples: a boy with sexual infantilism of pituitary origin was unable to make any progress in school. After two years of treatment with anterior pituitary lobe and thyroid he stood first in a class of forty-two.

In another case the boy’s pastor wrote after he was placed on treatment, “he bids fair to become a real boy, just as surely as he bade fair to become an imbecile.” These observations have been repeatedly observed and verified by the teachers.

The psychic influence and changes in personality as the result of glandular therapy are splendidly illustrated in the following cases referred by Dr. Fleck on October 1, 1927. A brother and sister, aged respectively eleven and ten years, presented themselves with typical Fröhlich syndromes. The mother was 5′ ½″ tall and weighed 88 pounds. The boy measured 4′ 6½″ and weighed 123½ pounds and the girl measured 4′ 7½″ and weighed 128½ pounds. They both exhibited almost identical features. They were both mentally defective and had supernumerary fingers and toes and they both had impairment of vision. The boy is in his fifth year and the girl is in the third year at school, but they only passed the first grade. These children were both mentally dull, stupid and drowsy and physically sluggish. The boy had marked genital hypoplasia. Treatment was begun on October the eighth with thyroid and later anterior pituitary lobe was added. They at once began to improve. A week later they showed livelier dispositions and a little later they both came home from school with reports of 100 in some of their studies. The boy had improved so much that the teacher had him play the role of Santa Claus at Christmas. Their records a week ago showed that the boy had lost 18 pounds: and the girl 17 pounds. They are more interested in play, continue to make perfect marks, take an interest in their personal ap-
pearance, wash their faces and enjoy tub baths, which they never did before the treatment. The boy goes about the house singing and whistling. His entire mood has changed. His father, who is a tailor, had to take his trousers in three inches at the waist. The genitalia have about doubled in size. In short, there has been a complete transformation of their mental and physical nature and their whole personality has changed in less than five months.

Many other cases could be cited in which glandular therapy was of distinct value, likewise many in which there was absolute failure. In order to meet with the greatest success certain rules should be observed:

1. Glandular therapy should not be used empirically.
2. Its indication should be definitely established upon a scientific basis.
3. Treatment should not be undertaken unless it can be carried out systematically over a long period of time.
4. Progress should be checked, in addition to improvement of signs and symptoms, by both weight and measure.
5. Gland preparations must be fresh in order to be efficacious. They will deteriorate with age and may become inert.
6. It is inadvisable to give large doses. They may give rise to unpleasant symptoms and discourage the patient from following further treatment.
7. The hypodermic administration is often helpful but as it is disagreeable to the patient and necessarily more expensive, it is not practical as a routine.
8. Do not regard organotherapy as a panacea for all human ills, because it acts almost like magic in a few conditions. Do not utterly condemn it because it fails in many instances.
MASSIVE COLLAPSE OF THE LUNG
Postoperative Massive Atelectasis

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History and Incidence

The condition of massive collapse of the lung was first brought to the attention of the profession in 1890 by an English practitioner, W. Pasteur. It was he who introduced the term acute massive collapse of the lung to describe a postmortem condition, which he found in children, who had died suddenly with nasal and pharyngeal diphtheria. In 1890 he reported 34 cases of post-diphtheritic paralysis; and in a later series 64 cases, of which 15 were fatal. In this series 8 autopsies were performed, and of these 5 demonstrated the gross pathology of massive collapse; again in 1914 in a review of 3,559 operations Pasteur uncovered 12 cases of massive collapse with one death in the associated series of 201 lung complications. The postoperative frequency of massive collapse from this study was shown to be less than that of pneumonia, bronchitis and dry pleurisy, but more common than the occurrence of embolism, abscess and pleural effusion. In another statistical survey of 2000 abdominal operations with varied types of anaesthesia, 16 cases of pulmonary collapse were found. A further addition to our knowledge came with the extensive military practice of 1918-1919. Thus, Rose Bradford reports that from 5%—10% of the gun-shot wounds of the chest which did not penetrate, were followed by massive collapse of the lung of the affected or contralateral side. Moreover, it was also observed that wounds of the head and arms were never followed by pulmonary collapse, but it was known to occur in wounds of the pelvis, thigh and buttocks.

Scrimger in 1921 reports 7 cases in one year following 540 consecutive operations. Interestingly enough, 6 of these cases of massive collapse were among those operated upon the abdomen and were distributed as follows:
(a) Inguinal hernia—4 cases; 3 of these were right-sided; of these 2 cases were collapsed on the right and one on the left.
(b) Appendix cases—2.

Case Report.

University Hospital—Service of Dr. Holland.
R. M., age 23, white male.
Preoperative diagnosis: Bilateral Indirect Inguinal Hernia.
There was a complete left inguinal hernia of long standing and a large ring on the opposite side. The history was essentially negative. (The thorax was normal as far as could be made out.)

Nov. 12. The Bassini operation (modified by strengthening the internal ring) was performed under a general anaesthesia.

Before operation—resp. 18/m; pulse 80/m; B. P. 116/68; heart and lungs clear; the operation lasted from 10:30 to 12 noon.

After operation—resp. 32/m; pulse 108/m; condition good.

Nov. 13. There was some cough in the morning, with pain in the operative field. The patient had voided spontaneously at 3 P. M. There was an inter-thoracic disturbance evident.

Inspection revealed:

Cyanosis, a shallow, rapid respiration of 34/m.

A tachycardia—pulse 115, and a temperature of 102.2°F.

The respirations were distressed, and were chiefly costal.

There was a diminished respiratory movement of the right side, becoming almost immobile. The breath sounds were diminished.
Percussion:

Left: Apex found 1 inch above left clavicle and the lung was fully resonant. The area of cardiac dullness was obliterated.

Right: Distinctly impaired. The note was high pitched above and below the right clavicle, and higher pitched along and down the right front. Relative liver dullness in the fifth interspace in the midclavicular space. Percussion note was dull at posterior axillary line.

Right back: note flat from the seventh dorsal spine to the base.

Auscultation:

Left front showed practically normal breath sounds.
Right front—marked diminution of breath sounds in first and second interspaces and an almost entire absence of breath sounds from the third rib to the base.

In the back: left—auscultation normal.
Right—Marked diminution of the breath sounds over right base from seventh dorsal spine, with prolonged expiration.
Patient unable to cough—no rales heard.

Diagnosis: By Dr. McCarthy.
Pulmonary infarction and partial collapse of the lung.

Roentgenogram Report:

Partial collapse of the right lower lobe with marked displacement of the heart and mediastinal contents toward the right side. The condition is suggestive of a massive collapse.

Nov. 14. The condition was improved. The patient could lie straight in bed. The respiratory movement of the right chest increased.

Dec. 1. The thoracic symptoms were relieved. The wound had healed. The patient was in good condition.
There was no cough or sputum. The chest expanded fully; and the temperature and pulse were normal.

*Summary of Symptoms and Physical Signs* (after Jackson and Lee)

In a few hours to seven days after the operation, which is usually abdominal, the patient presents an acute distressing group of symptoms. The cyanosis is indicative of a thoracic catastrophe and diagnosis may be acute dilatation of the heart, pulmonary embolus, infarction or pneumothorax.

The respiratory rate is increased to 30 or 40/m; with a proportionate increase of the pulse and respiration to the febrile reaction which varies with the associated infection.

*On Inspection:*

There is diminished or absent respiratory excursion over the affected area. The intercostal spaces are deepened and narrower. The cardiac impulse is displaced to the affected side (as contrasted to pneumothorax and pleural effusion). The apex tends to tilt outwards and upwards so that the heart beat may be felt in the axilla. The dome of the diaphragm on the affected side is abnormally high and immobile. These findings are corroborated by x-ray.

*Percussion:*

There is dullness on percussion as high as the clavicle usually posteriorly over the collapsed lung. The opposite, unaffected side is tympanitic or hyperresonant. Vocal fremitus is absent or diminished with the same effect upon the breath sounds or the latter may be increased; i.e., tubular with an associated bronchophony and pectoriloquy. The patency of the bronchi account for this variation such as we have experienced in the case described. In the early course of the condition, the bronchi are not patent generally, but later they become patent with the resultant changes of breath sounds and transmitted voice sounds. The displacement of the heart is characteristic and not accompanied by any murmur. The lung-shadow on the affected side as seen on X-ray is more opaque like a purulent pleural shadow. The opacity however gradually disappears. Finally the intrathoracic pressure is markedly negative rather than the positive one of pneumothorax or hydrothorax.
Clinical Varieties

The clinical forms that have been reported are:

(a) lobular—in which some part of one or more lobes are involved.
(b) lobar—in which one or more lobes are affected.
(c) total atelectasis—in which the entire lung is collapsed.

The prevalence of partial collapse has already been mentioned. Cutler\textsuperscript{13} has demonstrated the cause of frequent partial collapse as due to multiple emboli after operative procedures. This condition has been mistaken for postoperative pneumonia for the most part.

In thoracic wounds several types have been described, each of which may be of any of the clinical forms mentioned above. The varieties found have been:

(a) homolateral—collapse of the same side as the wound.
(b) contralateral—collapse of the opposite side.
(c) bilateral—collapse of both sides.

Cases of contralateral pulmonary collapse have been described in which the wound was a non-penetrating and even trivial one of the opposite side.

Etiology

Before commencing an explanation of the mechanism of massive collapse, it would be best to focus our attention upon the varied etiology of this condition.

Massive collapse of the lung has been reported as following:

(a) Infections of the lung such as pneumonia and purulent bronchitis (Norris and Landis)\textsuperscript{14}.
(b) After diphtheria—the postdiphtheritic paralysis of Pasteur\textsuperscript{11}.
(c) In the new-born—a pneumaptosis or congenital atelectasis.
(d) Trauma: such as unilateral thoracic wounds, and wounds of the buttocks, pelvis or thigh (Rose Bradford)\textsuperscript{12}.
(e) Abdominal operations.
(f) Foreign bodies in the bronchi (C. Jackson)\textsuperscript{6}.

As may be anticipated many hypotheses have been advanced to explain a condition which can follow such a variety of causes. We
may preface these theories by citing the experimental work\(^6\) that has been performed.

Briscoe\(^1\) divided the phrenic nerve on one side in normal rabbits and produced varying degrees of pulmonary collapse not only on the side of the operation but also on the opposite side. Experiments with intra-abdominal irritation were not productive of reflex paralysis or arrest of one half of the diaphragm.

As early as 1878, Lictheim produced definite collapse by plugging bronchi with laminaria plugs. This work has been clinically borne out (Chevalier Jackson)\(^6\).

Granley and Hewitt suggest that in the tapering bronchial tree an obstructing plug may have a ball valve action. Hence, air could leave but none could enter as the plug is propelled and jammed into the bronchial tube with each inspiration.

Elliott and Dingley have found that following mobilization of the thoracic wall and diaphragm, a secretion collects in the bronchioles and larger bronchi which prevents an egress of air and results in a gradual absorption of the trapped air. This has been confirmed by necropsy.

Upon these experimental studies and upon clinical observation, many theories have been postulated as to the true cause and mechanism of massive collapse of the lung. The most recent experimental fact has been the discovery of the marked negative intrathoracic pressure that exists in this condition (Elkin)\(^16\).

**Theories**

1. The Paralytic Theory of W. Pasteur\(^11\).

Based upon an extensive study of post-diphtheritic paralyses, Pasteur came to the conclusion that a paralysis of the muscles of respiration is responsible for massive pulmonary collapse. This may be a direct paralysis or a reflex inhibition which is due to pain or inflammation. This theory is inadequate to explain the variety of causes which lead to massive collapse.

2. The Obstructive Theory.

It has been clinically demonstrated that the occlusion of a bronchus by a foreign body with a resultant absorption of the retained air will produce massive collapse. Chevalier Jackson\(^6\) and his co-workers have stressed this fact and have produced repeated
cures by bronchoscopy of cases of massive collapse of the lung. This theory of obstruction by a plug, whether it be mucus or a foreign body, cannot serve to explain the majority of reported cases. In some cases necropsy reports show that no bronchial plug was found and that death was sudden and not to be explained by this process. The fact remains, however, that in specific cases there is an obstructive atelectasis; and this is taken advantage of in bronchoscopic clinics to make a diagnosis of non-opaque bodies in the bronchi.

Certainly the clinical symptoms and X-ray pictures of both conditions are strikingly similar; and in a few cases the obstruction has been demonstrated at autopsy. Jackson has properly stressed the fact that after ether anaesthesia, three types of mucus obstruction are found:

(a) By-pass—air can pass in and out.
(b) Check valve—air can pass in but not out.
(c) Stop valve—total obstruction.

These are aggravated by the other factors mentioned below.

3. Combined Obstruction and Impaired Respiratory Force (Elliott & Dingley).

There is an inflammatory edema with secretion by the bronchial mucosa together with a reflex immobility of the diaphragm. This condition is fostered by the compression exerted by an adjacent patch of broncho-pneumonia. The poor aeration increases the bulk of the bronchial secretion as the evaporation is decreased. This condition may increase beyond the power of the cough reflex and is heightened by the factor of posture and compensatory ventilation of the other lung and may offer some basis for the explanation of contralateral collapse.

4. Posture.

The discussion of the factor of posture is due primarily to Briscoe.\(^1\) Analyses of a series of cases have shown a definite tendency of contralateral collapse to vary with posture. Scott and Joelson\(^10\) present the following data:
<table>
<thead>
<tr>
<th>Operation</th>
<th>Dependent Lung</th>
<th>Side of Atelectasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott &amp; Joelson—Case No. 2—first operation—left pyelotomy</td>
<td>right</td>
<td>right</td>
</tr>
<tr>
<td>second operation—right pyelotomy</td>
<td>left</td>
<td>left</td>
</tr>
<tr>
<td>Scott &amp; Joelson—Case No. 3—left pyelotomy &amp; cystotomy</td>
<td>right</td>
<td>right</td>
</tr>
<tr>
<td>Scott &amp; Joelson—Case No. 4—right sacroiliac fusion</td>
<td>left</td>
<td>left</td>
</tr>
<tr>
<td>Hahn’s Case*5</td>
<td>right nephrectomy</td>
<td>left</td>
</tr>
<tr>
<td>Jackson &amp; Lee’s Case*6</td>
<td>laparotomy with drainage:</td>
<td></td>
</tr>
<tr>
<td>a. for appendical abscess</td>
<td>right</td>
<td>right</td>
</tr>
<tr>
<td>b. for rupture duodenal ulcer</td>
<td>right</td>
<td>right</td>
</tr>
<tr>
<td>Hunt’s Case*10</td>
<td>right nephrectomy</td>
<td>left</td>
</tr>
<tr>
<td>Harrington’s Case*2</td>
<td>right nephrectomy</td>
<td>left</td>
</tr>
<tr>
<td>Sante’s Case*7</td>
<td>right nephrectomy</td>
<td>left</td>
</tr>
</tbody>
</table>

In this series of 9 cases, the factor of posture is evident. The mechanism as suggested by Briscoe*1, Harrington*2, and others, is that “there is relative deflation of both bases due to prolonged quiet breathing in the supine position in such people as do not use their abdominal muscles to fix their chest.” (Due to pain or reflex spasm.) Rose Bradford’s*12 observation that pulmonary collapse was never observed in wounds of the head and arms, but was found to follow wounds of the pelvis, thigh, and buttocks, and thoracic trauma is especially indicative of the factor of postoperative posture. The unilateral position may afford the possibility of splinting of the well side by inhibiting respiratory movements and thus becoming a basis for contralateral collapse.

Scott and Joelson*10 have, however, also pointed out that recumbency plays but little role in this process by demonstrating that:

(a) These conditions obtained in laparotomies where massive collapse is about 1%.

(b) This does not explain the displacement of the mediastinum.

All that can be said is that posture is one of the factors that enters into the mechanism. It certainly aggravates the condition by splinting the dependent side, increasing alveolar congestion, and in this way may become the deciding factor in contralateral collapse.
5. Vasomotor Theory.

The findings at autopsy indicate a dilatation and stasis of reflex origin. This process would block the finer air passages and thus produce atelectasis. Experimentally atelectasis has been produced by vagal stimulation and there is some corroboration here. At most this is another factor which follows closely upon those below.


Scott and Joelson\(^9\) present a nervous reflex spasm theory, and for the following reasons:

(a) Massive collapse occurs with local anaesthesia and with trauma or spontaneous painful disease at some distance from the lungs.

(b) There seems to exist a hypersensitiveness to adrenalin hydrochloride and a neurasthenic tendency on the part of the patients who exhibit this phenomenon.

(c) The re-occurrence of massive collapse in the same patient in a second operation (see case No. 2).

(d) On auscultation—sibilant and sonorous rales are heard—as in asthma; they are most prominent on the affected side and are evanescent and seem to be indicative of bronchomotor and vasomotor changes. In cases where no obstruction has been found, there is some possibility of this factor playing an important role.

7. Angioneurotic Edema.

In the cases that have been reported with an acute onset while on the operating table, there has usually been bilateral involvement; and many of these cases have proved fatal. Such cases may present some such swelling of the mucous membrane as we are apt to term an angioneurotic edema. The necropsy in such a case revealed a lung which was a solid, shrunken organ. There was a complete atelectasis of the alveoli. The epithelial cells were closely packed and the individual cells were swollen with their cell outlines indistinct. The bronchioles were collapsed and the venules and capillaries and arterioles were uniformly dilated and engorged. Death was sudden and no obstruction was found (Bergamin and Shephard)\(^9\).
It seems probable, therefore, that in acute attacks of collapse, during or immediately after operation, the mechanism involved is different from what is seen in those attacks occurring some days later.

_Prognosis—Complications_

The condition of massive collapse of the lung is usually benign. As has already been discussed, the atelectasis may occur while on the operating table, immediately after the operation or a few hours or days later. The cases of partial or unilateral collapse as a rule occur late and clear up in a few days or weeks; these are generally obstructive in type. They are in contrast with others that occur during or immediately after the operation; which are bilateral; and apt to be fatal. This type with its acute onset is reported as non-obstructive in origin and is of the nerve-reflex or angioneurotic variety in all probability. The degree of obstruction, the posture, reflex inhibition of the diaphragm, all contribute to the degree of atelectasis. The condition is comparatively rare. It has been unrecognized and undifferentiated from acute dilatation of the heart, pulmonary infarct, pneumothorax, pleuritis, with or without effusion, and diaphragmatic hernia.

Massive collapse of the lung, or better, massive atelectasis of the lung may be complicated by inflammation and pleuritis. Only with the development of a pneumonitis is expectoration a part of the clinical picture. Purulent bronchitis and dry pleurisy are the usual complications.

_Treatment_

Finally, we may say a word as to the treatment of massive atelectasis. It can best be prevented by: (After Jackson and Lee)⁶.

(a) Being conservative in the pre- and postoperative use of morphia, which depresses the cough reflex and permits mucus to collect in bronchi.

(b) Avoiding the employment of fixed, unnatural positions in postoperative convalescence.

(c) Using the less irritating anaesthetics, such as ethylene, gas-oxygen, and local anaesthesia.

(d) Minimizing trauma in all operations to prevent reflex inhibitions of the diaphragm, pain, and embolic showers.

(e) Encouraging deep breathing as much as possible.
Treatment has been very unsatisfactory. The patient may be too ill for bronchoscopy and "rolling the patient" is of dubious value for one who is cyanosed. In most cases fortunately no drastic procedures are necessary. An abrupt or a more gradual recovery is the rule.

Summary
1. The mechanism and etiology of massive collapse of the lung has been discussed and a case presented.
2. The condition comprises about 10% of the postoperative pulmonary complications and follows abdominal operations for the most part.
3. It has been confused with many other conditions.
4. It is a clinical entity which is usually benign.

BIBLIOGRAPHY


1815 RUXTON AVENUE.
ANNOUNCEMENT

University of Maryland, Division of Medical Extension

A Combined Review Course for Physicians

June 4th-June 23rd, 1928.

The Division of Medical Extension of the University of Maryland has in recent years offered each June a number of short review courses of a month's duration to the physicians of the State. It has been decided this year to offer instead, a single, more intensive, general course, which will last only three weeks. This course is designed primarily to give to the physician in general practice the opportunity of studying those methods of diagnosis and of treatment which are in current use in the University Clinics. By careful use of the short period of time available it is hoped that a wide range of subjects may be briefly presented. The greater part of the course will be devoted to General Medicine but Surgery and the various specialties will also be included.

Information:
Questions concerning the course may be addressed to the Dean of the Medical School, University of Maryland, Baltimore.

Requirements for Admission:
The applicant must be a registered physician in good standing. Preference will be given to physicians registered in Maryland.

Enrollment:
The course this year will be limited to twenty men. It is suggested that applications be made promptly as the course will be filled up in the order that applications are received. Address: Dean of the Medical School, University of Maryland, Baltimore.

Fees and Tuition:
A matriculation fee of $25.00 will be charged to all registrants from Maryland. For those coming from other States a charge of $50.00 will be made.

Registration and Matriculation:
Monday, June 4, 1928, 8:30 A. M., northeast corner Lombard and Greene Streets, Baltimore.
Daily Schedule:
8:00-10:00—Lectures.
10:00-11:30—Ward Rounds.
11:30-12:30—Clinic.
12:30-1:30—Lunch.
1:30-2:30—Dispensary Clinic.
3:00-4:30—Laboratory and Therapeutic Procedures, X-ray and Electrocardiography.

Lectures:
The morning lectures will deal with modern advances in diagnosis and treatment. The subjects will be chiefly from the field of general medicine and surgery with a few lectures devoted to the specialties

Ward Rounds:
The class will be divided into groups for ward rounds and will visit the ward patients on the medical, surgical, and special services, in the University, Mercy, and City Hospitals.

Clinics:
There will be a daily clinic in the Amphitheatre of the University Hospital. These clinics will be given by different departments.

Dispensary Clinics:
The class will be assigned in groups in rotation to the Dispensary Clinics for pediatrics, genito-urinary diseases, syphilis, and gastrointestinal diseases.

Laboratory, Therapeutic Procedures, Roentgen Diagnosis, Electrocardiography.
In these afternoon periods instruction will be given in the laboratory methods of diagnosis. Modern functional tests such as those employed in diseases of the kidneys and of the liver will be demonstrated. The technique of and the indications for the use of such procedures as transfusion, venesection, infusion and spinal puncture will be taken up and demonstrated when possible. There will be a number of periods devoted to X-ray diagnosis. Electrocardiography and the interpretation of electrocardiograms will be briefly presented.
ENDOWMENT FUND

The Board of Trustees of this fund have made the following report for the year 1927:

REPORT OF ENDOWMENT FUND
December 31, 1927

<table>
<thead>
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<th>Fund</th>
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<th>Cash</th>
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<td>G. H. Emory Fund</td>
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Total of all Funds, December 31, 1927: $100,744.94  
Total of all Funds, December 31, 1926: 113,056.52

Increase for 1927: $4,306.61
Those interested in the University of Maryland's worldly progress will note with pleasure that its permanent endowment, though slowly, is steadily mounting. The first contribution to the University for this purpose was made by Dr. Randolph Winslow, in 1897. Since 1883 Dr. Eugene F. Cordell, the father of the Endowment Fund, had been preaching in season and out of season, in the highways and the byways, the necessity of an endowment if the University of Maryland hoped to survive. His message did not strike a responsive chord until the annual meeting of the Medical Alumni Association in the year above mentioned. It was not until 1899 that the Board of Trustees, however, could report any funds to administer, namely $329.00. Small as this beginning was, it represented the efforts largely of one man, that devoted servant and most loyal alumnus of the University, Dr. Eugene F. Cordell. By 1908, here again, largely through the constant perseverance of Dr. Cordell, the fund in hand had risen to the insignificant figure of $17,046.00. In 1926, there were $113,056.00 in hand.

Further, your attention is called to the more than welcome news that bequests to the amount of $159,000.00 are reputed to be in the hands of the Regents for application to specific purposes by the Baltimore schools, viz.:

<table>
<thead>
<tr>
<th>Fund</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warfield Fund</td>
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<tr>
<td>Emerson Bequest</td>
<td>120,000.00</td>
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</tbody>
</table>

In addition to the funds already in hand the Medical School is the residuary legatee of two estates, reported to total in the neighborhood of from $140,000.00 to $165,000.00. All of this is encouraging, but in the meanwhile the library, the hospital, and the other departments of the Medical School each and every one find their efficiency materially impaired by the lack of sufficient funds.

The Board of Trustees of the Endowment Fund of the University of Maryland is an independent body, working under a charter granted by the State of Maryland. None of the principal of any of the money placed in its hands can be touched for any purpose whatsoever. It is perpetual and inviolable. Moreover, any unused interest becomes an integral part of the fund. By this provision any gift to the University is absolutely safeguarded and cannot be dissipated. Any of our Alumni who can by word of mouth influence
somebody to remember in his or her will the University of Maryland can rest assured that the bequest will be utilized in accordance with the wishes of the benefactor.

Lend us a helping hand to this extent, "Oh Faithful, we beseech thee."

BOOK REVIEWS.

AN INTRODUCTORY COURSE IN OPHTHALMIC OPTICS.

By Alfred Cowan, M.D., Assistant Professor of Ophthalmology in the Graduate School of Medicine, University of Pennsylvania, 262 pages with 121 illustrations, many in colors. Published by F. A. Davis Company, Philadelphia, 1927.

The training of an ophthalmologist presents pedagogical problems which in many ways are more complicated than in the training of men in other specialties. Not only must he be made proficient in the special diagnostic and surgical procedures of his field, but also he must be thoroughly grounded in internal medicine and neurology, a requirement that is not so exacting, for instance, in the case of the otolaryngologist or urologist; and, finally, he must have a working knowledge of the optics of the eye in its combination with spectacle lenses. There is no more recondite and mathematical branch of knowledge within the medical domain than that of physiological optics. Unfortunately there appears to be a certain incompatibility between the more or less intuitive type of mind that is best adapted for the mastering of the field of internal medicine, and the more coldly rationalistic type that can best cope with the mathematical intricacies of the problems of optics.

The author of the book under review has faced this pedagogic problem with a clear realization of its difficulties and has produced a work which, while it contains only a minimum of mathematics is still a lucid and adequate presentation of the essentials of the subject. This must not be taken to mean that the optical training of an ophthalmologist is complete when he has studied this book, for no one can be said to have mastered ophthalmology who has not delved deeply into Helmholtz's masterly treatise on physiological optics or into one of the other more advanced text books of this subject.
But the plunge from medicine into Helmholtz is likely to produce serious shock to a non-mathematically minded person. Dr. Cowan's book is to be taken as a primer which will not only furnish the student with a working knowledge of the elements but will also make the more advanced treatises more intelligible, more interesting and less fearsome. The book is well printed and adequately illustrated. Particularly helpful is the fact that throughout all the figures and equations the author has maintained a uniform notation, a feature, the neglect of which has marred many previous attempts along the same line.

EARLY MEDICINE IN MARYLAND. By Thomas S. Cullen.

According to the Bible it is always a stimulating task to "praise famous men." It is a more difficult undertaking but perhaps a still more satisfactory one to set forth the praises of men whose names are not household words and whose lives have left very little permanent impression upon the minds of the men of today. In Dr. Cullen's book one finds two characteristics which are the product of his own personality and without which a book of this kind would be but dull reading. In the first place, Dr. Cullen has brought to his task the painstaking investigation and the balanced judgment of facts that are so permanent in his own professional work and that have helped to make him the distinguished surgeon whom we all delight to honor. Secondly, there is a warmth of appreciation, a kindheartedness joined with a keen sense of humor that make the book interesting to read and lend life and color to the lives of our former colleagues which Dr. Cullen describes. The casual reader is, perhaps, most impressed by the ups and downs in the History of the Medical and Chirurgical Faculty of Maryland. Periods of brilliant achievement and vivid interest were followed by slumps and long years of desuetude that may not have been innocuous if the medical abilities of our former colleagues was to be measured by their intellectual activity and love of learning. I suggest that any reader of Dr. Cullen's book should follow as in my own example and take from the shelves of the Medical Library some of those old books to which Dr. Cullen refers. It is fascinating to look through some of them and to see with what care and thoroughness some of the Medical Annals of Baltimore were compiled. Moreover, every
member of the Medical and Chirurgical Faculty at the present time ought to read Dr. Cullen's book in order to be able to appreciate what our present building and library represent and how great is the achievement represented by them. It is unfortunately true that one does not find the reading room of our Library very crowded of a morning or of an afternoon but it is comforting and reassuring to know that if one does seek some elusive fact or theory in the past History or Practice of Medicine one will be able to find it (with the aid of the Librarian) on the shelves of our Medical Library.

J. R. O.


While this book is intended primarily for the use of sanitary inspectors, it can be highly recommended for the general public for it is written in interesting, non-technical style. The author claims "that most of those things which have to do in a practical way with the control of disease may be understood by any school child of the seventh grade" and he proves his claim by his presentation in this book. He does not burden the reader with technical discussions and citations of research. He avoids almost entirely charts, tables, and graphs and makes no mention of statistics.

Nearly half of the book is devoted to rural sanitation and closely related subjects. The chapters on waste disposal, fly control and malaria control are most interesting and are made attractive with photographs. While several chapters are devoted to communicable diseases, the subjects of Child Welfare, Public Health Nursing, and School Hygiene are not taken up.

The best feature of the book is the attractive style by which the author holds the reader's attention. He goes just a short step beyond the bare facts, calling the attention to the difference between good and bad sanitary procedures and to the difference between significant and insignificant health work. Thus, the reader does a little thinking all the time he reads.

V. L. Ellicott, M.D.,
Epidemiologist, Baltimore City Health Department.
ALUMNI ASSOCIATION SECTION

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SPRING ACTIVITIES.

This Association is planning the most ambitious series of activities in its long history. There will be something in which each and every graduate may participate, renewing old friendships and making new ones. Read the following paragraphs carefully, take part in as many functions as you may feel able and kill two birds with one stone,—help your Alma Mater and enjoy yourself.

Graduation in Baltimore.

Under the direction of the Executive Committee, we are going to entertain our graduates in Baltimore on May 31st, June 1st and 2nd, as shown below; communicate with the secretary, at once, signifying your intention to be present. We expect a large crowd and would appreciate early replies.

(USE THE DETACHABLE FORM ON THE INSIDE OF THE FRONT COVER)

The secretary will be glad to attend to hotel reservations or make any other arrangement the out-of-town men may desire, providing a reasonable length of time is allowed.
We wish particularly to bring this program to the attention of the members of the classes of

1918—University of Maryland,
1913—Baltimore Medical College,
1911—University of Maryland,
1903—University of Maryland,
1903—Baltimore Medical College,
1903—College of Physicians and Surgeons,
1898—Baltimore Medical College,
1891—University of Maryland,
1890—University of Maryland,
1889—University of Maryland,

as committees of these classes are planning reunions and joint-reunions, and are anxious that you communicate with one of the committee for your class at as early a date as possible, so that arrangements can be made to insure each reunion a great success.

Class Reunion Committees:

“Tenth Year Reunion”—Class of 1918—University of Maryland.
  Dr. Clarence E. Macke, Chairman, 928 North Charles Street, Baltimore.
  Dr. Irwin O. Ridgely, 201 West Monument Street, Baltimore.
  Dr. Joseph Sindler, 2348 Eutaw Place, Baltimore.

“Fifteenth Year Reunion”—Class of 1913—Baltimore Medical College.
  Dr. Ira M. Zimmerman, Williamsport, Md.

“Seventeenth Year Reunion”—Class of 1911—University of Maryland.
  Dr. Charles A. Waters, 1100 North Charles Street, Baltimore.

“Twenty-Fifth Year Joint Reunion”—Classes of 1903.
  College of Physicians and Surgeons:
    Dr. Edgar B. Friedenwald, 1616 Linden Avenue, Baltimore.
  Baltimore Medical College:
    Dr. John Evans, Medical Arts Building, Baltimore.
  University of Maryland:
    Dr. G. Carroll Lockard, 4 East Preston Street, Baltimore.

“Thirtieth Year Reunion”—Class of 1898—Baltimore Medical College.
  Dr. Ralph L. Hoyt, 26 East Preston Street, Baltimore.

“Joint Reunion”—Classes of 1891-1890-1889—University of Maryland.
  Class of 1891:
    Dr. William Royal Stokes, City Health Department, Baltimore.
    Dr. Wilbur M. Pearce, 2105 North Charles Street, Baltimore.
  Class of 1890:
    Dr. William S. Love, 836 West North Avenue, Baltimore.
    Dr. Alexander D. McConachie, 805 North Charles Street, Baltimore.
    Dr. J. Frank Crouch, 11 East Chase Street, Baltimore.
  Class of 1889:
    Dr. Irwin Ebaugh, 700 West North Avenue, Baltimore.
    Dr. William J. Pillsbury, 602 East Twenty-seventh Street, Baltimore.
In the event you have failed to receive a letter from the committee for your class, communicate with the Secretary of the Medical Alumni Association, University of Maryland, Lombard and Greene Sts., Baltimore, Maryland, and he will bring it to their attention.

P-R-O-G-R-A-M

Baltimore Activities.

Thursday, May 31st.

9:00 A. M.—Registration at Alumni Headquarters, Administration Building, Lombard and Greene Streets.

1:30 P. M.—Luncheon—University Hospital.

2:30 P. M.—Series of Clinics by
Dr. William Sinclair Bowen, Clinical Professor of Obstetrics, Georgetown University (U. of M., Class 1888).
Dr. Fred W. Rankin, Mayo Clinic (U. of M., Class 1909).
Dr. Louis A. Buie, Mayo Clinic (U. of M., Class 1915).

5:00 P. M.—Annual Meeting, Medical Alumni Association, Chemical Hall, Administration Building, Lombard and Greene Streets.

8:00 P. M.—Annual Banquet—The Alcazar.
Guest of Honor.—Governor Albert C. Ritchie, of Maryland, (U. of M.—Law—Class of 1898).

The members of the Class of 1928, of the Medical School, will attend as guests of the Medical School.

Speakers—Dr. Raymond A. Pearson, President, University of Maryland.
Ex-Senator Joseph I. France, of Maryland (P. & S., Class of 1903).
Mr. Robert R. Carman, former District Attorney of Maryland.

Friday, June 1st

2:00 P. M.—Hillendale Golf Club.
Golf—Tennis—Swimming.

6:30 P. M.—Dinner at the Club.
8:30 P. M.—Cards.

Saturday, June 2nd

3:00 P. M.—Commencement.
(Send in for commencement tickets early, to the Secretary, as the number is limited.)
Annual Meeting A. M. A.—Minneapolis.

June 11-15, 1928.

On the evening of June 13th, at the Hotel Leamington, Minneapolis, there will be a banquet under the auspices of Dr. Frederick W. Schlutz, Professor of Pediatrics, University of Minnesota Medical School (U. of M., Class of 1902), and Dr. Porter P. Vinson, of Mayo Clinic (U. of M., Class of 1914), at 6:30 P. M.

We are endeavoring to secure facilities for a registration desk on the floor of the Main Auditorium of the Convention Hall near the General Registration booths of the Convention. In the event we cannot secure such space, we shall have a registration desk in the lobby of the Hotel Leamington for the convenience of our graduates.

Please Be Sure to Register. Send in Your Checks at Once to Dr. Schlutz, 121 Millard Hall, University of Minnesota Medical School, Minneapolis. (See and Use Detachable Form Inside of Back Cover.)

State Society Meetings.

Our field secretaries are arranging to have our graduates at the same tables at the banquets held at the annual meetings of the state societies or are planning smokers for such occasions. Get in touch with the Secretary of the Medical Alumni Association of the University of Maryland, Lombard and Greene Sts., and notify him of your intention to be present.

(See and Use Detachable Form Inside of Back Cover.)

Field Secretaries.

Dr. Lloyd Noland..............Fairfield, Alabama.
Dr. Fitz R. Winslow...........Hayden, Arizona.
Dr. Arthur T. Newcomb........44 S. Marengo Ave., Pasadena, California.
Dr. Robert A. Bonner..........51 W. Main St., Waterbury, Conn.
George C. McElfatrick.........1024 W. Eighth St., Wilmington, Del.
Dr. Andres G. Martin.........Palma Soriano, Cuba.
Dr. Noble P. Barnes..........Arlington Hotel, Washington, D. C.
Dr. F. T. Barker.............502 Krause Building, Tampa, Florida.
Dr. C. W. Roberts............20 E. Linden Ave., Atlanta, Ga.
Dr. W. M. Mitchell..........Parma, Idaho.
Baltimore Medical Club of New York City.

The Annual Banquet of the Club will be held on Saturday evening, May 5th, at the Commodore Hotel, Lexington Ave. and Forty-second St., New York City. The speakers this year will be Dr. Raymond A. Pearson, President of the University of Maryland, and Dr. Harry Friedenwald, Professor of Diseases of the Eye, of the University of Maryland Medical School. These affairs in the past have been delightful according to men from Baltimore who have attended them and it is expected that a party will go to New York from here this year as was the case last year. This is a splendid organization and has been fortunate in having such actively interested and able officers.

It is with great pleasure that we learn from Dr. L. Winfield Kohn that a delegation of New York men are planning to be present during the spring activities of our Association in Baltimore.
The purposes of the Baltimore Medical Club of New York are the promotion of goodfellowship amongst graduates of Baltimore medical schools practicing their profession within a radius of sixty miles of New York City. Further, the cementing of ties between them and their respective schools in Baltimore. Their success has been splendid and should be an inspiration to men in other cities.

DUES

Dues are the sinews of war in any organization, the more prompt the remittances the better its work and vice versa.

Fortunately, the great majority of our members have paid up for the year 1927-1928, but there are still many men who have overlooked the matter.

When they consider how little their alma mater asks of them in comparison with most other similar institutions, we are sure they will help the cause along by sending in three dollars at once.

Don't put it off—write the check now and send it in before you forget it.

We thank you.

COMMUNICATIONS

The Managing Editor is in receipt of the following communications:

March 6, 1928.

I enclose the copies of Lieutenant Skilling's citations, with the description of his medal. Will you not wish to use this material in the next Bulletin? This will about wind up our memorials to the fallen, I think. These have never been published.

Notice, too, might be made of the gift of an enlarged picture of Lieutenant Skilling's grave in France, taken by and presented to the Library by Mrs. John Galen Skilling, his widow.

The grave (No. 39) is in the American Cemetery, Romagne-sur-Montfaucon, Argonne Sector, the largest American cemetery of war victims—14,148 bodies.

Sincerely yours,

RUTH BRISCOE.
Mrs. Ruth Lee Briscoe,
Librarian, University of Maryland,
S. E. Cor. Lombard and Greene Streets,
Baltimore, Maryland.

Dear Madam:

Receipt of your letter of the 17th instant is acknowledged, in which you ask for a description of the medal awarded to John Galen Skilling, formerly first lieutenant, M.D., Twenty-sixth Infantry, and in which letter you also request any other items of interest concerning his military service.

The records of this office show that the Victory Medal with battle clasps for Montdidier-Noyon, Aisne-Marne, St. Mihiel, Meuse-Argonne and a defensive sector, was issued to Mrs. Jessie R. Skilling as next of kin of John Galen Skilling, deceased, who served as first lieutenant, Medical Corps, Twenty-sixth Infantry.

The Victory Medal is a medal of bronze, 36 millimeters in diameter. On the obverse is a winged Victory, standing, full length, and full face. On the reverse is the inscription "The Great War for Civilization" and the coat of arms of the United States, surmounted by a fasces, and on either side the names of the allied and associated nations. The medal is suspended by a ring from a watered-silk ribbon, 1 3/8 inches in length and 36 millimeters in width, representing two rainbows placed in juxtaposition and having the red in the middle, with a white thread along each edge.

The records also show that this former officer was cited in General Orders No. 94, First Division, dated December 13, 1918; General Orders No. 86, First Division, dated December 1, 1919; and General Orders No. 1, First Division, dated January 1, 1920. Each of these citations warrant the wearing of a silver citation star on the ribbon of the Victory Medal.

It does not appear from a search of the official records that Lieutenant Skilling was awarded any other decorations or citations.

Very truly yours,

Lutz Wahl,
Major General,
The Adjutant General.

By J. A. V.
COPY

Headquarters First Division,
American Expeditionary Forces.
Germany, 13 December, 1918.

General Orders, No. 94.

The Division Commander cites the following officer for distinguished gallantry in action during the operations near Exermont.

Extract.

First Lieutenant John G. Skilling, M. C., Twenty-sixth Infantry, "displayed distinguished bravery during the entire attack. He followed his Battalion closely, always being where he was most needed. Has served with distinction during three battles."

By Command of
Major General McGlachlin,
(Signed) Stephen O. Fuqua,
Colonel, General Staff,
Chief of Staff.

Official:
(Signed) B. R. Legge,
Division Adjutant.

COPY

Headquarters First Division,
Camp Zachary Taylor, Ky.
November 3rd, 1919.

General Orders No. 81.

The Division Commander cites the following officer for gallantry in action:

First Lieutenant John G. Skilling, M. C., Twenty-sixth Infantry, "an officer of distinguished ability and devotion to duty, for his efficient services in the Aisne-Marne, St. Mihiel, and Meuse-Argonne offensives. As Battalion surgeon he attended the wounded under heavy shell and machine gun fire with utter disregard of his personal safety. He was killed in the last battle of the war while making his way forward to the advanced dressing station."

By Command of
Major General Summerall.
(Signed) Stephen O. Fuqua,
Colonel, General Staff,
Chief of Staff.

Official:
(Signed) B. R. Legge,
Division Adjutant.
Victory Medal.

Containing five citations:
Montdidier-Noyon
Aisne-Marne
St. Mihiel
Meuse-Argonne
Defensive Sector

Bar of Colors:
Containing two silver stars (personal citations) and five bronze stars (division citations).

Headquarters First Division,
Camp Zachary Taylor, Ky.

January 1, 1920.

General Orders, No. 1.

Extract.

The Division Commander cites the following officers and soldiers for gallantry in action and especially meritorious services:

* * * * * * * * * 
Skilling, John G., 1st Lt. M. C., 26th Inf.

* * * * * * * * *

By Command of
Major General Summerall.

Stephen O. Fuqua,
Colonel, General Staff,
Chief of Staff.

Official:
R. E. Fraile,
Lt. Col. A. G. D.,
Division Adjutant.
STATE MEETINGS*

At the time of going to press we have heard from the following field secretaries relative to the get-togethers they are planning in their states during the annual meetings of their State Societies.

GEORGIA: Dr. Charles W. Roberts, our field secretary for Georgia, informs us that during the annual meeting of their State Society, May 9, 10 and 11, he plans to get the graduates of the school, about 100 in number, together at a function that he is, at present, arranging. When we remember the delightful affair arranged by Dr. Roberts last year, we feel sure those attending will be thoroughly pleased.

NEW YORK: Dr. Milton E. Gregg, of Mottville, New York, together with the cooperation of Drs. Kohn and Paganelli, of New York City, is arranging for an Annual Alumni Meeting at Albany in connection with the State Medical Society of New York. He states that this Alumni meeting will probably be held on the afternoon of May 23rd. Our graduates in upper New York held a very delightful meeting in Syracuse last year, at which Dr. Charles W. Maxson, who was then President of the Medical Alumni Association, was present. We trust that a large number of our alumni in New York will attend.

OKLAHOMA: Dr. C. Calvin Hoke writes this office that the Oklahoma State Medical Association’s Annual Meeting will be held at Tulsa this year on May 17-19, inclusive. On May 18th he plans a get-together meeting of our alumni at the Hotel Mayo. We congratulate Dr. Hoke upon this good work, which is bound to cement the bonds between our alumni in that far-away State and their alma mater.

VIRGINIA: The University of Maryland Alumni Association of Tidewater, Virginia, a body composed of graduates from all departments of the University, notified this office through its President, Dr. Albert Edwards Wilson, that they held their spring meeting Tuesday, April 24th, in the Assembly Room of the Norfolk County Medical Society, Medical Arts Building, Norfolk, Virginia.

*See “State Society Meetings” on page 244 and get in touch with the Field Secretary for your State.
Their meeting at the Monticello Hotel, last November, according to Professor Randolph Winslow, who honored this Association by representing them at the affair, was a most inspiring and interesting occasion. We understand that the one of April 24th was equally so. This organization is most active and is carrying on a most valuable work in the interest of the University and we wish to congratulate its officers and members.

DEATHS

Dr. Edward Everett Mackenzie, Baltimore, Md.; class of 1884, also a pupil in the old School of Letters, University of Maryland; aged 69; died, February 11, 1928, of pneumonia.

Dr. Richard Thomas Pollard, Garrett, Pa.; B. M. C., class of 1891; also a druggist and a minister; aged 79; died, January 5, 1928, of diabetes mellitus.

Dr. Samuel Schwalbe, St. Louis, Mo.; class of 1885; aged 69; died, January 22, 1928, of broncho-pneumonia, myocarditis and hypertension.

Dr. William F. Peairs, Sutersville, Pa.; P. & S., class of 1892; aged 62; died, November 20, 1927, of cerebral hemorrhage.

Dr. John Winfield Harrison, Middle River, Md.; P. & S., class of 1890; aged 58; died, January 25, 1928, of apoplexy.

Dr. James Homer Wright, Boston, Mass.; class of 1892; aged 58; assistant professor of pathology, Harvard University Medical School and the Graduate School; for many years director of the pathological laboratory and consulting pathologist to the Massachusetts General Hospital; died, January 3, 1928, of lobar pneumonia.

Dr. Harry J. Carrick, Baltimore, Md.; class of 1889; aged 61; died, January 2, 1928, of heart disease.

Dr. Arthur Lee Tumbleson, Baltimore, Md.; B. M. C., class of 1901; aged 60; died, January 28, 1928, after a lingering illness, of chronic myocarditis and cerebral sclerosis.

Dr. Jacob Charles Madara, Ridgely, Md.; P. & S., class of 1898; aged 56; died, November 5, 1927, of carcinoma of lungs, intestine and bladder.

Dr. W. Potter Whittington, Asheville, N. C.; P. & S., class of 1882; aged 73; died, January 4, 1928, of carcinoma of the liver.

Dr. James Robert Jerome, Oakboro, N. C.; class of 1890; aged 66; died, December 27, 1927, of chronic nephritis and uremia.

Dr. Algernon Duval Atkinson, Baltimore, Md.; class of 1894; formerly Clinical Professor of Medicine in his Alma Mater and son of the late Dr. Isaac Edmondson Atkinson, class of 1865, and at the time of his death professor of therapeutics and clinical medicine in the University of Maryland; aged 56; died, January 18, 1928, of bronchitis.

Dr. Ernest Osmand Chellis, Narrowsburg, N. Y.; B. M. C., class of 1896; aged 57; died, December 28, 1927, of gastric ulcer.
Dr. Charles Edwin Keen, Harrisburg, Pa.; P. & S., class of 1891; aged 61; died, December 20, 1927, of septicemia.

Dr. B. R. Brown, Gaffney, S. C.; P. & S., class of 1890; aged 60; died, December 16, 1927, of heart disease.

Dr. Robert Kemp Jefferson, Federalsburg, Md.; class of 1890; aged 60; died, January 3, 1928.

Dr. W. Prestman Malone, Washington, D. C.; class of 1888; aged 64; died, December 18, 1927, of arterio-sclerosis.

Dr. Thomas Edward Sears, Baltimore, Md.; class of 1874; aged 73; died, December, 1927, of heart disease.

Dr. Presley Worthington Morehead, Clarendon, Va.; P. & S., class of 1884; aged 67; died, November 29, 1927, of myocarditis.

Dr. James Walker Humrichouse, Hagerstown, Md.; class of 1873; aged 78; past-president of the Medical and Chirurgical Faculty of Maryland; died, December 18, 1927, of heart disease.

Dr. William Haywood Bobbitt, Indianapolis, Ind.; P. & S., class of 1882; aged 66; died, February 8, 1928, of cerebral hemorrhage.

Dr. John W. Lacy, Lisbon, Md.; P. & S., class of 1896; aged 61; died, January, 1928.

Dr. Ellsworth H. Hinman, Lower Marlboro, Md.; P. & S., class of 1890; died, November 16, 1927.

Dr. Roscoe Conkling Metzel, Baltimore, Md.; class of 1906; gold medalist, and associate in clinical medicine, University of Maryland; aged 47; died, February 29, 1928, of carcinoma of the kidney with metastases to the liver.

Dr. Charles Bernard Henkel, Annapolis, Md.; class of 1889; aged 60; died, suddenly, February 27, 1928.

Dr. Guy Fairfax Whiting, Washington, D. C.; class of 1878; aged 71; died, December 30, 1927, of nephritis, myocarditis and diabetes mellitus.

Dr. Eutaw D. Neighbors, Lewiston, Md.; P. & S., class of 1882; about 69 years old; died, January 12, 1928, of heart disease.

Dr. Frank B. Adams, Baltimore, Md.; P. & S., class of 1877; aged 77; died, February 17, 1928.

Dr. Charles W. Sawyer, Elizabeth City, N. C.; class of 1885; aged 70; died, December 18, 1927, of acute dilatation of the heart and pulmonary edema.

Dr. Francis W. Harper, Irvona, Pa.; P. & S., class of 1896; aged 62; died, January 3, 1928, of pneumonia.

Dr. Tom V. Williams, New Castle, Pa.; P. & S., class of 1892; aged 65; died, December 21, 1927.

Dr. German Baxter Miller, Lexington, Ky.; P. & S., class of 1882; aged 75; died, January 20, 1928.

Dr. David K. Allinder, Atascadero, Cal.; class of 1880; aged 82; died, January 21, 1928.

Dr. Milton McKintry Norris, New Windsor, Md.; class of 1880; aged 72; died, March 12, 1928.
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BULLETIN
OF THE
University of Maryland School of Medicine
AND
College of Physicians and Surgeons
Successor to The Hospital Bulletin of the University of Maryland, Baltimore Medical College News, and the Journal of the Alumni Association of the College of Physicians and Surgeons.

VOL. XIII JULY, 1928 No. 1

ANNUAL ANNOUNCEMENT
SESSION 1928-1929
BALTIMORE SCHOOLS (PROFESSIONAL GROUP)
CALENDAR, 1928-1929

FIRST SEMESTER

1928

Monday, September 24—Registration begins.

Monday, October 1—Instruction begins with the first scheduled period.

Monday, October 8—Last day to register without paying fine of $5.00.

Monday, November 12—Holiday (Armistice Day).

Wednesday, November 28—Thanksgiving recess begins after the last scheduled period.

Monday, December 3—Instruction resumed with the first scheduled period.

Saturday, December 22—Christmas recess begins after the last scheduled period.

1929

Thursday, January 3—Instruction resumed with the first scheduled period.

Saturday, January 26—First semester ends after the last scheduled period.

SECOND SEMESTER

Monday, January 14—Registration begins for second semester.

Monday, January 28—Instruction begins with the first scheduled period.

Saturday, February 2—Last day to register without paying fine of $5.00.

Friday, February 22—Holiday (Washington’s Birthday).

Thursday, March 28—Easter recess begins after the last scheduled period.

Tuesday, April 2—Instruction resumed with the first scheduled period.

Saturday, June 8—Commencement Day.
THE UNIVERSITY OF MARYLAND

Control of the University of Maryland is vested in a Board of nine Regents, appointed by the Governor and confirmed by the Senate for terms of nine years each. The general administration of the University is vested in the President. The University Council is an advisory body, composed of the President, the Assistant to the President, the Director of the Agricultural Experiment Station, the Director of the Extension Service, and the Deans. The University Council acts upon all matters having relation to the University as a whole, or to cooperative work between the constituent groups. Each school has its own Faculty Council, composed of the Dean and members of its Faculty; each Faculty Council controls the internal affairs of the group it represents.

The University has the following educational organization:

The College of Agriculture,
The College of Engineering,
The College of Arts and Sciences,
The School of Medicine,
The School of Law,
The School of Dentistry,
The School of Pharmacy,
The College of Education,
The College of Home Economics,
The Graduate School,
The Summer School,
The Department of Physical Education and Recreation.

The Schools of Medicine, Law, Dentistry and Pharmacy are located in Baltimore; the others in College Park, Maryland.
BOARD OF REGENTS
OF THE
UNIVERSITY OF MARYLAND

Samuel M. Shoemaker, Esq., Chairman.....................Term expires 1933
Robert Crain, Esq...........................................Term expires 1933
John M. Dennis, Esq., Treasurer..............................Term expires 1932
Dr. Frank J. Goodnow.......................................Term expires 1931
John E. Raine, Esq...........................................Term expires 1930
C. C. Gelder, Esq...........................................Term expires 1929
Dr. W. W. Skinner, Secretary.................................Term expires 1927
Henry Holzapfel, Jr., Esq..................................Term expires 1934
E. Brooke Lee, Esq............................................Term expires 1935

Raymond A. Pearson, M.S., D.Agr., LL.D..................President and Executive Officer

THE UNIVERSITY COUNCIL

Raymond A. Pearson, M.S., D.Agr., LL.D..................President
H. C. Byrd, B.S..............................................Assistant to the President
H. J. Patterson, D.Sc.................................Dean of the College of Agriculture and
Director of the Experiment Station
A. N. Johnson, S.B., D.Eng.........................Dean of the College of Engineering
T. H. Taliaferro, C.E., Ph.D. Acting Dean of the College of Arts and Sciences
Henry D. Harlan, LL.D.................................Dean of the School of Law
J. M. H. Rowland, M.D.................................Dean of the School of Medicine
A. G. Du Mez, Phar.D.........................Dean of the School of Pharmacy
T. O. Heatwole, M.D., D.D.S..................Secretary of the Baltimore Schools
W. S. Small, Ph.D.................................Dean of the College of Education
M. Marie Mount, M.A.................................Dean of the College of Home Economics
C. O. Appleman, Ph.D.........................Dean of the Graduate School
Thomas B. Symons, M.S., D.Agr...............Director of Extension Service
J. Ben Robinson, D.D.S., F.A.C.D..............Dean of the School of Dentistry
UNIVERSITY OF MARYLAND
SCHOOL OF MEDICINE
AND
COLLEGE OF PHYSICIANS AND
SURGEONS

MEDICAL COUNCIL

ARTHUR M. SHIPLEY, M.D., ScD.
GORDON WILSON, M.D.
HARRY FRIEDENWALD, A.B., M.D.
WILLIAM S. GARDNER, M.D.
STANDISH McCLEARY, M.D.
JULIUS FRIEDENWALD, A.M., M.D.
J. M. H. ROWLAND, M.D.
ALEXIUS McGLANNAN, A.M., M.D., LL.D.
HUGH R. SPENCER, M.D.
H. BOYD WYLIE, M.D.
CARL L. DAVIS, M.D.
WILLIAM H. SCHULTZ, Ph.B., Ph.D.
MAURICE C. PINCOFFS, S.B., M.D.
FRANK W. HACHTEL, M.D.
EDUARD UHLENHUTH, Ph.D.
HARRY J. DEUEL, Jr., Ph.D.
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IRVING J. SPEAR, M.D., Professor of Neurology.
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JOHN RUHRHA, M.D., Professor of Pediatrics.
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Charles E. Brack, Ph.G., M.D., Professor of Clinical Obstetrics.
Harvey G. Beck, M.D., Sc.D., Professor of Clinical Medicine.
Albertus Cotton, A.M., M.D., Professor of Orthopaedic Surgery and Roentgenology.
Andrew C. Gillis, A.M., M.D., LL.D., Professor of Neurology.
Charles L. Summers, M.D., Professor of Pediatrics.
Anton G. Rytina, A.B., M.D., Professor of Genito-Urinary Diseases.
Henry J. Walton, M.D., Professor of Roentgenology.
R. M. Chapman, M.D., Professor of Psychiatry.
John Rathbone Oliver, A.B., M.D., Ph.D., Professor of the History of Medicine.
L. H. Douglass, M.D., Professor of Clinical Obstetrics.
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Monte Edwards, M.D., Instructor in Surgery and Proctology.
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Clewell Howell, M.D., Instructor in Pediatrics.
A. H. Finkelstein, M.D., Instructor in Pediatrics.
Elizabeth Sherman, M.D., Instructor in Pediatrics.
Marie Kovner, M.D., Instructor in Pediatrics.
Robert Hodes, M.D., Instructor in Neurology.
M. H. Goodman, M.D., Instructor in Pathology.
J. Willis Gutton, M.D., Assistant in Genito-Urinary Surgery.
Dwight Mohr, M.D., Assistant in Surgery.
W. R. Geraghty, M.D., Assistant in Surgery.
S. Demarco, M.D., Assistant in Surgery.
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J. G. Onnen, M.D., Assistant in Surgery.
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A. C. Monninger, M.D., Assistant in Dermatology.
James Brown, M.D., Assistant in Surgery.
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Karl J. Steinmuller, A.B., M.D., Assistant in Surgery.
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HENRY WASSERMAN, M.D., Assistant in Dermatology.
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R. HOOPER SMITH, M.D., Assistant in Medicine.
BENJAMIN ABESHOUSE, M.D., Assistant in Pathology.
T. NELSON CAREY, M.D., Assistant in Medicine.
L. T. LAVY, M.D., Assistant in Pediatrics.
BENJAMIN MILLER, M.D., Assistant in Pediatrics.
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S. C. FELDMAN, M.D., Assistant in Pediatrics.
RUTH F. CARR, B.S., Assistant in Biological Chemistry.
W. D. HAWKINS, M.D., Assistant in Pathology.
EUGENE L. FLIPPIN, M.D., Assistant in Roentgenology.
MAURICE SHAMER, M.D., Assistant in Obstetrics.
University of Maryland School of Medicine
AND
College of Physicians and Surgeons

As a result of the merger accomplished in 1915 the combined schools offer the student the abundant resources of both institutions, and, in addition, by earlier combination with the Baltimore Medical College, the entire equipment of three large medical colleges.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. It was chartered in 1807, under the name of the College of Medicine of Maryland, and its first class was graduated in 1810. In 1812 the College was empowered by the Legislature to annex three other colleges or faculties, of Divinity, of Law, and of Arts and Sciences, and the four colleges thus united were "constituted an University by the name and under the title of the University of Maryland."

Established thus for more than a century, the School of Medicine of the University of Maryland has always been a leading medical college, especially prominent in the South and widely known and highly honored throughout the country.

The beautiful college building at Lombard and Greene Streets, erected in 1812, is the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837), and here were first installed independent chairs for the teaching of Diseases of Women and Children (1867), and of Eye and Ear Diseases (1873).

The School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for the senior student was first established.
In 1913, juncture was brought about with the Baltimore Medical College, an institution of 32 years' growth. By this association the facilities of the School of Medicine were enlarged in faculty, equipment and hospital connection.

The College of Physicians and Surgeons was incorporated under Legislative enactment in 1872, and established on Hanover Street in a building afterwards known as the Maternite, the first obstetrical hospital in Maryland. In 1878 union was affected with the Washington University School of Medicine, in existence since 1827, and the college was removed to its present location at Calvert and Saratoga Streets. By this arrangement medical control of the City Hospital, now the Mercy Hospital, was obtained, and on this foundation in 1899 the present admirable college building was erected.

ORGANIZATION OF THE SCHOOL OF MEDICINE

LABORATORY AND CLINICAL FACILITIES

The Laboratories

The laboratories are located at two centers, the group of buildings at Greene and Lombard Streets, and at 32 and 34 South Paca Street. The schedule is so adjusted that the laboratory periods are placed with a view of obviating unnecessary movement on the part of the classes. The building known as Gray Laboratory, at Greene and Lombard Streets, houses three departments. The Anatomical Laboratory is placed upon the top floor, where skylights and an auxiliary modern system of electric lighting gives adequate illumination of the subjects. On this floor are the office of the department and the necessary preparation rooms. The Department of Pharmacology occupies the second floor. There is a large room for the general student laboratory, which is thoroughly equipped with apparatus of recent acquisition, and in addition contains many instruments of unique and original design. With office and stockroom adjoining, this laboratory is complete for student experimentation. On the first floor of Gray Laboratory is the Department of Physiology. In addition to the large student laboratory, which is constructed for sections of forty-five students,
there are rooms for the departmental office, preparation of material, and storage of apparatus. An additional room is devoted exclusively to mammalian experiments. In this building there is maintained an animal room where is kept an abundance of material for experimental purposes. The embalming and storage plant for the Department of Anatomy is in physical connection with the building and its special departments. The laboratories of physiology and pharmacology are completely equipped with apparatus lockers so that in accord with the best ideas of instruction, the students work in groups of two each, and each group has sufficient apparatus so that the experimental work can be carried on without delay or recourse to a general stockroom.

The laboratories of Pathology and Biochemistry are located on the third floor of the Dental Building. The former department has a large student laboratory with a capacity of ninety; the tables are so placed as to secure the most satisfactory illumination for microscopic work, in addition, all of the tables are electrically equipped for substage illumination. This equipment is also provided for all laboratories where microscopic work obtains. The museum of the Department of Pathology adjoins the student laboratory. Here are available for demonstration about fifteen hundred carefully prepared and mounted specimens, and for laboratory instruction and study, an abundance of autopsy material with complete clinical histories. Several preparation, research, and office rooms communicate with the other rooms of this department. The laboratory of Biochemistry is constructed and equipped for sections of fifty. The laboratory is completely equipped for the facilitation of work. The office and stockroom adjoin. In the Main Building is the Museum of Anatomy, where are arranged for student reference, specimens which represent the careful selection of material over a period of many years. In the University Hospital is the Student Laboratory for the analytical studies by those students who are serving as clinical clerks on the wards. A similar laboratory is maintained in the building at the northwest corner of Saratoga and Calvert Streets, for the student work on the wards of the Mercy Hospital.

At 32 and 34 South Paca Street are two laboratories for Bacteriology, Histology, and Clinical Pathology. The two laboratories accommodate one hundred and twenty-five students or the full class,
and are equipped with necessary lockers for microscopes and apparatus. Each of the departments housed in this building are provided with their individual offices, preparation and stockrooms.

Clinical Facilities

UNIVERSITY HOSPITAL

The University Hospital, which is the property of the University of Maryland, is the oldest institution for the care of the sick in the State of Maryland. It was opened in September, 1823, under the name of the Baltimore Infirmary, and at that time consisted of but four wards, one of which was reserved for the eye cases.

The present hospital has a capacity of 275 beds devoted to general medicine, surgery, obstetrics and the various medical and surgical specialties. It is equipped with a thoroughly modern X-ray department and clinical laboratory, and a post-mortem building which is constructed with special reference to the instruction of students in pathological anatomy.

The hospital is situated opposite the medical school buildings so that the students lose no time in passing from the lecture halls and laboratories to the clinical amphitheater, dispensary and wards.

Owing to its situation, being adjacent to the largest manufacturing district of the city and the shipping district, large numbers of accident cases are received. These combined with the cases of many sick seamen and with patients from our own city furnish a large amount of clinical material. Accommodations for thirty obstetrical patients are provided in the hospital for the purpose of furnishing actual obstetrical experience to each member of the graduating class.

In connection with the University Hospital an outdoor obstetrical clinic is conducted, in which every case has careful pre-natal supervision, is attended during labor by a senior student, supervised by a hospital physician and assisted by a graduate nurse, and is visited during the puerperium by the attending student and graduate nurse. Careful pre-natal, labor and puerperal records are kept, making this work of extreme value to the medical student, not only from the obstetrical standpoint, but in making him appreciate the value of social service and public health work.
During the year ending December 31, 1927, 458 cases were delivered in the hospital and 1094 cases in the outdoor department. Students in the graduating class delivered an average of fourteen cases, each student being required to deliver twelve cases.

The dispensaries associated with the University Hospital and the Mercy Hospital are organized upon a uniform plan in order that the teaching may be the same in each. Each dispensary has the following departments: Medicine, Surgery, Obstetrics, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopaedics, Proctology, Dermatology, Throat and Nose, Tuberculosis and Psychiatry.

All students in their junior year work in the departments of Medicine and Surgery each day in one of the dispensaries.

All students in their senior year work in the special departments one hour each day.
HOSPITAL COUNCIL

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A. M. Shipley, M.D., Sc.D., Head of the Department of Surgery.
Samuel M. Shoemaker, President of the Board of Regents.
A. J. Lomas, M.D., Superintendent of the Hospital.
Miss Annie Crighton, R.N., Superintendent of Nurses.
J. Allison Muir,
G. M. Shriver,
W. B. Brooks,
Miss Florence Sadtler, Representing Woman's Auxiliary Board.

Representing Hospital Staff
J. W. Holland, M.D. C. Reid Edwards, M.D.

Representing Medical Alumni
Charles W. Maxson, M.D. G. Milton Linthicum, M.D.

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Gordon Wilson, M.D. Maurice C. Pincoffs, M.D.
Charles W. McElfresh, M.D. G. Carroll Lockard, M.D.
Harry M. Stein, M.D. Jos. E. Gichner, M.D.
Walter A. Baetjer, M.D. Wm. H. Smith, M.D.

Gastro-Enterologist
Julius Friedenwald, A.M., M.D.

Neurologist
Irving J. Spear, M.D.

Psychiatrist
R. M. Chapman, M.D.

Pediatrician
Charles L. Summers, M.D.
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Pathologists
Hugh R. Spencer, M.D. S. Lloyd Johnson, M.D.

Surgeons
Joseph W. Holland, M.D. Page Edmunds, M.D.
Nathan Winslow, M.D. Frank S. Lynn, M.D.
Charles Reid Edwards, M.D.

Laryngologists
Edward A. Looper, M.D. Franklin B. Anderson, M.D.

Proctologists
G. Milton Linthicum, A.M., M.D. J. Dawson Reeder, M.D.

Orthopaedic Surgeons
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Genito-Urinary Surgeons
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Roentgenologists
Henry J. Walton, M.D. Eugene L. Flippin, M.D.

Dermatologist
Henry M. Robinson, M.D.

Bronchoscopist
Waitman F. Zinn, M.D.

Anaesthetists
S. Griffith Davis, M.D. Samuel W. Moore, D.D.S.
W. G. Queen, M.D.

Obstetricians
J. M. H. Rowland, M.D. L. H. Douglass, M.D.
M. A. Novey, A.B., M.D. J. G. M. Reese, M.D.
Isador H. Siegel, A.B., M.D.

Ophthalmologists and Otologists
Harry Friedenwald, M.D. Hiram Woods, A.M., M.D.
William Tarun, M.D. J. W. Downey, M.D.

Gynecologists
J. Mason Hundley, M.D. W. S. Gardner, M.D.
Hugh Brent, M.D. R. G. Willse, M.D.
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Assistant Resident in Surgery ................................. C. F. Karns, M.D.
Assistant Resident in Surgery ................................. H. V. Davis, M.D.
Assistant Resident in Surgery ................................. J. R. Phillips, M.D.
Assistant Resident in Roentgenology ......................... Samuel Weinstein, M.D.
Resident in Medicine ........................................... C. E. Gill, M.D.
Resident in Obstetrics ................................. William Linthicum, M.D.
Assistant Resident in Obstetrics ............................. Theodore Wollak, M.D.
Resident in Gynecology ....................................... J. R. Hibbitts, M.D.

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Dr. Lewis P. Gundry
Dr. Joseph G. Laukaitis

Dr. Luther E. Little
Dr. M. C. Smoot
Dr. William H. Varney
Dr. C. Gardner Warner
Dr. E. Eldon Baum
Dr. Bryan N. Roberts

Dr. Earl F. Limbach

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William Michel, M.D.
A. L. Fehsenfeld, M.D.
S. B. Wolfe, M.D.

W. H. Triplett, M.D.
Joseph Rosenblatt, M.D.
Leo Lally, M.D.

Thomas Coonan, M.D.

Diseases of the Stomach and Intestines

J. H. Ullrich, M.D., Chief of Clinic
Joseph Sindler, M.D.
Z. Morgan, M.D.
Leo T. Brown, M.D.

M. S. Koppelman, M.D.
N. J. Davidov, M.D.
C. Vance Hooper, M.D.

Neurology

Irving J. Spear, M.D., Professor of Neurology
G. M. Settle, M.D., Associate Professor of Neurology
Leon Freedom, M.D., Chief of Clinic

Benjamin Pushkin, M.D.

Robert Hodes, M.D.

Mental Hygiene

Ralph P. Truitt, M.D., Director
G. H. Preston, M.D.
UNIVERSITY HOSPITAL DISPENSARY STAFF

Diseases of the Lungs
C. C. Habliston, M.D., Chief of Clinic

Diseases of Metabolism
H. M. Stein, M.D., Chief of Clinic

Cardiovascular Diseases
William S. Love, Jr., M.D., Chief of Clinic
Franklin Eleder, M.D.

Allergy Clinic
H. M. Bubert, M.D., Chief of Clinic

Pediatrics
Charles L. Summers, M.D., Professor of Pediatrics
C. Loring Joslin, M.D., Chief of Clinic
John H. Traband, M.D., Chief of Clinic

Clarence E. Macke, M.D.
Albert Jaffe, M.D.
William J. Todd, M.D.
F. Stratner Orem, M.D.
William G. Geyer, M.D.
George A. Knipp, M.D.
Bernard J. Ferry, M.D.
I. J. Feinglos, M.D.
Frederick B. Dart, M.D.
S. C. Feldman, M.D.

R. M. Hening, M.D.
Marie Kovner, M.D.
Clewell Howell, M.D.
Samuel Glick, M.D.
Elizabeth Sherman, M.D.
M. N. Putterman, M.D.
A. H. Finkelstein, M.D.
Louis T. Lavy, M.D.
Benjamin Miller, M.D.
E. V. Teagarden, M.D.

Surgery
Charles Reid Edwards, M.D., Chief of Clinic
H. M. Foster, M.D.
C. A. Reifsneider, M.D.
E. S. Perkins, M.D.
F. A. Sigrist, M.D.
J. H. Wilkerson, M.D.

E. S. Johnson, M.D.
W. R. Johnson, M.D.
James Brown, M.D.
S. H. Culver, M.D.
A. C. Monninger, M.D.

Orthopaedic Surgery
R. Tunstall Taylor, A.B., M.D., Professor of Orthopaedic Surgery
Compton Riely, M.D., Chief of Clinic

Harry L. Rogers, M.D.
Clifford Lee Wilmoth, A.B., M.D.

Clement R. Monroe, M.D.
Moses Gellman, M.D.
UNIVERSITY HOSPITAL DISPENSARY STAFF

Genito-Urinary

W. H. Toulson, M.D., Chief of Clinic

Harris Goldman, M.D.
J. H. Collinson, M.D.
H. T. Collenberg, M.D.

Lyle J. Millan, M.D.

Roentgenologists

Henry J. Walton, M.D.

Dermatology

H. M. Robinson, M.D., Chief of Clinic

J. E. Gately, M.D.

Nose and Throat

E. A. Looper, M.D., Clinical Professor of Diseases of Throat and Nose
Franklin B. Anderson, M.D., Chief of Clinic

F. A. Holden, M.D.
Charles H. Cahn, M.D.

Joseph Nubkin, M.D.

Colon and Rectum

Monte Edwards, M.D., Chief of Clinic

Gynecology

J. M. Hundley, Jr., M.D.
Leo Brady, M.D.

William J. Fulton, M.D.

Obstetrics

L. H. Douglass, M.D., Chief of Clinic

Dudley Pleasants Bowe, B.A., M.D.
J. G. M. Reese, M.D.
Maxwell Mazer, M.D.

M. Alexander Novey, M.D.
Isadore A. Siegel, A.B., M.D.
Maurice Shamer, M.D.

Eye and Ear

Harry Friedenwald, M.D., Professor of Ophthalmology and Otology

J. W. Downey, M.D.

Charles Cahn, M.D.

John G. Runkel, M.D.

Social Service

Miss Grace Pearson, Directress
UNIVERSITY HOSPITAL DISPENSARY REPORT

October 1, 1926, to September 30, 1927.

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<th>DEPARTMENT</th>
<th>NEW</th>
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<td>Tuberculosis</td>
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<td>Cardiology</td>
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<td><strong>Total</strong></td>
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<td><strong>62,865</strong></td>
<td><strong>81,951</strong></td>
</tr>
</tbody>
</table>

In addition to the above, there were treated in the State Venereal Clinic 21,035 cases.
MERCY HOSPITAL

The Sisters of Mercy first assumed charge of the Hospital at the corner of Calvert and Saratoga Streets, then owned by the Washington University, in 1874. By the merger of 1878 the Hospital came under the control of the College of Physicians and Surgeons, but the Sisters continued their work of administering to the patients.

In a very few years it became apparent that the City Hospital, as it was then called, was much too small to accommodate the rapidly growing demands upon it. However, it was not until 1888 that the Sisters of Mercy, with the assistance of the Faculty of the College of Physicians and Surgeons, were able to lay the cornerstone of the present Hospital. This building was completed and occupied late in 1889. Since then the growing demands for more space has compelled the erection of additions, until now there are accommodations for 351 patients.

In 1909 the name was changed from The Baltimore City Hospital to Mercy Hospital.

Mercy Hospital is located in the center of a city of 800,000 inhabitants.

The clinical material in the free wards is under the exclusive control of the Faculty of the University of Maryland School of Medicine and College of Physicians and Surgeons.

It adjoins the College building, and all surgical patients from the public wards are operated upon in the College operating rooms. This union of the Hospital and College buildings greatly facilitates the clinical teaching, as there is no time lost in passing from one to the other.

Mercy Hospital is the hospital of the United Railways and Electric Company of Baltimore City, and receives patients from the Baltimore and Ohio Railroad Company and from the Pennsylvania Railroad Company and its branches.
MERCY HOSPITAL STAFF

BOARD OF GOVERNORS

SAMUEL M. SHOEMAKER, ESQ., CHAIRMAN

SISTER M. CARMELITA
SISTER M. SIENA
SISTER M. HILDEGARDE
SISTER M. ANITA
SISTER M. JOAN

Dr. ALEXIUS McGANNAN
Dr. WALTER D. WISE
Dr. THOMAS K. GALVIN
Dr. ANDREW C. GILLIS
Dr. STANDISH MCCLEARY

MERCY HOSPITAL STAFF

SURGICAL DIVISION

ALEXIUS McGANNAN, A.M., M.D.
W. D. WISE, M.D.
C. F. BLAKE, M.D.

Elliott Hutchins, M.D.
A. M. Evans, M.D.
F. L. Jennings, M.D.

Associate Surgeons

R. H. Locher, M.D.
T. R. Chambers, M.D.
F. X. Kearney, M.D.

I. O. RIDGELEY, M.D.
N. C. MARVEL, M.D.
D. J. PESSAGNO, M.D.

Assistant Surgeons

CHARLES MAXSON, M.D.
A. B. McELWAIN, M.D.
T. J. Touhey, M.D.

Dwight Mohr, M.D.
H. F. Bongardt, M.D.
J. W. Nelson, M.D.

Ophthalmologists and Otologists

HARRY FRIEDENWALD, M.D.

H. K. Fleck, M.D.

J. W. Downey, M.D.

Rhinologists and Laryngologists

Frank D. Sanger, M.D.
W. F. Zinn, M.D.

George W. Mitchell, M.D.
Raymond McKenzie, M.D.

Associate

F. A. Pacienza, M.D.

Proctologist

CHARLES F. BLAKE, M.D.

Orthopaedic Surgeon

ALBERTUS COTTON, M.D.

Associate

H. L. Rogers, M.D.

Assistant

K. W. Golley, M.D.
MERCY HOSPITAL STAFF

Urologist
Alexander J. Gillis, M.D.

Assistant
Kenneth B. Legge, M.D.

Dentist
John Frederick, D.D.S.

MEDICAL DIVISION

Physicians
Maurice C. Pincoffs, M.D.
William F. Lockwood, M.D.
Standish McCleary, M.D.

Cary B. Gamble, M.D.
Harvey G. Beck, M.D.

Assistants
Robert Williams, M.D.
William F. Lockwood, M.D.
Standish McCleary, M.D.

Gastro-Enterologist
Julius Friedenwald, M.D.

Associates
Cary B. Gamble, M.D.
Harvey G. Beck, M.D.

Assistant
Joseph Sindler, M.D.

Pediatricians
John Ruhrah, M.D.

Assistant
Edgar B. Friedenwald, M.D.

F. B. Smith, M.D.

Neurologist and Psychiatrist
Andrew C. Gillis, M.D.

Associate
Milford Levy, M.D.

Dermatologist
Melvin Rosenthal, M.D.
MERCY HOSPITAL STAFF

OBSTETRICAL DIVISION

CHARLES E. BRACK, M.D.
A. SAMUELS, M.D.
W. S. GARDNER, M.D.
G. A. STRAUSS, M.D.

E. P. SMITH, M.D.
J. J. ERWIN, M.D.
T. K. GALVIN, M.D.
E. S. EDLAVITCH, M.D.

GYNECOLOGICAL DIVISION

Gynecologists

WILLIAM S. GARDNER, M.D.
GEORGE A. STRAUSS, M.D.

T. K. GALVIN, M.D.

ASSOCIATE

J. J. ERWIN, M.D.

ASSISTANT

E. S. EDLAVITCH, M.D.

PATHOLOGICAL DIVISION

STANDISH MCCLEARY, M.D.

CLINICAL PATHOLOGISTS

H. T. COLLENBERG

EMIL G. SCHMIDT, PH.D.

TECHNICIANS

SISTER M. JOAN, PH.G., R.N.
FRANCES DONOVAN, R.N.

X-RAY DEPARTMENT

RADIOPHAGERS

ALBERTUS COTTON, M.D.
K. W. GOLLEY, M.D.

TECHNICIAN—SISTER M. ANTONIA, R.N.
MERCY HOSPITAL RESIDENT STAFF

Resident Surgeon
John L. Winstead, M.D.

Assistant Resident Surgeons
E. Prefontaine, M.D.
Francis W. Gillis, M.D.

Resident Physician
T. N. Carey, M.D.

Resident Gynecologist
Frank K. Morris, M.D.

Internes
J. P. Barnes, M.D.
Simon Brager, M.D.
J. H. Rutter, M.D.
F. T. Zimmerman, M.D.

Julius J. Leyko, M.D.
J. Benesunes, M.D.
C. P. Roetling, M.D.
M. Schapiro, M.D.
David Tenner, M.D.
M. Levinsky, M.D.
DISPENSARY STAFF OF MERCY HOSPITAL

Surgery Supervisors

ALEXIUS McGANNAN, M.D.

Attending Surgeons

D. H. Mohr, M.D.
I. O. Ridgesley, M.D.
JOHN O'CONNOR, M.D.

J. W. Nelson, M.D.

Genito-Urinary Surgery

A. J. Gillis, M.D.

Orthopaedic Surgery

ALBERTUS COTTON, M.D.

K. W. GOLLEY, M.D.

Medicine Supervisors

W. F. LOCKWOOD, M.D.

Attending Physicians

A. A. SUSSMAN, M.D., Chief of Clinic

J. M. MILLER, M.D.

A. W. KELLY, M.D.

Cardiovascular Diseases

A. A. SUSSMAN, M.D., Chief of Clinic

Diseases of the Lungs

S. Snyder, M.D., Chief of Clinic

Diseases of Metabolism

J. S. Eastland, M.D., Chief of Clinic
Diseases of Stomach  
Supervisor, Julius Friedenwald, M.D.

Attending Physicians
T. Frederick Leitz, M.D.  
M. Feldman, M.D.  
Theodore H. Morrison, M.D.  
Joseph Sindler, M.D.  
A. Eisenberg, M.D.  
I. I. Levy, M.D.

Esophagoscopist  
W. F. Zinn, M.D.

Nervous Diseases  
Supervisor, A. C. Gillis, M.D.

Attending Physicians  
Milford Levy, M.D.  
Robert Hodes, M.D.

Diseases of Women  
Supervisors
W. S. Gardner, M.D.  
A. Samuels, M.D.

Attending Surgeons
E. P. Smith, M.D.  
J. J. Erwin, M.D.  
T. K. Galvin, M.D.  
C. F. J. Coughlin, M.D.

E. Edlavitch, M.D.

Diseases of Nose and Throat
W. F. Zinn, M.D.  
F. A. Pacienza, M.D.  
B. McGowan, M.D.  
R. F. McKenzie, M.D.  
Louise Small, M.D.

Diseases of Eye and Ear
H. F. Fleck, M.D.  
J. I. Kemler, M.D.  
Bernard Wess, M.D.  
M. Raskin, M.D.  
F. A. Pacienza, M.D.

Dermatology  
Melvin Rosenthal, M.D.

Assistant  
William G. Coppage, M.D.

Social Service Department  
Sister M. Helen, R.N.  
Elise Linfert, A.M.
MERCY HOSPITAL DISPENSARY

<table>
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<th>Cases</th>
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<tr>
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<td>Genito-Urinary</td>
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</table>

OTHER CLINICAL FACILITIES

THE BALTIMORE CITY HOSPITALS

The clinical advantages of the University have been largely increased by the liberal decision of the Board of Supervisors of City Charities to allow the immense material of these hospitals to be used for the purpose of medical education. There are daily visits and clinics in medicine and surgery by the Staff of the Hospitals. The autopsy material is unsurpassed in this country in amount, thoroughness in study, and the use made of it in medical teaching.

The Baltimore City Hospitals consist of the following separate hospitals:

The General Hospital, 160 beds.
The Hospital for Chronic Cases, 180 beds.
The Hospital for Tuberculosis, 190 beds.
The Detention Hospital for Insane, 450 beds.
STAFF OF THE BALTIMORE CITY HOSPITALS

VISITING STAFF

ARTHUR M. SHIPLEY, Sc.D., M.D., Surgeon-in-Chief.
C. C. HABILITY, M.D., Physician-in-Chief to the Tuberculosis Hospital.
HARRY GOLDSMITH, M.D., Physician-in-Charge of the Detention Hospital for the Insane.
WILEY D. FORBUS, A.B., M.D., Visiting Pathologist.
W. D. HAWKINS, A.B., M.D., Resident Pathologist.

CONSULTING STAFF

Otologist
WILLIAM TARUN, M.D.

Gynecologists
R. G. WILSE, M.D.
J. MASON HUNDLEY, JR., M.A., M.D.

Urologist
W. H. TOULSON, A.B., M.D.

Laryngologists
H. R. SLACK, M.D.
FRANKLIN B. ANDERSON, M.D.

Pediatrician
JOHN RUHRAH, M.D.

Neurologist
OLIVER SMITH, A.B., M.D.

Psychiatrists
HENRY J. BERKLEY, M.D.
ADOLPH MEYER, M.D.

Orthopaedist
H. L. WHEELER, M.D.

Proctologist
G. MILTON LINTHICUM, A.B., M.D.

Assisting Visiting Physician
CHARLES R. AUSTRIAN, M.D.

Assistant Visiting Surgeons
FRANK S. LYNN, M.D.
C. A. REIFFSCHNEIDER, M.D.
E. M. HANRAHAN, A.B., M.D.
THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF MARYLAND FOR CRIPPLED CHILDREN

This institution contains 100 beds for the active treatment of deformities, a new fire-proof building having been recently added, with every possible facility for the operative and physical treatment of these cases. It owns an estate known as "Radnor Park," of colonial origin, comprising 75 acres, at Hillsdale, within the northwestern city limits, and may be reached by trolley.

This institution has city, state, endowed and private beds and rooms with private baths and terraces adjacent, overlooking a beautiful park-like environment, especially adapted for heliotherapy in tuberculosis, rachitic, osteomyelitic and arthritic conditions. A dairy and farm are maintained in connection with this hospital. The dispensary of this hospital is maintained across the street from the University Hospital, with which this institution is in close affiliation, for didactic, clinical, dispensary and bedside instruction.

It is the Orthopaedic Department of the University of Maryland, and maintained in connection with it is a well-equipped Physiotherapy branch, affording the student an opportunity to familiarize himself with the newer methods in the application of actinotherapy, diathermy, thermotherapy, electricity and hydrotherapy.

STAFF

Surgeon-in-Chief and Medical Director

R. Tunstall Taylor, A.B., M.D.

Associate Surgeons

Albertus Cotton, A.M., M.D.

Clement R. Monroe, M.D.


Harry L. Rogers, M.D.
Assistant and Dispensary Surgeons
Compton Riely, M.D.  
Arnold Lawson Jensen, B.Sc., M.D.  
Moses Gellman, A.B., M.D.

Consulting Surgeons
Randolph Winslow, A.B., M.A., M.D., LL.D.

Surgeon
Arthur M. Shipley, Sc.D., M.D.

Plastic Surgeon
John Staige Davis, B.Sc., M.D.

Neuro-Surgeon
Charles Bagley, Jr., A.B., M.D.

Consulting Oculist and Aurist
Hiram Woods, A.B., M.D., LL.D.

Oculist and Aurist
William Tabun, M.D.

Laryngologist
Edward A. Looper, M.D.

Assistant Laryngologists
F. B. Anderson, M.D.  
Everett L. Bishop, M.D.  
Allen Holden, M.D.  
Marshall P. Byerly, M.D.

Dentists
J. B. Bell, D.D.S.  
C. Merle Dixon, Jr., D.D.S.

Consulting Physicians
Lewellys F. Barker, A.B., M.D.  
Thomas B. Futcher, A.B., M.D.  
Thomas R. Brown, A.B., M.D.  
William S. Thayer, A.B., M.D.

Pediatrician
Benjamin Tappan, A.B., M.D.

Dermatologist
John R. Abercrombie, A.B., M.D.
Pathologist
SYDNEY M. CONE, A.B., M.D.

Attending Pathologist
HOWARD J. MALDEIS, M.D.

Neurologist
IRVING J. SPEAR, M.D.

Resident Surgeon
CLEMENT R. MONROE, M.D.

Resident Student Intern
SAMUEL PHILIP SARDO

Head Nurse
MISS GRACE LOVELL ELGIN, R.N.

Dispensary and Social Service Nurse
MISS MABEL S. BROWN, R.N.

Physiotherapists, Masseuses and Instructors in Corrective Gymnastics
MISS ANITA RENSHAW PRESSTMAN
MISS ELIZABETH EMORY

Mrs. Georgiana Wisong
MISS FLORENCE GRAPE

Roentgenologists
ALBERTUS COTTON, A.M., M.D.
HENRY J. WALTON, M.D.

MRS. GEORGIANA WISONG

Instructors in Grammar School
MISS MARY H. LEE, Principal
MISS MARY SAMPSON, Assistant

Superintendent and Business Manager
MRS. M. E. LANE
ST. VINCENT'S INFANT ASYLUM

The facilities of this institution, containing 250 infants and children, have been kindly extended to the University of Maryland by the Sisters of Charity. This large clinic enables this school to present to its students liberal opportunities for the study of diseases of infants and children.

STAFF

Obstetrician
Dr. L. H. Douglass

Pediatricians
Dr. W. C. Bacon
Dr. C. R. Goldsborough

Surgeon
Dr. N. Winslow

Dermatologist
Dr. J. A. Buchness

Oculists
Dr. C. A. Clapp

Orthopedic Surgeon
Dr. W. H. Daniels

Physician
Dr. C. P. Clatfice

Epidemiologist
Dr. H. E. Reifschneider
LIBRARIES

The University Library, founded in 1813 by the purchase of the collection of Dr. John Crawford, now contains 28,398 volumes, a file of 70 current (medical) journals, and several thousand pamphlets and reprints. It is well stocked with recent literature, including books and periodicals of general interest. The home of the Library is Davidge Hall, a comfortable and commodious building in close proximity to the classrooms and the Laboratories of the Medical Department. The Library is open daily during the year, except in August, for use of members of the Faculty, the students, and the profession generally.

The Library of the Medical and Chirurgical Faculty of Maryland, containing 50,000 volumes, is open to the students of the school. The leading medical publications of the world are received by the Library, and complete sets of many journals are available. Other Libraries of Baltimore are the Peabody (254,547 volumes) and the Enoch Pratt Free Library (558,324 volumes).

All these Libraries are open to the students of the school without charge.
ORGANIZATION OF THE CURRICULUM

The following curriculum is the result of a thorough revision of teaching in this school in order to meet modern requirements. The multiplication of specialties in medicine and surgery necessitates a very crowded course and the introduction of electives will very soon be depended on to solve some of the difficulties.

The curriculum is organized under eleven departments:
1. Anatomy (including Histology and Embryology).
2. Physiology.
3. Bacteriology and Immunology.
4. Biological Chemistry.
5. Pharmacology and Materia Medica.
6. Pathology.
7. Medicine (including Medical Specialties).
8. Surgery (including Surgical Specialties).

The instruction is given in four years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

The first and second years are devoted largely to the study of the structures and functions of the normal body. Laboratory work occupies most of the student’s time during these two years.

Some introductory instruction in Medicine and Surgery is given in the second year. The third and fourth years are almost entirely clinical.

A special feature of instruction in the school is the attempt to bring together teacher and student in close personal relationship. In many courses of instruction the classes are divided into small groups and a large number of instructors insures attention to the needs of each student.

In most courses the final examination as the sole test of proficiency has disappeared and the student’s final grade is determined largely by partial examinations, recitations and assigned work carried on throughout the course.
DEPARTMENT OF ANATOMY, INCLUDING HISTOLOGY
AND EMBRYOLOGY

C. L. Davis, M.D. ........................................... Professor of Anatomy
Eduard Uilenhuth, Ph.D. ................................. Associate Professor of Anatomy
John F. Lutz, M.D. ........................................ Instructor in Histology
Wm. R. Johnson, M.D. ................................. Assistant in Anatomy
Robt. W. Johnson, M.D. ................................. Assistant in Anatomy
Joseph Pokorny, M.D. ................................. Assistant in Histology
Jas. W. Nelson, M.D. ................................ Assistant in Histology
J. Hulla, M.D. ............................................ Assistant in Histology

Gross Anatomy. First Year. Three to four hours every day for approximately 30 weeks. The entire course centers around the dissection of the human body. Each student is given opportunity of dissecting an entire half (left or right) of the body. The dissection is supplemented by lectures and informal discussions.

Anatomy is taught as an independent science, emphasis being laid on the human species as contrasted to animal morphology. An attempt is made to familiarize the student with the elements of anthropometry, with systematic and regional anatomy, with the principles of topographical anatomy and with osteology.

The actual dissection is preceded by a general examination of the body surface and superficial organs. Opportunity is provided for taking representative measurements of the head, face, trunk and limbs and of acquiring a knowledge of using anthropometric instruments. Throughout the dissection the student is encouraged to take measurements and weights of all the major organs, including the brain and the endocrine organs, and to obtain a knowledge of the proportions of each organ to the body as a whole as well as to the variability of these proportions.

The dissection is undertaken in relation to topographical regions of the body, but systematic relations are continuously emphasized and, wherever possible, brought out by actual dissection.

Osteology is taught in conjunction with the dissection of the muscles and the study of the functional mechanism of the skeletomuscular apparatus. Each student is provided with a set of bones to aid him in his homework. A charge of $6 is made for each set, $4 of which is returned at the end of the year, while the remaining $2 are used for the upkeep of old and the purchase of new skeletal
material. Fifty complete and perfect skeletons of the whole body and about as many of the limbs are available for reference and special advanced work.

At the end of the course the entire work is reviewed in a series of lectures presenting the entire anatomical basis of the most representative physiological activities, such as respiration, secretion, digestion, endocrine activity, parturition, etc.

As a continuation of the knowledge gained from the dissection of the peripheral spinal and autonomic nervous system and as an introduction to neuro-anatomy, each student is given an opportunity to dissect a complete human brain.

Second, Third and Fourth Years. Opportunity is provided for advanced special dissections and for research work in every branch of anatomy. Dr. Eduard Uhlenhuth.

Histology and Embryology

First Year. Lectures, recitations and laboratory work, eight hours each week for thirty-two weeks. Histology and embryology are taught as a common subject, the histogenesis of a part preceding its histological study.

The most important part of the work will be done in the laboratory, where each student will be provided with apparatus, staining fluids and material necessary for the preparation of specimens for microscopical examination. An important aid to the course is the projection microscope and balopticon which are used for the projection upon a screen of magnified images of the specimens actually used in the laboratory, and of illustrations from standard text-books.

Each student is provided with a loan collection of histological slides, for which a deposit of $10 is required. This deposit is refunded upon the return of the slides in a satisfactory condition.

DEPARTMENT OF PHYSIOLOGY

Harry J. Deuel, Jr., Ph.D.................Professor of Physiology
Ferd A. Ries, M.D....................Associate Professor of Physiology
Charles C. Conser, M.D...............Associate Professor of Physiology
Samuel B. Wolfe, M.D...............Associate in Physiology
George A. Knipp, M.D................Instructor in Physiology

1. The required course consists of lectures, recitations, laboratory work, demonstrations and conferences in the first and second years.
First Year. One hour a week is devoted to the subject during the first year. The lectures are devoted to a general survey of the subject and to the physiology of digestion and blood.

Second Year. Three one-hour periods weekly throughout the year are devoted to lectures and recitations. At these lectures, charts, lantern slides and demonstrations are used. Three hours weekly during the first semester and six hours per week during the second semester are spent in the laboratory.

The laboratory work of the second year begins with a study of irritability and contractility and with methods of making precise quantitative physiological observations and controls, curve plotting, interpretation of data and the use of physiological apparatus. Students work in groups of two at completely equipped desks, and the material consists largely of the frog and turtle.

This is followed by experiments in which the students work in groups of four to six, largely upon mammals as well as themselves, and includes the subjects: circulation and body fluids, respiration, digestion, secretion, metabolism, internal secretion, central nervous system and special senses. Specially equipped laboratories are used for certain parts of the work. Students are taught to treat animals with the same consideration and interest as patients.

The work is arranged to illustrate fundamental principles of physiology and at the same time familiarize the students in methods of thought and technique essential to diagnosis and directly applicable to the clinic and bedside.

2. Clinical Physiology. During the second semester of the second year a one-hour clinic is held each week by the Department of Medicine to correlate physiology and medicine and serve as an introduction to the work of the clinical years.

3. Elective Work. This is offered to students of the third and fourth years, without credit, in the following subjects: basal metabolism, internal secretions and central nervous system.

4. Research. Hours to be arranged. The facilities of the laboratory are available to qualified persons to undertake original investigation, the laboratory bearing all reasonable expense for material.
DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY

FRANK W. HACHTEL, M.D...........................Professor of Bacteriology
WILLIAM ROYAL STOKES, M.D., Sc.D..................Professor of Bacteriology
J. A. F. PFEIFFER, M.D...........................Instructor in Bacteriology
HENRY F. BUETTNER, M.D..........................Instructor in Bacteriology

Instruction in bacteriology is given in the laboratory to the students of the second year during the first semester. This includes the various methods of preparation and sterilization of culture media, the study of pathogenic bacteria and the bacteriological examination of water and milk. The bacteriological diagnosis of the communicable diseases is also included in this course. Animal inoculations are made in connection with the bacteria studied. The most important protozoa are also studied in the laboratory. The principles of general bacteriology are taught by quiz, conference and lecture.

The principles of immunology are presented by means of quizzes, conferences and lectures to the second-year class throughout the second semester, and practical experiments are carried out by the class in laboratory sessions of three hours each, held twice weekly during the semester.

DEPARTMENT OF BIOLOGICAL CHEMISTRY

H. BOYD WYLIE, M.D..........................Professor of Biological Chemistry
FRANK N. OGDEN, M.D..........................Associate in Biological Chemistry
EMIL G. SCHMIDT, Ph.D...........................Associate in Biological Chemistry
RUTH F. CARR, B.S..........................Assistant in Biological Chemistry

Instruction in biological chemistry comprises laboratory work, lectures and conferences.

The laboratory work consists in the study of important indicators, volumetric solutions, buffer solutions, colloids and membrane phenomena followed by experiments illustrating the physical and chemical properties of carbohydrates, proteins and lipins. Subsequently, the examination of hydrolytic and oxidative enzymes, gastric contents, tissues of the body, bile, milk and the investigations of blood and urine chemistry conclude the assigned experimental work.
The lectures treat of laboratory technique, the chemistry of indicators, hydrogen-ion concentration, the physical chemistry of the cell, osmosis, diffusion, dialysis, the law of mass action, reversible reactions, catalysis and enzymes. The following lectures refer to the metabolism of water, salts, other inorganic substances, carbohydrates, proteins and lipids, vitamins and deficiency diseases, dietary requirements, basal metabolism, acid-base balance and, finally, the secretions and excretions.

The conferences are conducted by one of the instructors and take the form of short, written examinations and informal oral quizzes.

PHARMACOLOGY AND MATERIA MEDICA

WILLIAM HENRY SCHULTZ, Ph.B., Ph.D. .......... Professor of Pharmacology
O. G. HARNE, A.B. ................................ Associate Professor of Pharmacology
WILLIAM GLENN HARNE .......................... Assistant in Pharmacology
RUTH MUSSEr, A.B. ................................. Assistant in Pharmacology

1. MATERIA MEDICA AND PHARMACOLOGY. Fifty-six hours required.

The methods now used in presenting the subject-matter of Materia Medica and Prescription Writing have evolved as a result of some years of practical teaching. The science of Pharmacology has introduced methods of critical analysis in the choice of drugs proposed for use as medicine. As aids in determining the particular drugs chosen for study, use is made of the “United States Pharmacopoeia” and “New and Non-Official Remedies.”

Official titles, whenever practicable, are expressed in English and all quantities are stated in terms of the metric system. The only way to get away from the unscientific system of English weights and measures, and from a Latin system which few ever learn correctly, is to refuse to teach either one of them.

When possible, drugs are grouped according to their chemical composition and the influence of various radicals and side chains emphasized, whereas drugs, the chemistry of which is not definitely established, are grouped according to their dominant physiological action. Following the Pharmacology of a given group, their place in practical medicine is indicated, and the student is requested to
organize of the curriculum

prescribe same in suitable form. Thus a Materia Medica is developed throughout the course, based upon Pharmacological action of drugs.

2. Systematic Pharmacology. Ninety-six hours required. Second year. In this portion of the course the student is taught Pharmacology as a pure science. The aim is to attain a mean between that which has a purely scientific bearing and that dominantly practical, so that both a critical attitude toward drugs and an understanding of the principles of dosage may be acquired. This is accomplished by lectures, quizzes, conferences and the following course of laboratory exercises.

3. Pharmacodynamics. Ninety-six hours. Second Year. This laboratory course runs parallel with Pharmacology 2. Many of the most important problems of Immunology, Parasitic intoxications, and of Chemotherapy are essentially Pharmacological. In the first part of the course the experiments are upon normal animals, hence, primarily toxicological in character. In the latter part of the course more and more emphasis is laid upon what is now designated as chemo-therapeutic index of drugs.

4. Pharmacology of General and Local Anesthetics and Soporifics. Four weeks, three lectures, three laboratory periods a week. This is a special course designed to meet the needs of physician and graduate nurse who wish to acquire a knowledge of the more recent developments in the pharmacology of depressant and sleep-producing drugs. The course is so arranged that those properly qualified may continue the work under expert anesthetists in the wards of the hospitals connected with the university. Professor Schultz.

5. Research in Pharmacology and Chemo-Therapy. Properly qualified students are admitted to the laboratory with a view to their carrying on original investigations in drug action. Thoroughly equipped laboratories are well adapted for post-graduate study and research in Pharmacology. Hours will be arranged to suit the applicant. Professor Schultz.
DEPARTMENT OF PATHOLOGY

Hugh R. Spencer, M.D. .................................. Professor of Pathology
Standish McCleary, M.D. ................................. Professor of Pathology
Sydney M. Cone, M.D. .................................. Associate Professor of Pathology
Robert B. Wright, M.D. .................................. Assistant Professor of Pathology
Albert E. Goldstein, M.D. ............................... Associate in Pathology
M. Alexander Novey, M.D. ............................... Instructor in Pathology
Wm. S. Love, Jr., M.D. .................................. Instructor in Pathology
A. A. Sussman, M.D. .................................. Instructor in Pathology
Howard M. Bubert, M.D. .................................. Instructor in Pathology
Leon Freedom, M.D. .................................. Instructor in Pathology
M. H. Goodman, M.D. .................................. Instructor in Pathology
Walter C. Merkel, M.D. ................................. Instructor in Pathology
Samuel Glick, M.D. .................................. Assistant in Pathology
Benjamin Abeshouse, M.D. ............................... Assistant in Pathology
W. D. Hawkins, M.D. .................................. Assistant in Pathology
W. R. Johnson, M.D. .................................. Assistant in Pathology

Courses of instruction in Pathology are given during the second and third years. These courses are based on previous study of normal structure and function and aim to outline the natural history of disease. Instruction is made as practical as possible that the student may become familiar with the appearance of tissues in disease and may be able to correlate anatomical lesions with clinical symptoms and signs.

1. General Pathology and Histopathology. This course is given to second-year students. It includes the study and demonstration of disturbances of the body fluids, disturbances of structure, nutrition and metabolism of cells, disturbances of fat, carbohydrate and protein metabolism, disturbances in pigment metabolism, inflammation and tumors. The laboratory course consists in a daily preliminary talk on the subject for study, following which the student takes up the study of microscopical sections. Gross material from autopsy and from the museum is demonstrated in conjunction with the microscopical sections.

2. Applied Pathology, Including Gross Morbid Anatomy and Morbid Physiology. Third-year Students. In this course the special relationship of the gross and microscopical lesions to clinical symp-
toms and signs is emphasized. Fresh material from autopsy collected at the various hospitals is demonstrated and supplemented by a study of the respective autopsy protocols.

3. AUTOPSIES. Third Year. Autopsy technique is taught to small groups of students by special instruction at autopsies performed at the various hospitals. Students are required to assist at the autopsy, study the organs, examine the microscopical sections, make cultures and prepare autopsy protocols.

4. CLINICAL PATHOLOGY CONFERENCE. Fourth Year. In collaboration with the Department of Medicine. Material from autopsies is studied with reference to the correlation of the clinical aspects with the pathological findings.

5. ADVANCED WORK IN PATHOLOGY. Properly qualified students will be permitted to carry out advanced or research work along the lines of experimental pathology.
## DEPARTMENT OF MEDICINE

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<tr>
<th>Name</th>
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<tr>
<td>Maurice C. Pincoffs, B.S., M.D.</td>
<td>Professor of Medicine</td>
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<td>Gordon Wilson, M.D.</td>
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<td>Charles W. McELFRESH, M.D.</td>
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<td>Harvey G. Beck, Sc.D., M.D.</td>
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<td>H. J. Maldeis, M.D.</td>
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<td>S. Lloyd Johnson, M.D.</td>
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<td>George McLean, M.D.</td>
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<td>J. S. Eastland, M.D.</td>
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<td>T. Nelson Carey, M.D.</td>
<td>Assistant in Medicine</td>
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GENERAL OUTLINE

SECOND YEAR

Introduction to clinical medicine.
   (a) Introductory physical diagnosis.
       (1 hour a week, first semester.)
       (2 hours a week, second semester.)
   (b) Medical clinics.
       (1 hour a week, second semester.)

THIRD YEAR

I. The methods of examination (13 hours a week).
   (a) History taking.
   (b) Physical diagnosis.
   (c) Clinical pathology.

These subjects are taught and practiced in the out-patient department and in the clinical laboratory.

II. The principles of medicine (7 hours a week).
   (a) Lectures, clinics and demonstrations in general medicine, neurology, pediatrics and preventive medicine.

III. The principles of therapeutics (2 hours a week).
    Lectures and demonstrations in general therapeutics, physical therapeutics and materia medica.

FOURTH YEAR

The practice of medicine.

I. Clinical clerkship on the medical wards.
   (26 hours a week for ten weeks.)
   (a) Responsibility, under supervision, for the history, physical examination, laboratory examinations and progress notes of assigned cases.
   (b) Ward classes in general medicine, the medical specialties, and therapeutics.

II. Clinics in general medicine and the medical specialties.
   (6 hours a week.)

III. Dispensary work in the medical specialties.

IV. Clinical pathological conferences (1 hour a week.)

Medical Dispensary Work

The medical dispensaries of both the Mercy and the University Hospitals are utilized for teaching in the third year. Each student spends two periods a week of two hours each in dispensary work.
The work is done in groups of four to six students under an instructor. Systematic history-taking is especially stressed. Physical findings are demonstrated. The student becomes familiar with the commoner acute and chronic disease processes.

Physical Diagnosis

Second Year. Didactic lectures and practical demonstrations in topographical anatomy and normal physical signs.

Third Year. The class is divided into small groups, and each section receives instruction for four hours a week for the entire session in the medical dispensaries of the hospitals. The large clinical material of the dispensaries and hospitals is utilized to give each student the opportunity to familiarize himself with the common types of bodily structure, with the normal variations in physical signs and with the physical signs of the chief pulmonary, circulatory and abdominal diseases.

Therapeutics

Third Year. General therapeutics and materia medica are taken up and an effort is made to familiarize the student with the practical treatment of disease. The special therapy of the chief diseases is then reviewed. Two hours a week. Dr. Lockard.

The principles of physical therapy are taught in a special lecture and demonstration course consisting of six one-hour periods. Dr. Gichner.

Fourth Year. Special consideration is given to the practical application of therapeutic principles in bedside teaching and the chief therapeutic methods are demonstrated.

Tuberculosis

During the third year in connection with the instruction in physical diagnosis a practical course is given weekly to sections of the class at the Municipal Tuberculosis Hospital. Stress is laid upon the recognition of the physical signs of the disease, as well as upon its symptomatology and gross pathology.
Syphilis

Third Year. During the third year the subject of syphilis will be dealt with in the lecture course.

Fourth Year. An elective course in the therapeutic management of syphilis will be offered in the dispensary.

CLINICAL PATHOLOGY

JOHN G. HUCK, M.D. ......................... Assistant Professor of Medicine
Head of Department of Clinical Pathology

H. J. MALDEIS, M.D. ............. Associate Professor of Medical Jurisprudence

M. G. GICHNER, M.D. ......................... Instructor in Medicine

WILLIAM A. STRAUSS, M.D. ......................... Instructor in Medicine

R. HOOVER SMITH, M.D. ......................... Assistant in Medicine

During the third year the student is thoroughly drilled in the technique of the usual clinical laboratory work, so that he is able to perform all routine examination which may be called for during his fourth year, in connection with the work in the wards and dispensary.

The practical work is supplemented by a series of didactic lectures and demonstrations in which the entire teaching staff of the department takes an active part. The microscopical and chemical study of blood, exudates and transudates, gastric juice, spinal fluid, feces and urine are successively taken up, and special attention directed to the clinical significance of the findings.

Clinical parasitology from the standpoint of the infecting agent and the carrier is given careful consideration.

The entire course is thoroughly practical. Each student has his own microscope and is provided with blood counters and hemoglobinometer for his exclusive use, and every two students with a special laboratory outfit for all routine purposes.

During the fourth year the student applies what he has learned during the preceding year in the laboratories of the various affiliated hospitals. He is also supplied with a laboratory outfit which is sufficiently complete to enable him to work independently of the general equipment. Special instructors are available during certain hours to give necessary assistance and advice.
ORGANIZATION OF THE CURRICULUM

GASTRO-ENTEROLOGY

Julius Friedenwald, A.M., M.D. .......... Professor of Gastro-Enterology
T. Fred Leitz, M.D. ................. Clinical Professor of Gastro-Enterology
J. Harry Ullrich, M.D. .............. Associate Professor of Gastro-Enterology
Theodore H. Morrison, M.D. ....... Associate Professor of Gastro-Enterology
Maurice Feldman, M.D. .............. Assistant Professor of Gastro-Enterology
Zachariah Morgan, M.D. .......... Associate in Gastro-Enterology
Joseph Sindler, M.D. ............... Instructor in Gastro-Enterology
M. S. Koppelman, M.D. ............ Instructor in Gastro-Enterology
N. J. Davidov, M.D. ................. Instructor in Gastro-Enterology
Albert Eisenberg, M.D. ............ Instructor in Gastro-Enterology
I. S. Zinberg, M.D. ................. Instructor in Gastro-Enterology
Isidore I. Levy, M.D. .............. Instructor in Gastro-Enterology
Leo T. Brown, M.D. ................. Assistant in Gastro-Enterology
C. Vance Hooper, M.D. ............ Assistant in Gastro-Enterology

Fourth Year. Clinics, recitations and demonstrations to the class for one hour a week throughout the session. Dispensary instruction to small groups throughout the entire session. Practical instruction in the differential and clinical diagnosis and demonstrations of the newer methods of diagnosis in gastro-intestinal affections.

PSYCHIATRY

R. M. Chapman, M.D. .................. Professor of Psychiatry
H. S. Sullivan, M.D. ............... Associate Professor of Psychiatry
Harry Goldsmith, M.D. .............. Instructor in Psychiatry

Third Year. In the third year the student attends fifteen clinical lectures and five clinics which are designed to be introductory to the more intensive work in psychiatry in the fourth year.

Fourth Year. The class is divided into sections for clinical conferences on selected groups of cases. Each student may work for a short period as assistant in the Mental Hygiene Clinic, and thus gain practical experience of the problems of history-taking, examination, and the care of psychiatric patients.
ORGANIZATION OF THE CURRICULUM

PEDIATRICS

Charles L. Summers, M.D. .................................. Professor of Pediatrics
Edgar B. Friedenwald, M.D. ................................ Professor of Clinical Pediatrics
C. Loring Joslin, M.D. ......................................... Clinical Professor of Pediatrics
John H. Traband, M.D. ......................................... Associate in Pediatrics
Clarence E. Macke, M.D. ....................................... Associate in Pediatrics
Albert Jaffe, M.D. .............................................. Associate in Pediatrics
William J. Todd, M.D. .......................................... Instructor in Pediatrics
F. Stratner Orem, M.D. .......................................... Instructor in Pediatrics
William G. Geyer, M.D. ......................................... Instructor in Pediatrics
George A. Knipp, M.D. ......................................... Instructor in Pediatrics
Bernard J. Ferry, M.D. .......................................... Instructor in Pediatrics
I. J. Feinglos, M.D. .............................................. Instructor in Pediatrics
Frederick B. Dart, M.D. ......................................... Instructor in Pediatrics
R. M. Hening, M.D. .............................................. Instructor in Pediatrics
Marie Kovner, M.D. .............................................. Instructor in Pediatrics
Clewell Howell, M.D. ............................................ Instructor in Pediatrics
Samuel Glick, M.D. .............................................. Instructor in Pediatrics
Elizabeth Sherman, M.D. ....................................... Instructor in Pediatrics
M. N. Puttermann, M.D. ......................................... Instructor in Pediatrics
A. H. Finkelstein, M.D. ......................................... Instructor in Pediatrics
Louis T. Lavy, M.D. ............................................. Assistant in Pediatrics
Benjamin Miller, M.D. .......................................... Assistant in Pediatrics
E. V. Teagarden, M.D. .......................................... Assistant in Pediatrics
S. C. Feldman, M.D. ............................................ Assistant in Pediatrics

Third Year. Instruction during the third year consists of one lecture each week in which infant feeding and the most important diseases of infancy and childhood are especially emphasized. Drs. Summers and Friedenwald.

Fourth Year. During this year a weekly clinical lecture is given where the character of disease is fully demonstrated and the students are afforded an opportunity for personal examination of all cases. In addition, ward classes are held weekly where bedside instruction is given. A section of the class also works daily at the Babies' and Children's Clinic. This clinic, which is under the direction of Dr. Summers, has a yearly attendance of more than twenty thousand, and offers an excellent opportunity for study and observation of a wide variety of cases under competent instructors.

Instruction is also given on the Children’s Ward at the Mercy Hospital.
NEUROLOGY

Irving J. Spear, M.D. ................................ Professor of Neurology
Andrew C. Gillis, A.M., M.D., LL.D. ................. Professor of Neurology
G. M. Settle, A.B., M.D.,
Associate Professor of Neurology and Clinical Medicine
Benjamin Pushkin, M.D. .......... Associate Professor of Clinical Neurology
Milford Levy, M.D. .................................... Associate in Neurology
Leon Freedom, M.D. ................................. Associate in Neurology
Robert Hodes, M.D. ................................. Instructor in Neurology

Third Year. Lectures and recitations one hour each week to the entire class. Instruction in clinical neurology two hours a week at the City Hospital to small groups. By means of didactic lectures and clinical conferences, there are considered the commoner types of diseases of the nervous system, the methods of neurological examination, and the relationship of signs and symptoms to pathological conditions. The material at the University and Mercy Hospitals is available.

Fourth Year. Clinical conference one hour each week to the entire class. This subject is taught at the University and Mercy Hospitals. All cases presented at these clinics are carefully examined; complete written records are made by the students who demonstrate the cases before the class. The cases are usually assigned one or two weeks before they are presented, and each student in the class must prepare one or more cases during the year.

Ward Class Instruction. In small sections at the University and Mercy Hospitals. In these classes the students come in close personal contact with the cases in the wards under the supervision of the instructor.

Dispensary Instruction. Small sections are instructed in the dispensaries of the University and Mercy Hospitals four afternoons each week. In this way students are brought into contact with nervous diseases in their earlier as well as later manifestations.

HYGIENE AND PREVENTIVE MEDICINE

C. Hampson Jones, M.D., C.M. ........ Professor of Hygiene and Public Health
V. L. Ellicott, M.D. .................... Instructor in Hygiene and Public Health
M. G. Tull, M.D. ........................ Instructor in Hygiene and Public Health
Third Year. Two lectures a week throughout the session. The lectures will encompass the fundamental subjects: air, water, soil, food, disposal of wastes, communicable diseases, state and federal public health laws, and industrial diseases. Small groups visit the Sydenham Hospital weekly and are given practical instruction in the diagnosis, treatment and isolation of the contagious diseases.

Fourth Year. Small groups visit the City Board of Health Laboratories for practical instruction in the laboratory, field and administrative aspects of public health work.

MEDICAL JURISPRUDENCE

H. J. Maldeis, M.D.............Associate Professor of Medical Jurisprudence
Baltimore City Post Mortem Physician

Fourth Year. One hour each week for one semester.

Inasmuch as Medical Jurisprudence teaches the application of every branch of medical knowledge to the needs of the law, civil or criminal, this course embraces the following: Proceedings in criminal and civil prosecution; medical evidence and testimony; identity in its general relations; sexual abnormalities; personal identity; impotence and sterility; rape; criminal abortions; signs of death; wounds in their medico-legal relations; death, natural and homicidal; malpractice; insanity and medico-legal autopsies.
DEPARTMENT OF SURGERY

Arthur M. Shipley, Sc.D., M.D. .................................. Professor of Surgery
Alexius McGlannan, A.M., M.D. .................................. Professor of Surgery
Nathan Winslow, A.M., M.D. ..................................... Clinical Professor of Surgery
Page Edmunds, M.D. .............................................. Clinical Professor of Industrial Surgery
Walter D. Wise, M.D. ............................................. Clinical Professor of Surgery
Joseph W. Holland, M.D. .......................................... Clinical Professor of Surgery
Frank S. Lynn, M.D. .............................................. Clinical Professor of Surgery
Elliot H. Hutchins, A.M., M.D. .................................. Clinical Professor of Surgery
Thomas R. Chambers, A.M., M.D. ............................... Associate Professor of Surgery
R. W. Locher, M.D. ................................................ Associate Professor of Operative and Clinical Surgery
Charles Reid Edwards, M.D. ...................................... Associate Professor of Surgery
A. M. Evans, M.D. ................................................. Associate Professor of Surgery
F. L. Jennings, M.D. ................................................ Associate Professor of Surgery
E. H. Hayward, M.D. ............................................... Associate in Surgery
E. S. Johnson, M.D. ................................................ Associate in Surgery
C. A. Reifsneider, M.D. ........................................... Associate in Surgery
M. J. Hanna, M.D. ................................................ Associate in Surgery
H. M. Foster, M.D. ................................................. Associate in Surgery
D. J. Pessagno, M.D. ............................................... Associate in Surgery
C. F. Horine, M.D. ................................................ Instructor in Surgery
Monte Edwards, M.D. ............................................. Instructor in Surgery
I. O. Ridgely, M.D. ................................................ Instructor in Surgery
W. R. Johnson, M.D. ............................................... Instructor in Surgery
E. M. Hanrahan, A.B., M.D. ....................................... Instructor in Surgery
H. F. Bongardt, M.D. ............................................... Instructor in Surgery
Dwight Mohr, M.D. ................................................ Assistant in Surgery
Wm. R. Geraghty, M.D. ........................................... Assistant in Surgery
S. Demarco, M.D. ................................................ Assistant in Surgery
Clyde Marvel, M.D. ................................................. Assistant in Surgery
H. M. McElwain, M.D. ............................................. Assistant in Surgery
J. G. Onnen, M.D. ................................................ Assistant in Surgery
James Brown, M.D. ................................................ Assistant in Surgery
A. V. Buchness, M.D. ............................................. Assistant in Surgery
Karl J. Steinmueller, A.B., M.D. ................................. Assistant in Surgery
Thomas B. Aycock, A.B., M.D. ................................. Assistant in Surgery
Robert W. Johnson, M.D. ......................................... Assistant in Surgery

The teaching is done in the Anatomical Laboratory and the dispensaries, wards, clinical laboratories and operating rooms of the University and Mercy Hospitals, and in the wards and dead-house of the Baltimore City Hospital.

Instruction is given by means of lectures, recitations, dispensary work, bedside instruction, ward classes, and clinics. The work begins in the second year, and continues throughout the third and fourth years.
Second Year

Topographic and Surgical Anatomy. Ten hours a week for the first semester. The course is designed to bridge the gap between anatomy in the abstract, and clinical anatomy as applied to the study and practice of medicine and surgery.

The teaching is done in the anatomical laboratory, and students are required to demonstrate all points, outlines, and regions on the cadaver. Underlying regions are dissected when necessary to bring out outlines and relations of structures.

Didactic Lectures. Two hours a week for one semester, augmented by demonstrations with specimens, charts, and cross section. Dr. Holland.

Laboratory. Twelve hours a week for 8 weeks. Dr. Hanna, assisted by Drs. Brady, Hundley, Boyd, Jacobson, and Mr. Clark.

Principles of Surgery. This course includes history-taking, records of physical examinations and of operations and progress notes; the preparation of surgical dressings, suture materials and solutions. It includes inflammation, infections, ulcers, gangrene, fistulae and sinuses, hemorrhage and shock; the use of splints, bed frames, bone plates, bone grafts, etc., local anaesthesia and the preparation of patients for operations. Lectures and conferences. Two hours per week for one semester to the entire class. Dr. Edwards.

Third Year

General and Regional Surgery. Principles of surgery and general surgery, three hours a week throughout the year to the entire class, lectures, recitations and clinics. Dr. Shipley.

The class is divided into groups and receives instruction in history-taking, gross pathology, and surgical diagnosis—at the bedside and in the dead-house of the Baltimore City Hospital. Drs. Shipley, Lynn and Reischneider.

Operative Surgery. Instruction is given in operative surgery upon the cadaver and on dogs. The class is divided into sections, and each section is given practical and individual work under the supervision of the instructors. Dr. Frank S. Lynn, assisted by Drs. Nathan Winslow, Hayward, E. S. Johnson, Foster, Geraghty,

Fractures and Dislocations. Twenty-four hours to the entire class. This course consists of instruction in the various forms of fractures and dislocations and their treatment, and serves as a preparatory course for clinical work. Drs. Wise and Jennings.

Surgical Dispensary. Under supervision, the student takes the history, makes the physical examinations, attempts the diagnosis, and, as far as possible, carries out the treatment of the ambulatory surgical cases in the University and in the Mercy Hospitals. Mercy Hospital—Drs. Dwight Mohr, Ridgely, Passagno, Bongardt and McElwain. University Hospital—Drs. Holland, Lynn, Nathan Winslow, Edwards, E. S. Johnson and Foster.

Fourth Year

Clinics. A weekly clinic will be given at the Mercy and at the University Hospitals to one-half the class throughout the year. As far as possible this is a diagnostic clinic. Mercy Hospital—Dr. McGlannan. University Hospital—Dr. Shipley.

Surgical Pathology. A weekly exercise of one hour at Mercy Hospital for one semester, at which specimens from the operating-room and museum are studied in the gross and microscopically, in relation with the case history. Dr. McGlannan.

Industrial Surgery. Operative and post-operative treatment of accident cases, with instructions as to the relationship between the state, the employee, the employer, and the physician’s duty to each. One hour a week to sections of the class throughout the year. Dr. Edmunds.

Clinical Clerkship. The personal study of assigned hospital patients, under supervision of the staffs of University and of Mercy Hospitals, history-taking, and physical examination of patients, laboratory examinations, attendance at operations and observation of post-operative treatment.

ANAESTHESIA

Second Year


Eight hours to the entire class. Drs. S. Griffith Davis and W. G. Queen.

Fourth Year

During the clinics and operations before small groups, each student will be required to observe the administration of anaesthetics and to keep a chart recording blood pressure, pulse and respiration under the direction of an instructor.

DERMATOLOGY

Melvin Rosenthal, M.D. ............... Associate Professor of Dermatology
Harry M. Robinson, M.D. ............... Associate Professor of Dermatology
John R. Abercrombie, A.B., M.D. ............... Associate in Dermatology
A. C. Monninger, M.D. ............... Assistant in Dermatology
Harry Wasserman, M.D. ............... Assistant in Dermatology

Clinical conferences one hour each week to entire class. This course will consist of demonstrations of the common diseases of the skin.

Dispensary instruction, University Hospital, Mondays, Wednesdays and Fridays in the diagnosis and treatment of the common skin diseases. Drs. Abercrombie, Robinson and Gately. Dispensary instruction, Mercy Hospital. Dr. Rosenthal.

ORTHOPAEDIC SURGERY

R. Tunstall Taylor, A.B., M.D. ............... Professor of Orthopaedic Surgery
Albertus Cotton, A.M., M.D. ............... Professor of Orthopaedic Surgery
Compton Riely, M.D. ............... Clinical Professor of Orthopaedic Surgery
In this course didactic, clinical, bedside and out-patient instruction will be given. This instruction is provided in the University Hospital Amphitheatre, Mercy Hospital and Dispensary and Kernan Hospital and Industrial School for Crippled Children at "Radnor Park" and in the Dispensary of the University Hospital.

Lectures or clinics will be held at each of the hospitals named in town once a week. In addition, a weekly bedside clinic will be held for small sections of the class at "Radnor Park" and Mercy Hospital. Sectional quizzes are held at stated intervals with mid-year and final examinations.

The course will cover instruction in the special methods of examination, pathology, diagnosis and treatment in this specialty. X-ray interpretation will be stressed. The lectures will cover:

- Tuberculosis of the spine, bones and joints; non-tuberculous affections of the spine, bones and joints; fractures, non-union, mal-union, pyogenic infections, malignancy, abnormalities and the arthritides.
- Surgery of the hands and feet.

A brief outline and demonstration will also be given of the apparatus employed in Physiotherapy in using Actinotherapy, Thermotherapy, Electrotherapy, Hydrotherapy, Massage and Corrective Gymnastics in treating bone, joint and muscular disabilities.

**ROENTGENOLOGY**

Harry L. Rogers, M.D. Associate in Orthopaedic Surgery
Clement R. Monroe, M.D. Associate in Orthopaedic Surgery
Clifford Lee Wilmotth, B.S., M.D. Associate in Orthopaedic Surgery
Moses Gellman, M.D. Instructor in Orthopaedic Surgery
Arnold Lawson Jensen, B.Sc., M.D. Instructor in Orthopaedic Surgery

Henry J. Walton, M.D. Professor of Roentgenology
Albertus Cotton, M.D. Professor of Roentgenology
Eugene L. Flippin, M.D. Assistant in Roentgenology

An effort is made to familiarize the student with the appearance of normal Roentgenograms, after which instruction is given in the interpretation of the more common pathological lesions seen on the X-ray films and fluoroscopic screen. The history, physics and prac-
tical application of Roentgen Rays are alluded to, but not stressed. Weekly demonstrations are given to sections of the fourth year class.

**DIATHERMY AND RADIUM THERAPY**

**Charles Reid Edwards, M.D.,**

*Associate Professor of Surgery*

Students are taken in groups and are taught the indications for the use of radium in the treatment of malignant and non-malignant conditions. The course also includes the use of diathermy in the treatment of disease.

**DISEASES OF THE THROAT AND NOSE**

**Edward A. Looper, M.D.**...Clinical Prof. of Diseases of the Throat and Nose

**W. F. Zinn, M.D.**...Associate Prof. of Diseases of the Throat and Nose

**Franklin B. Anderson, M.D.**...Associate in Diseases of the Throat and Nose

**R. F. McKenzie, M.D.**....Instructor in Diseases of the Throat and Nose

*Third Year.* Instruction to entire class is given in the common diseases of the nose and throat, attention being especially directed to infections of the accessory sinuses, the importance of focal infections in the etiology of general diseases and modern methods of diagnosis. Lectures are illustrated by lantern slides. Dr. Looper.

*Fourth Year.* Dispensary instruction daily to small sections at the University and the Mercy Hospitals. The student is given opportunity to study, diagnose and treat practical cases under an instructor. Ward classes and clinical demonstrations are given one and one-half hours weekly throughout the session in the University and the Mercy Hospitals.

**GENITO-URINARY DISEASES**

**Anton G. Rytina, A.B., M.D.**.............Professor of Genito-Urinary Diseases

**W. H. Toulson, A.B., M.Sc., M.D.**

*Associate Professor of Genito-Urinary Diseases*

**A. J. Gillis, M.D.**.............Associate Professor of Genito-Urinary Diseases

**Harris Goldman, M.D.**.............Associate in Genito-Urinary Diseases

**Austin H. Wood, M.D.**.............Associate in Genito-Urinary Diseases

**L. K. Fargo, M.D.**.............Instructor in Genito-Urinary Diseases

**H. C. Knapp, M.D.**.............Assistant in Genito-Urinary Diseases
Third Year. Eight hours to the entire class. This course is a didactic one in the principles of Genito-Urinary Surgery. Dr. Toulson.

Fourth Year. The course includes urethroscopy, cystoscopy, ureter catheterization, renal functional tests, urography, urine cultures, etc. The teaching consists of clinics in the amphitheater, ward rounds, and attendance by members of the Senior class upon our patients in the dispensary. The dispensary classes are carried on both at the Mercy and the University Hospital dispensaries. In the latter institution the Maryland State Department of Health conducts a venereal-disease clinic, in which 20,133 visits were paid last year. Every variety of venereal disease is here encountered, and this rich wealth of material is available for teaching purposes. In addition to this, a cystoscopic clinic is conducted in another part of the dispensary, where the students are given practical instruction in the modern diagnostic methods.

DISEASES OF THE COLON AND RECTUM

G. Milton Linthicum, A.M., M.D.,
Professor of Diseases of Rectum and Colon

Charles F. Blake, M.D. Professor of Diseases of Rectum and Colon

J. Dawson Reeder, M.D.,
Associate Professor of Diseases of Rectum and Colon

L. J. Rosenthal, M.D.,
Associate Professor of Diseases of Rectum and Colon

Monte Edwards, M.D. Instructor in Diseases of Rectum and Colon

Third Year. Six hours to the entire class. This course is for instruction in the diseases of the colon, sigmoid flexure, rectum and anus, and will cover the essential features of the anatomy and physiology of the large intestine as well as the various diseases to which it is subject. Dr. Linthicum.
The class is divided into sections for clinical instruction in the Baltimore City Hospital. Dr. Linthicum.

*Fourth Year.* Ward and Dispensary instruction is given in the University and Mercy Hospitals, where different phases of the various diseases are taught by direct observation and examination. The use of the proctoscope and sigmoidoscope and examination of the rectum and sigmoid is made familiar to each student. Mercy Hospital—Drs. Blake and Rosenthal. University Hospital—Drs. Linthicum and Reeder.

**BRONCHOSCOPY AND ESOPHAGOSCOPY**

*Waitman F. Zinn, M.D.*

*Associate Professor of Diseases of Throat and Nose*

Clinical Lectures and Demonstrations once weekly at University and Mercy Hospitals.

Etiology, symptomatology, diagnosis and prophylaxis of foreign bodies in the air and food passages. Bronchoscopy as an aid in the diagnosis and treatment of diseases of the lungs. Bronchoscopy as an aid to the surgeon. Diseases of the trachea. Diseases of the esophagus. All the phases of these subjects that the general practitioner should know are demonstrated clinically.

**DEPARTMENT OF OBSTETRICS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. M. H. Rowland, M.D.</td>
<td>Professor of Obstetrics</td>
</tr>
<tr>
<td>L. H. Douglass, M.D.</td>
<td>Professor of Clinical Obstetrics</td>
</tr>
<tr>
<td>Charles E. Brack, M.D.</td>
<td>Clinical Professor of Obstetrics</td>
</tr>
<tr>
<td>J. McF. Bergland, M.D.</td>
<td>Associate Professor of Obstetrics</td>
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<tr>
<td>E. P. Smith, M.D.</td>
<td>Associate in Obstetrics</td>
</tr>
<tr>
<td>Emil Novak, M.D.</td>
<td>Associate in Obstetrics</td>
</tr>
<tr>
<td>J. G. M. Reese, M.D.</td>
<td>Associate in Obstetrics</td>
</tr>
<tr>
<td>M. A. Novey, A.B., M.D.</td>
<td>Associate in Obstetrics</td>
</tr>
<tr>
<td>Dudley Pleasants Bowe, M.D.</td>
<td>Instructor in Obstetrics</td>
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<tr>
<td>J. G. Murray, Jr., A.B., M.D.</td>
<td>Instructor in Obstetrics</td>
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<tr>
<td>Maurice Lazenby, M.D.</td>
<td>Instructor in Obstetrics</td>
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<tr>
<td>J. J. Erwin, M.D.</td>
<td>Instructor in Obstetrics</td>
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<tr>
<td>Isadore A. Siegel, A.B., M.D.</td>
<td>Instructor in Obstetrics</td>
</tr>
<tr>
<td>Maurice Shamer, M.D.</td>
<td>Assistant in Obstetrics</td>
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<tr>
<td>Knight Reynolds, B.S., M.D.</td>
<td>Assistant in Obstetrics</td>
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</tbody>
</table>
Third Year. Three lectures and recitations each week by Drs. Bergland, Novak, Murray, Douglass and Rowland to entire class. Manikin Work, Drs. Brack, Smith and Erwin to sections of class at Mercy Hospital, and Drs. Douglass, Reese, Novey, Siegel and Rowland at University Hospital.

Fourth Year. Clinical Conference. One hour each week. Drs. Rowland, Douglass, Murray and Lazenby.

Ward Classes. Six hours per week for five weeks to sections of class at University Hospital. Drs. Douglass, Reese, Novey, Reynolds and Rowland.

DEPARTMENT OF GYNECOLOGY

William S. Gardner, M.D. Professor of Gynecology
Hugh Brent, M.D. Associate Professor of Gynecology
Abraham Samuels, M.D. Associate Professor of Gynecology
George A. Strauss, M.D. Associate in Gynecology
R. G. Willse, M.D. Associate in Gynecology
T. K. Galvin, M.D. Associate in Gynecology
J. M. Hundley, Jr., M.D. Associate in Gynecology
Leo Brady, M.D. Associate in Gynecology

Third Year. Didactic Work. A course of thirty lectures and recitations.

Clinical Work. Six hours weekly for one trimester. In this course the student writes the clinical history of each patient in the ward, makes a general physical examination, including the blood and urine, before the patient is brought before the class. One student under supervision gives the anaesthetic, a pelvic examination is made by six students, and any operation required is then done before a section of the class small enough to see clearly what is being done and how it is done. On a subsequent day the whole group examines, microscopically, sections prepared from material removed from patients that have been before them.

DEPARTMENT OF OPHTHALMOLOGY AND OTOLOGY

Harry Friedenwald, A.B., M.D. Professor of Ophthalmology and Otology
J. W. Downey, M.D. Clinical Professor of Otology
M. Randolph Kahn, M.D. Clinical Professor of Ophthalmology
H. K. Fleck, M.D. Associate in Ophthalmology
Joseph I. Kemler, M.D. Associate in Ophthalmology
**Third Year.** First semester, **Course in Diseases of the Eye.** Dr. Randolph Kahn. Second semester, **Course in Diseases of the Ear.** Dr. Downey.

**Practical Course in Ophthalmoscopy,** once weekly, in sections. Dr. Kemler.

**Fourth Year.** **Clinics in Diseases of the Eye and Ear,** weekly. Drs. Harry Friedenwald and Downey.

**Ward Studies** of ocular and aural lesions associated with general medical diseases, once weekly in sections. Dr. Friedenwald.

**Dispensary Instruction,** daily to small sections. Drs. Downey, Kahn, Fleck and Kemler.

The courses in Ophthalmology and Otology are designed to familiarize the students with the common diseases of the eye and ear, their recognition and treatment, with a view to meet the needs of the general practitioner. Special emphasis is laid upon the relation between diseases of the eye and the ear and systemic diseases and diseases of other organs.

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**THE HISTORY OF MEDICINE**

**John Rathbone Oliver, A.B., M.D., Ph.D.**

*Professor of the History of Medicine*

During the past year a series of lectures was given from March to May, inclusive. It was found impossible to get together a group of students for seminary work but this idea is not given up but merely postponed. The lectures of this year began with the later years of the Revival of Learning and have dealt chiefly with the Seventeenth Century. Harvey, von Helmont and Sydenham have been studied in detail as well as the beginnings of medical life and practice in the American Colonies. Next year we hope to cover the Eighteenth and at least the first half of the Nineteenth Century. Our present scheme is to cover the entire field of the History of Medicine in four series of lectures so that each medical student if he attends every year will have at the end of his four year course a fairly complete review of the History of Medicine. As formerly,
the lectures this year have been illustrated with lantern slides and
the thanks of the Department are especially due to the Surgeon
General’s Library in Washington which has allowed us to photo-
graph some of their valuable items for our slides. During the lec-
tures also the students have been allowed to handle and look through
copies of the most important works of all those medical authors who
have been mentioned in the lectures.
## FIRST YEAR SCHEDULE
### SESSION 1928-1929

<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
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<tbody>
<tr>
<td>A. M. 9-10</td>
<td>Histology and Embryology</td>
<td>Histology and Embryology</td>
<td>Histology and Embryology</td>
<td>Biological Chemistry</td>
<td>Biological Chemistry</td>
<td>Oct. 1, 1928 To Apr. 1, 1929</td>
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<tr>
<td>10-11</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Anatomy</td>
</tr>
<tr>
<td>11 to 12</td>
<td>Laboratory and C. H.</td>
<td>Physiology and C. H.</td>
<td>Laboratory</td>
<td>Section A.</td>
<td>Section B.</td>
<td>Laboratory and C. H.</td>
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<tr>
<td>12 M. to 1 P. M.</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
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### AFTERNOON SCHEDULE
**FROM OCTOBER 1, 1928, TO APRIL 1, 1929**

<table>
<thead>
<tr>
<th>1-2</th>
<th>Anatomy</th>
<th>Anatomy</th>
<th>Biological Chemistry C. H.</th>
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<th>Biological Chemistry C. H.</th>
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<tbody>
<tr>
<td>2-3</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Anatomy</td>
<td>Anatomy</td>
<td>Anatomy</td>
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<tr>
<td>3-4</td>
<td>C. H. &amp; A. H.</td>
<td>A. H.</td>
<td>Laboratory</td>
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### AFTERNOON SCHEDULE
**FROM APRIL 2, 1929, TO END OF SCHOOL YEAR**

<table>
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<tr>
<th>1-2</th>
<th>Neural</th>
<th>Neural</th>
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<th>Biological Chemistry C. H.</th>
<th>Biological Chemistry C. H.</th>
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<tbody>
<tr>
<td>2-3</td>
<td>Anatomy</td>
<td>Anatomy</td>
<td>Physiology C. H.</td>
<td>Biological Chemistry</td>
<td>Biological Chemistry</td>
</tr>
<tr>
<td>3-4</td>
<td>Laboratory</td>
<td>Laboratory</td>
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<tr>
<td>4-5</td>
<td></td>
<td></td>
<td>Section A.</td>
<td>Section B.</td>
<td></td>
</tr>
</tbody>
</table>

### LOCATIONS OF LECTURE HALLS AND LABORATORIES:
A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.
C. H.—Chemical Hall, N. E. Cor. Lombard and Greene Streets.
Anatomy Laboratory—Third Floor, Gray Laboratory, Lombard and Greene Streets.
Biological Chemistry Laboratory—Third Floor, Dental Building, Lombard and Greene Streets.
Histology and Embryology Laboratory—32-34 S. Paca Street, Sixth Floor.
## SECOND YEAR SCHEDULE—First Semester, 1928-1929

<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.M. 9-10</td>
<td>Physiology A.H.</td>
<td>Physiology A.H.</td>
<td>Physiology A.H.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>No Classes Scheduled</td>
</tr>
<tr>
<td>10-11</td>
<td>Pharmacology A.H.</td>
<td>Pharmacology A.H.</td>
<td>Pharmacology A.H.</td>
<td>Physiology Section A.</td>
<td>Physiology Section B.</td>
<td></td>
</tr>
<tr>
<td>11 to 12</td>
<td>Pathology A.H.</td>
<td>Pathology A.H.</td>
<td>Bacteriology A.H.</td>
<td>Pharmacology Section B.</td>
<td>Pharmacology Section A.</td>
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<tr>
<td>12 M. to</td>
<td>Lunch</td>
<td>Lunch</td>
<td>(12-1 P.M.) Lunch</td>
<td>(12-1 P.M.) Lunch</td>
<td>(12-1 P.M.) Lunch</td>
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<tr>
<td>12.30 P.M.</td>
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<tr>
<td>12.30-1.30</td>
<td>Bacteriology Laboratory</td>
<td>Pharmacology A.H.</td>
<td>Pharmacology A.H.</td>
<td>Medicine A.H.</td>
<td>Surgery A.H.</td>
<td></td>
</tr>
<tr>
<td>1.30-2.30</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Pharmacology Section A.</td>
<td>Pharmacology Section B.</td>
<td>Pharmacology Section A.</td>
<td></td>
</tr>
<tr>
<td>2.30-3.30</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Bacteriology</td>
<td>Pharmacology A.H.</td>
<td>Physical Diagnosis Univ. Hosp. Disp.</td>
<td></td>
</tr>
<tr>
<td>3.30-4.30</td>
<td>Physiology Section A.</td>
<td>Physiology Section B.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.30-5.30</td>
<td>Pharmacology Section B.</td>
<td>Pharmacology Section A.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## SECOND YEAR SCHEDULE—Second Semester, 1928-1929

<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.M. 8.30</td>
<td>Physiology A.H.</td>
<td>Physiology A.H.</td>
<td>Physiology A.H.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td></td>
</tr>
<tr>
<td>9.30-10.30</td>
<td>Pharmacology A.H.</td>
<td>Pharmacology A.H.</td>
<td>Pharmacology A.H.</td>
<td>Physiology Section A.</td>
<td>Physiology Section B.</td>
<td></td>
</tr>
<tr>
<td>10.30-11.30</td>
<td>Pathology A.H.</td>
<td>Pathology A.H.</td>
<td>Immunology A.H.</td>
<td>Pharmacology Section B.</td>
<td>Pharmacology Section A.</td>
<td></td>
</tr>
<tr>
<td>11.30-12 M.</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>(11-12 M.) Surgical Anatomy A.H.</td>
</tr>
<tr>
<td>12-1 P.M.</td>
<td>Pathology A.H.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>(12-1 P.M.) Medical Clinic Amp.</td>
</tr>
<tr>
<td>1-2</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>Immunology</td>
<td>Immunology</td>
<td>Immunology</td>
<td>Immunology</td>
<td>Surgical Anatomy A.H.</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Surgical Anatomy A.H.</td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Surgical Anatomy A.H.</td>
<td></td>
</tr>
</tbody>
</table>

### April 5-May 25

<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3</td>
<td>Surgical Anatomy A.H.</td>
<td>Surgical Anatomy A.H.</td>
<td>Surgical Anatomy A.H.</td>
<td>Surgical Anatomy A.H.</td>
<td>Surgical Anatomy A.H.</td>
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</tr>
<tr>
<td>3-4</td>
<td>Laboratory</td>
<td>Surgical Anatomy Lab.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Laboratory</td>
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</tr>
<tr>
<td>4-5</td>
<td>Laboratory</td>
<td>Surgical Anatomy Lab.</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Surgical Anatomy Lab.</td>
<td></td>
</tr>
</tbody>
</table>

### LOCATIONS OF LECTURE HALLS AND LABORATORIES:

- **A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.**
- **C. H.—Chemical Hall—Lower Hall, N. E. Cor. Lombard and Greene Streets.**
- **Laboratories:**
  - **Bacteriology—Sixth Floor, 32-34 S. Paca Street.**
  - **Immunology—Sixth Floor, 32-34 S. Paca Street.**
  - **Pathology—Third Floor, Dental Building, Lombard and Greene Streets.**
  - **Pharmacology—Second Floor, Gray Laboratory, Lombard and Greene Streets.**
  - **Physiology—First Floor, Gray Laboratory, Lombard and Greene Streets.**
  - **Surgical Anatomy—Third Floor, Gray Laboratory, Lombard and Greene Streets.**
  - **Amp.—Amphitheatre, University Hospital, Lombard and Greene Streets.**
  - **Univ. Hosp. Disp.—Dispensary, University Hospital, Lombard and Greene Streets.**
### SCHEDULE

**THIRD YEAR SCHEDULE**  
**SESSION 1928-1929**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Therapeutics</td>
<td>Pathology</td>
<td>Medicine</td>
<td>Surgery</td>
<td>Pathology</td>
<td>Surgery</td>
</tr>
<tr>
<td>9.30 to 10.30</td>
<td>Obstetrics</td>
<td>Surgery</td>
<td>Obstetrics</td>
<td>Medicine</td>
<td>Medicine</td>
<td>Therapeutics</td>
</tr>
<tr>
<td>10.30 to 1 P.M.</td>
<td>Physical Diagnosis</td>
<td>Physical Diagnosis</td>
<td>Physical Diagnosis</td>
<td>Physical Diagnosis</td>
<td>Physical Diagnosis</td>
<td>Physical Diagnosis</td>
</tr>
<tr>
<td>1 P.M.</td>
<td>Operative Surgery</td>
<td>Operative Surgery</td>
<td>Operative Surgery</td>
<td>Operative Surgery</td>
<td>Operative Surgery</td>
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<td></td>
<td>Dispensary</td>
<td>Dispensary</td>
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<td></td>
<td>Lunch and Transfer</td>
<td>Lunch and Transfer</td>
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<td>Lunch</td>
</tr>
<tr>
<td>1 to 2</td>
<td>Medical Clinic Amp.</td>
<td>Surgery</td>
<td>Neurology</td>
<td>Gynecology</td>
<td>1.15 to 4.15 Transfer</td>
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</tr>
<tr>
<td></td>
<td>C. H.</td>
<td>C. H.</td>
<td>P. &amp; S. 34</td>
<td>P. &amp; S. 34</td>
<td></td>
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</tr>
<tr>
<td>2.15 to 5.15</td>
<td>Pathology Laboratory</td>
<td>Pathology Laboratory</td>
<td>2.30-4.30 Section A</td>
<td>Clinical Pathology Laboratory</td>
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<tr>
<td></td>
<td>Pathology Laboratory</td>
<td>Pathology Laboratory</td>
<td>Clinical Medicine</td>
<td>2-4 Section B Clinical Medicine</td>
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</tr>
<tr>
<td>3.15 to 4.15</td>
<td>Laboratory</td>
<td>Laboratory</td>
<td>Pathology at Bay View</td>
<td>Surgery</td>
<td>Surgery</td>
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<tr>
<td>4.15 to 5.15</td>
<td>Pediatrics A.H.</td>
<td><strong>Ear</strong> C. H.</td>
<td>Preventive Medicine</td>
<td>Legal Medicine</td>
<td>Preventive Medicine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Group Work</td>
<td>Mental Hygiene</td>
<td>C. H.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Ophthalmoscopy</td>
<td>Un. Hosp.</td>
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<td></td>
<td>Practical</td>
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<td></td>
<td>Obstetrics</td>
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<td></td>
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<td>at Bay View</td>
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</tbody>
</table>

From 10.30 A. M. to 1.00 P. M. the class is divided into two sections, one section reporting at Calvert and Saratoga Streets, the other at Lombard and Greene Streets.

C. H.—Chemical Hall—N. E. Cor. Lombard and Greene Streets.
A. H.—Anatomical Hall—N. E. Cor. Lombard and Greene Streets.
Amp.—Amphitheatre—University Hospital, S. W. Cor. Lombard and Greene Streets.

At the beginning of the second semester Section “A” at Bay View on Saturdays, 2-4 P. M., and University Hospital on Wednesdays, 10.30-4.30 P. M.

* First Semester.
** Second Semester.
# Schedule

**Fourth Year Schedule**

**Session 1928-1929**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.00 to 12.00</td>
<td>Orthopaedic Surgery Univ. Sec. Amp. P &amp; S. Sec. 51</td>
<td>Medical Clinic Univ. Sec. Amp. Surgical Pathology P &amp; S. Sec. 40</td>
<td>Clinical Pathological Conference Univ. Sec. C.H. P &amp; S. Sec. 34</td>
<td>Surgical Clinic Univ. Sec. Amp. P &amp; S. Sec. 51</td>
<td>Medical Clinic Univ. Sec. Amp. P &amp; S. Sec. 34</td>
<td>Pediatrics Clinic Univ. Sec. Amp. P &amp; S. Sec. 51</td>
</tr>
<tr>
<td>P.M. 12.00 to 2</td>
<td>Dispensary Lunch and Transfer</td>
<td>Dispensary and Lunch</td>
<td>Dispensary Lunch and Transfer</td>
<td>Dispensary Lunch and Transfer</td>
<td>Dispensary Lunch and Transfer</td>
<td>Dispensary Lunch and Transfer</td>
</tr>
<tr>
<td>2.15 to 3.15</td>
<td>Dermatology Clinic (Full Class at Univ. Hosp.) Amp.</td>
<td>Neurology Clinic Univ. Sec. Amp. P &amp; S. Sec. 34</td>
<td>Eye and Ear Clinic (Full Class at Univ. Hosp.) Amp.</td>
<td>Obstetrical Clinic (Full Class at Univ. Hosp.) Amp.</td>
<td>Gastro-Enterology Clinic (Full Class at Univ. Hosp.) Amp.</td>
<td>Genito-Urinary Clinic P &amp; S. Sec. 51</td>
</tr>
<tr>
<td>5 to 6 P.M.</td>
<td>Univ. Sec. Ward Classes Medicine Surgery Eye and Ear</td>
<td>5 to 6 P.M. March, April and May</td>
<td>History of Medicine C. H.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Senior Class is divided into two sections, which report, one at Lombard and Greene Streets, the other at Calvert and Saratoga Streets, for one semester each, then rotate. Each section of the class is divided into three groups—Medical, Surgical, and Special. These groups will rotate on the following dates:

**First Semester**

1st period, Oct. 1—Nov. 3.
2nd period, Nov. 5—Dec. 3.

C. H.—Chemical Hall—N. E. Cor. Lombard and Greene Streets.

Amp.—Amphitheatre—University Hospital.

P. & S. 34—Second Floor, Calvert and Saratoga Streets.

P. & S. 46, 51—Fourth Floor, Calvert and Saratoga Streets.

**Second Semester**

1st period, Jan. 28—Mar. 2.
2nd period, Mar. 4—April 6.
3rd period, April 8—May 11.
REQUIREMENTS FOR MATRICULATION

Admission to the course in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland. This certificate is obtained from the Registrar on the basis of satisfactory educational credentials, and is essential for admission to any class.

The minimum requirements for the issuance of the Medical Student Certificate are:

(a) The completion of a standard four-year high school course or the equivalent, and, in addition, at least
(b) Two years or sixty semester hours of college credits, including chemistry, biology, physics and English.

Women are admitted to the School of Medicine of this University.

(A) HIGH SCHOOL REQUIREMENTS

Graduation from an accredited high or preparatory school, after pursuing a four-year course based upon an eight-year elementary course, or its full equivalent as demonstrated by entrance examinations.

At least fifteen units must be offered.‡

SCHEDULE OF SUBJECTS REQUIRED OR ACCEPTED FOR ENTRANCE TO THE PREMEDICAL COLLEGE COURSE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units*</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROUP I, ENGLISH—(I—II—III—IV)—</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature and Composition</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>GROUP II, FOREIGN LANGUAGES—</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greek</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>French or German</td>
<td></td>
<td>2-4</td>
</tr>
<tr>
<td>Other foreign languages</td>
<td></td>
<td>2-4</td>
</tr>
<tr>
<td><strong>GROUP III, MATHEMATICS—</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary algebra</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Advanced algebra</td>
<td>$\frac{1}{2}$-1</td>
<td>..</td>
</tr>
<tr>
<td>Plane geometry</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Solid geometry</td>
<td>$\frac{1}{2}$</td>
<td>..</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>$\frac{1}{2}$</td>
<td>..</td>
</tr>
</tbody>
</table>
### REQUIREMENTS FOR MATRICULATION

**GROUP IV, HISTORY AND ECONOMICS—**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancient history</td>
<td>1</td>
</tr>
<tr>
<td>Medieval and modern history</td>
<td>1</td>
</tr>
<tr>
<td>English history</td>
<td>1</td>
</tr>
<tr>
<td>American history</td>
<td>(\frac{1}{2}-1)</td>
</tr>
<tr>
<td>Civil government</td>
<td>(\frac{1}{2}-1)</td>
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<tr>
<td>Economics</td>
<td>(\frac{1}{2}-1)</td>
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</tbody>
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Total: 1

**GROUP V, SCIENCE—**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botany</td>
<td>(\frac{1}{2}-1)</td>
</tr>
<tr>
<td>Zoology</td>
<td>(\frac{1}{2}-1)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Physics</td>
<td>1</td>
</tr>
<tr>
<td>Physiography</td>
<td>(\frac{1}{2}-1)</td>
</tr>
<tr>
<td>Physiology</td>
<td>(\frac{1}{2}-1)</td>
</tr>
<tr>
<td>Astronomy</td>
<td>(\frac{1}{2})</td>
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<tr>
<td>Geology</td>
<td>(\frac{1}{2}-1)</td>
</tr>
</tbody>
</table>

Total: 1

**GROUP VI, MISCELLANEOUS—**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational—including agriculture, commercial, home economics, industrial, etc</td>
<td>1-4</td>
</tr>
</tbody>
</table>

* A unit is the credit value of at least thirty-six weeks' work of four or five recitation periods per week, each recitation period to be not less than forty minutes. In other words, a unit represents a year's study in any subject in a secondary school constituting approximately a quarter of a full year's work. A satisfactory year's work in any subject cannot be accomplished under ordinary circumstances in less than 120 sixty-minute hours, or their equivalent.

† Both of the required units of foreign language must be of the same language, but the two units may be presented in any one of the languages specified.

‡ Of the fifteen units of high school work, nine units are required, as indicated in the foregoing schedule; the remainder may be made up from any of the other subjects in the schedule, provided that at least eleven units must be offered in Groups I-V.

### (B) DETAILS OF THE COLLEGE REQUIREMENT

a. The preliminary college course shall extend through two college sessions of at least thirty-two weeks each of actual instruction, including final examinations.

b. In excellence of teaching and in content, the work of this preliminary college course shall be equal to the work done in the freshman and sophomore years in standard colleges and universities.
c. This preliminary college course shall include courses in physics, chemistry, biology and English, each course to embrace at least six, eight or twelve hours of work in each subject, as shown in the schedule following:

**SCHEDULE OF SUBJECTS OF THE TWO-YEAR PREMEDICAL COLLEGE COURSE**

_Sixty Semester Hours Required_

<table>
<thead>
<tr>
<th>Required Courses:</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry (a)</td>
<td>12</td>
</tr>
<tr>
<td>Physics (b)</td>
<td>8</td>
</tr>
<tr>
<td>Biology (c)</td>
<td>8</td>
</tr>
<tr>
<td>English Composition and Literature (d)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Courses Strongly Urged:**

- A modern foreign language
- Comparative vertebrate anatomy
- Psychology
- Social science

A semester hour is the credit value of sixteen weeks' work consisting of one lecture or recitation period per week, each period to be of not less than fifty minutes' duration net, at least two hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

(a) **Chemistry.** Twelve semester hours required of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work, and four semester hours in organic chemistry, including two semester hours of laboratory work. In the interpretation of this rule, work in qualitative analysis may be counted as general inorganic chemistry.

(b) **Physics.** Eight semester hours required, of which at least two must be laboratory work. This course presupposes a knowledge of plane trigonometry.

(c) **Biology.** Eight semester hours required, of which four must be laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone.

(d) **English Composition and Literature.** The usual introductory college course of six semester hours, or its equivalent, is required.
COMBINED COURSE IN ARTS AND MEDICINE

A combined seven years' curriculum is offered, leading to the degrees of Bachelor of Science and Doctor of Medicine. The first three years are taken in residence at College Park, and the last four years in Baltimore, at the School of Medicine. The premedical curriculum constitutes the first two years' work, and the third year follows a general outline of prescribed and elective courses approved by the chairman of the premedical committee and the dean of the College of Arts and Sciences.

Upon the successful completion of the first year in the School of Medicine, and upon the recommendation of the dean, the degree of Bachelor of Science may be conferred by the College of Arts and Sciences at College Park.

Students are urged to consider carefully the advantages this combination course offers over the minimum requirements of the two years. By completing three years the training may be gradually broadened by a wider latitude in the election of courses in the arts subjects.

POST-GRADUATE STUDENTS

Graduates in medicine desiring to take the work of the senior year without being candidates for the degree, and, therefore, without examination, may receive a certificate of attendance on completing the full course satisfactorily.

The requirements for graduates in medicine admitted to the fourth-year class as candidates for the degree of Doctor of Medicine are the same as those enforced against undergraduates admitted to advanced standing.

Summer Post-Graduate Courses—In the April number of the Bulletin detailed announcement will be made of the Post-Graduate Summer Courses.

RULES

1. All students are required to take the spring examinations unless excused by the Dean. No student will be permitted to advance from a lower to a higher class with conditions.

2. Should a student be required to repeat any year in the course, he must pay regular fees.
3. A student failing in final examinations for graduation at the end of the fourth year will be required to repeat the entire course of the fourth year and to take examination in such other branches as may be required should he again be permitted to enter the school as a candidate for graduation.

4. The general fitness of a candidate for graduation will be taken into consideration by the Faculty as well as the results of his examination.

5. All students entering the School of Medicine of the University of Maryland are required to provide themselves with microscopes of a satisfactory type.

A standard microscope of either Bausch & Lomb, Leitz, Spencer Lens or Zeiss make, fitted with the following attachments, will fill the requirements:

- Triple nose piece
- Wide aperture stage
- Quick Screw condenser (Abbe)

10 x and 5 x Oculars
16mm. and 4mm. Objectives
1.9mm. 1.25 N.A. Oil Immersion Lens

All the above rules, as well as the fees stated below, relate to the year ending June 8th, 1929, only. The right is reserved to make changes in the curriculum, the requirements for graduation, the fees and in any of the regulations whenever the Faculty deem it expedient.

**FEES**

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Matriculation fee (paid once)</td>
<td>$10.00</td>
</tr>
<tr>
<td>Tuition fee (each year) for residents of Maryland</td>
<td>300.00</td>
</tr>
<tr>
<td>Tuition fee (each year) for non-residents</td>
<td>450.00</td>
</tr>
<tr>
<td>Laboratory fee (each year)</td>
<td>20.00</td>
</tr>
<tr>
<td>Special and re-examination fee</td>
<td>5.00</td>
</tr>
<tr>
<td>Graduation fee</td>
<td>15.00</td>
</tr>
</tbody>
</table>

No fees are returnable.

The above fees apply to all students who matriculate in this institution in any class for the session beginning October 1st, 1928.

All students, after proper certification, are required to register at the Registrar's Office. The last date of registration is October 8th, 1928.
Matriculation, laboratory and tuition fees for the first semester shall be paid at the time of registration, and for the second semester on or before February 2nd, 1929.

Failure to meet these conditions will automatically debar the student from attendance on classes and other privileges of the University.

Students who fail to pay the tuition and other fees on or before the last day of registration for each term or semester, as stated in the catalogue, will be required to pay as an addition to the fees required the sum of Five ($5.00) Dollars, and if the payment so required shall not be paid before twenty (20) days from the beginning of said term or semester, the student's name shall be stricken from the rolls.

Students who are minors are considered to be resident students, if at the time of their registration their parents or guardians have been residents of this state for at least one year.

Adult students are considered to be resident students, if at the time of their first registration they have been residents of this state for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents or guardians move to and become legal residents of this state.
PRIZES AND SCHOLARSHIPS

FACULTY PRIZE

To stimulate study among the candidates for graduation, the Faculty offers a Gold Medal to the candidate who secures the highest average during the four years of his course. Certificates of Honor are awarded to the five candidates standing next highest.

DR. JOSE L. HIRSH MEMORIAL PRIZE

A prize of $50.00 is given each year by Mrs. David Myers as a memorial to the late Dr. Jose L. Hirsh, formerly Professor of Pathology in this School, to the student in the third year who has done the most satisfactory work in Pathology during his second and third years.

SCHOLARSHIPS

The Dr. Samuel Leon Frank Scholarship

(Value, $125.00)

This scholarship was established by Mrs. Bertha Rayner Frank as a memorial to the late Dr. Samuel Leon Frank, an alumnus of this University.

It is awarded by the Trustees of the Endowment Fund of the University each year upon nomination by the Medical Council “to a medical student of the University of Maryland, who in the judgment of said Faculty, is of good character and in need of pecuniary assistance to continue his medical course.”

This scholarship is awarded to a second, third or fourth year student who has successfully completed one year’s work in this school, and no student may hold such scholarship for more than two years.

The Charles M. Hitchcock Scholarships

(Value, $125.00 each)

Two scholarships were established from a bequest to the School of Medicine by the late Charles M. Hitchcock, M.D., an alumnus of the University.

These scholarships are awarded annually by the Trustees of the Endowment Fund of the University upon nomination by the Medical
Council to students who have meritoriously completed the work of at least the first year of the course in medicine, and who present to the Faculty satisfactory evidence of a good moral character and of inability to continue the course without pecuniary assistance.

The Randolph Winslow Scholarship
(Value, $125.00)

This scholarship was established by Prof. Randolph Winslow, M.D., LL.D.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination by the Medical Council, to a "needy student of the Senior, Junior, or Sophomore Class of the Medical School."

"He must have maintained an average grade of 85% in all his work up to the time of awarding the scholarship."

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

The Dr. Leo Karlinsky Scholarship
(Value, $200.00)

This scholarship was established by Mrs. Ray Mintz Karlinsky as a memorial to her husband, the late Dr. Leo Karlinsky, an alumnus of this University.

The scholarship is awarded to a second-year student who at the end of the first year passes the best examination in Anatomy, Histology, Embryology and Bacteriology.

The University Scholarships

Two scholarships are awarded by the University. One to a student of the College of Arts and Sciences appointed by the President, to be held for only one year; the other, which entitles the holder to exemption from payment of the tuition fee of the year, is awarded annually by the Medical Council to a student of the Senior Class who presents to the Medical Council satisfactory evidence that he is of good moral character and is worthy of and in need of assistance to complete the course.
Frederica Gehrmann Scholarship

This scholarship was established by the bequest of the late Mrs. Frederica Gehrmann and entitles the holder to exemption from payment of tuition fees. The scholarship is awarded to a third-year student who at the end of the second year passes the best practical examination in Anatomy, Physiology, Biological Chemistry, Pharmacology, Pathology, Immunology and Serology.

The Clarence and Genevra Warfield Scholarships

(Valuation, $300.00 each)

There are five scholarships established by the Regents from the income of the fund bequeathed by the will of Dr. Clarence Warfield.

Terms and Conditions: These scholarships will be available to students of any of the classes of the course in medicine. Preference is given to students from the counties of the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners.

Any student receiving one of these scholarships must, after graduation and a year's internship, agree to undertake the practice of medicine, for a term of two years, in the county to which the student is accredited or in a county selected by the Council. In the event that a student is not able to comply with the condition requiring him to practice in the county to which he is accredited by the Council, the money advanced by the Regents shall be refunded.

Israel and Cecilia E. Cohen Scholarship

(Value, $250.00)

This scholarship was established by Miss Eleanor S. Cohen in memory of her parents, Israel and Cecilia E. Cohen. Terms and conditions:

This scholarship will be available to students of any one of the classes of the course in Medicine; preference is given to students of the counties of the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners. Any student receiving one of these scholarships must, after graduation and a year's internship, agree to undertake the practice of medicine for a term of two years in the county to which the student is accredited, or in a county selected by the Council.
ANNUAL HOSPITAL APPOINTMENTS

On February 1st of each session the following annual appointments are made from among the graduates of the school:

TO THE UNIVERSITY HOSPITAL

Two Resident Surgeons  Two Resident Obstetricians
Two Resident Physicians  Thirteen Junior Residents on a
One Resident Gynecologist  Rotating Service

A number of students are appointed each year, at the close of the session, as Clinical Assistants in the University Hospital for the summer months.

TO THE MERCY HOSPITAL

Chief Resident Physician  One Resident Gynecologist
One Assistant Resident Physician  One Resident Obstetrician
Chief Resident Surgeon  Eight Junior Residents on a Rotating Service
Five Assistant Resident Surgeons
NOTICE TO STUDENTS

The personal expenses of the students are at least as low in Baltimore as in any large city in the United States. The following estimates of a student's personal expenses for the academic year of eight months have been prepared by students, and are based upon actual experience:

<table>
<thead>
<tr>
<th>Items</th>
<th>Low</th>
<th>Average</th>
<th>Liberal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>$50</td>
<td>$75</td>
<td>$100</td>
</tr>
<tr>
<td>College Incidentals</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Board, eight months</td>
<td>200</td>
<td>250</td>
<td>275</td>
</tr>
<tr>
<td>Room rent</td>
<td>64</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Clothing and laundry</td>
<td>50</td>
<td>80</td>
<td>150</td>
</tr>
<tr>
<td>All other expenses</td>
<td>25</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>$409</td>
<td>$556</td>
<td>$720</td>
</tr>
</tbody>
</table>

Students will save time and expense upon their arrival in the city by going direct to the School of Medicine on the University grounds, N. E. corner of Lombard and Greene Streets, where the Secretary of Student Y. M. C. A., who may be found at his office on the premises, will furnish them with a list of comfortable and convenient boarding-houses suitable to their means and wishes.

For further information, apply to

J. M. H. Rowland, M.D., Dean,
Lombard and Greene Streets.
MATRICULATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, 1927-1928

FOURTH YEAR CLASS

Baer, Adolph ................. New York
Bailey, Hugh Alvin, A.B.... South Carolina
Bedri, Marcel Rechtman .... Palestine
Berger, William Adolph, B.S... New Jersey
Biecher, Irving Ezra ......... New York
Bonelli, Nicholas William, A.B.. New Jersey
Brager, Simon ............... Maryland
Chor, Herman, A.B. ....... Maryland
Christian, William ........ Pennsylvania
Clemson, Earle Princeton .... Maryland
Duckwall, Frederick Mooman, West Virginia
Duncan, George Andrew, B.S., West Virginia
Friedman, Bernard .......... New York
Garred, Herbert William D., B.S., West Virginia
Gilbert, Jacques Saul ....... Rhode Island
George, Jessie Ethelwyn, B.S., West Virginia
Goldberg, Victor, Ph.G...... Maryland
Goodman, Jerome Edward, Ph.G.Maryland
Greer, Creed Collins, B.S.. . West Virginia
Grollman, Aaron Isaac, A.B.... Maryland
Glick, Georg Krohn, B.S. .... Denmark
Gundry, Lewis Perkins, A.B.. Maryland
Hankin, Samuel Jay .......... Maryland
Hayes, Paul ................... Maryland
Herald, Lewis Jacob, Ph.G.... New York
Johnson, Walter Brenman, A.B.. Maryland
Jones, Henry Alvan, Ph.G..... Maryland
Kaufman, Israel, B.S......... New York
Kaye, Philip Louis .......... New York
Kohn, Theodore, B.S......... South Carolina
Kotch, Nathan Hersh ......... New York
Lampert, Hyman .......... New York
Lamstein, Jacob Irwin, B.S... New York
Lankaitis, Joseph George .... Maryland
Lerner, Morris ............ New York
Levinsky, Maurice .......... Connecticut
Levinson, Louis Jack ....... New York
Limbach, Earl Frederick, A.B.... Ohio
Litsinger, Edward Andrew, B.S., West Virginia
Little, Luther Emanuel, Ph.G.... Maryland
Littman, Irving Isaac ....... Maryland
Lyon, Isadore Bernard, A.B.. Maryland
Mace, John, Jr., B.S........ Maryland
Maged, Alan John, A.B...... New York
McCleney, Robert Sadler, A.B.... Maryland
McDowell, Roy Hendrix, A.B., North Carolina
McPau, William Neal, Jr., A.B. . Maryland
McGee, William Buster, B.S., West Virginia
Mee, Robert Amos, A.B., B.S., New Hampshire
Meister, Aaron ............. New York
Merkamer, David, A.B...... New York
Merlino, Frank Anthony .... New Jersey
Messina, Vincent Michael .... Maryland
Mostwill, Ralph ............ New Jersey
Piacente, Pasquale Anthony .. New York
Pileggi, Peter ............. New Jersey
Raschoff, Henry Morris ..... New York
Rich, Benjamin Sunderland, A.B.Maryland
Roetting, Carl Paul ......... Maryland
Rosen, Marks Julius ......... Maryland
Rubinstein, Hyman Solomon, Ph.G., Maryland
Rutter, Joseph Howard ...... Florida
Saffron, Morris Harold, A.B... New Jersey
Sardo, Samuel Robert, B.S... Pennsylvania
Shaw, Cecil Curry, A.B...... Alabama
Silver, Abraham Alfred .. Connecticut
Singer, Jack Jerome ......... Maryland
Smoot, Aubrey Cannon, A.B.... Maryland
Smoot, Merrill Clayvelle, B.S.. Maryland
Stacy, Theodore Edwin, Jr., Ph.G., Maryland
*Tannenbaum, Morris, B.S.... New York
Taylor, Charles Vivian, A.B... Maryland
Temple, Levi Wade, Jr., B.S., South Carolina
Tenner, David, Ph.G......... Maryland
Varney, William Henry .... Maryland
Vernaglia, Anthony Paul .... New York
Vogel, S. Zachary .......... New York
Warner, Carroll Gardner, A.B... Maryland
Weintraub, Fred Siegfried, B.S., Pennsylvania
Weisenfeld, Nathan, B.S....... Connecticut
Weiss, Aaron .................. New York
Wells, Samuel Robert, B.S.... West Virginia
Wilkinson, Albert Russell, Ph.G... Maryland
Wolf, Frederick Samuel .... Maryland
Wurzel, Milton ............. New Jersey
Yarbrough, Oscar DeMelle .... Alabama
Zimmerman, Frederick Thomas, A.B., Pennsylvania

*Did not complete the year.
THIRD YEAR CLASS

Abramowitz, Max, B.S. ..........New York
Ackerman, Jacob Harold, A.B. ..New York
Alessi, Silvio A., Ph.G. ..........Maryland
Amos, Hugh, B.S. .............Ohio
Anderson, Walter Anders, Ph.G., D.D.S., Maryland

Bardfield, Benjamin B. ........New Jersey
Barland, Samuel, Jr., B.S. ....New York
Birely, Morris Franklin, A.B. ....Maryland
Bongiorno, Henry Domenic, Ph.G., New Jersey
Botsch, Bernard, B.S. ...........Ohio
Bowen, James Poore, B.S., South Carolina
Brauer, Selig Leo, Jr. ..........New Jersey
Calas, Andres Eladio, ...........Cuba
Chambers, Earl LeRoy, ..........Maryland
Chapman, William Hardee ........Maryland
Ciccone, Arnold William, ......Rhode Island
Clark, Francis Alden, B.S. ....West Virginia
Cohen, Herman ..........................New Jersey
Cohen, Paul Henry, A.B. ........Maryland
Conn, Jacob Harry, A.B. ........Maryland
Corseilo, Joseph Nicholas, B.S. .New York
Dailey, William Paul ..........Pennsylvania
Daniels, Willard Floyd, B.S. ..West Virginia
DeBarbieri, Fred Louis, A.B. .Pennsylvania
Draper, William Bateman .........Maryland
Farbman, Meyer David, B.S. ...New York
Fargo, William Russell, A.B. ...Maryland
Fattel, Henry Charles, B.S. ...New Jersey
Feingold, Charles Rodin, B.S. .New York
Felt, Emanuel, B.S. ...............New York
Fifer, Jesse Showalter, A.B. ...Delaware
Garber, Jacob S. ..................New York
Givner, David, A.B. ..............Maryland
Gouldman, Edwin Foster, B.S. ..Virginia
Guiglia, Sascha Facchetti ........New York
Haney, John James ...............New Jersey
Heck, Leroy Savin, B.S. .........Maryland
Helms, Samuel Thomas, B.S. ...Virginia
Holroyd, Frank Jackson, A.B., B.S., West Virginia
Horowitz, Morris, A.B. ..........Massachusetts
Husted, Samuel Harley ..........New Jersey
Isern, Rafael Angel Vilar, B.S. .Porto Rico
Jackson, Murray Elliot, B.S. ...New York
Jacobs, Abraham, B.S. ..........New York
Kelly, Clyde Ernest, A.B. .......Pennsylvania
Kendall, Benjamin Horton, A.B., North Carolina

Knight, Walter Phillips ........Pennsylvania
Levi, Ernest, Ph.G. .............Maryland
Levy, Walter Howard ............New York
Lynn, Irving, B.S. ..............New Jersey
Lynn, John Galloway, 4th ......Maryland
Matsumura, Junichiro ..........Hawaii
McAndrew, Joseph Theodore, West Virginia
McGowan, Joseph Francis ......Pennsylvania
Mershani, Israel Peter, B.S. ....Connecticut
Morgan, Isaac Joseph, B.S. ....Pennsylvania
Moser, Charles Yarnall, B.S. ...West Virginia
Murphy, John Edward ......Pennsylvania
Neistadt, Isidore Irving, A.B. ...Maryland
Neuman, Finley Frederick, A.B. ...Ohio
Newman, Saul Charles, B.S. ....Connecticut
Nickman, Emanuel Harrison . ..New Jersey
O'Dea, John Francis, A.B. .....New York
Overton, Lewis Marvin, A.B., North Carolina
Penchansky, Samuel Joseph, B.S., New Jersey
Porterfield, Maurice Coleman ....Maryland
Prager, Benjamin, B.S. .........New York
Reeder, Paul Arlington, B.S. .West Virginia
Reilly, John Vincent ..........New Jersey
Roberts, Eldred, B.S. ..........Maryland
Safer, Jake Victor ..............Florida
Safford, Henry Towne, Jr. ....Texas
Schreiber, Morris Bernard ......New York
Schwartzbach, Saul, A.B., District of Columbia
Seibel, Jack, B.S. ..............New York
Sekera, Raymond Andrew .........Connecticut
Serra, Lawrence Mario, Ph.G. ...Maryland
Sikorsky, Albert Edward, A.B. ..Maryland
Silver, Mabel Irene, B.S. ......Maryland
Sofer, Albert Alexander, B.S. ..Maryland
Solomon, Milton, B.S. ..........New York
Speicher, Wilbur Glenn ..........Maryland
Spencer, Ernest ..................Maryland
Spurrier, Oliver Walter, A.B. ...Maryland
Staton, Leon Raphael, A.B. .North Carolina
Stevenson, Charles Calvert ....Utah
Sullivan, William Joseph ......Rhode Island
Ulrich, Henry Franz ..........Maryland
Vann, Homer King ..............Florida
Vestal, Tom Fletcher ..........North Carolina
Volensik, Lee Joseph ..........New York
Wallack, Charles Albert, B.S. .New Jersey
Ward, Hugh Walter, A.B. .....Maryland
Waters, Zack James, B.S. ....North Carolina
Yeager, George Herschel, B.S. ..Maryland
Yudkoff, William, B.S. .........New Jersey
SECOND YEAR CLASS

Aronofsky, Milton Robert, Ph.B.,
  Connecticut
Ashman, Harry, B.S. .......... Maryland
Baumgardner, George M., A.B. .... Maryland
Baylus, Meyer Milby, Ph.G. .... Maryland
Belinkin, William, B.S. ......... New York
Benfer, Kenneth Louis, A.B. .... Maryland
Benson, Alvan Homer .......... Maryland
Berkowitz, Rudolph, A.B. ....... New York
Blum, Joseph Sydney, Ph.G. ..... Maryland
Borow, Henry ................ North Dakota
Burns, John Howard, A.B. ..... Maryland
* Cannon, David Clayton, Jr., B.S.,
  Pennsylvania
Chenitz, William, B.S. ......... New Jersey
Cohen, Archie Robert, Ph.G. .... Maryland
Cohen, Irving Joseph, Ph.G. .... Maryland
Cohen, Max Hurston, Ph.G. ..... Maryland
Coppola, Matthew Joseph, B.S. .... New York
Durrett, Clay Earle, B.S. ...... Maryland
Dyar, Edna Gerrish, Ph.D.,
  District of Columbia
Edmonds, Henry Jeter .......... Virginia
Farinacci, Charles Joseph, A.B. .... Ohio
Faw, Wylie Melvin, Jr. .......... Maryland
Feman, Jacob George, A.B. .... New York
Flocco, Vincent James, B.S. .... New York
Fisher, Samuel ................ New Jersey
Flesch, Julius, Ph.G. .......... Maryland
Garey, James Lyman, B.S.,
  Pennsylvania
Garfinkel, Abraham, B.S. .... New York
Gerner, Harry Ezekiel, B.S. ...... New Jersey
Gersten, Paul Francis .......... New York
Ginsberg, Leon, Ph.D. ......... New York
Goldman, Lester Milton, B.S. ...... New Jersey
Goldstein, Jacob Everett, B.S. .... New York
Goodman, Julius Henry, Ph.G. .... Maryland
Hildenbrand, Emil John C., B.S. Maryland
Hornbaker, John Harlan, A.B. .... Maryland
Hudson, Rollin Carl, A.B. .... Maryland
Johnson, Marius Pitkin, A.B. .... Connecticut
Kilgus, John Frank, Jr. .... Pennsylvania
Kirchner, Abe Edward, A.B. .... New York
Kleinman, Abraham Morris, B.S. New York
Kovarsky, Albert Elias, A.B. .... New Jersey
Kraemer, Samuel Harry, B.S. .... New Jersey
Kremen, Abraham, A.B. ...... Maryland
Kuhn, Esther Frances, A.B. .... Maryland
Levin, Morton Loeb, Ph.G. ...... Maryland
Levy, Solomon, A.B. .......... Palestine
Lewandoiski, Henry Charles ...... Maryland
Lewis, Frank Russell .......... Maryland
Magovern, Thomas F. .... New Jersey
Mansdorfer, George Bowers, B.S. Maryland
Miller, Benjamin Herman, A.B. .... Maryland
Miller, Isaac ................ New Jersey
Miller, James Alton, A.B. ...... Maryland
Montilla, Victor Joseph .......... Porto Rico
Mortimer, Egbert Laird, Jr., A.B. Maryland
Needle, Nathan E. ............ Maryland
Oppenheim, Joseph Harry ...... New York
Perlin, Robert, B.S. .......... New York
* Post, Charles Gordon, Jr., A.B. New York
Powell, Joseph Lawrence .......... Pennsylvania
Reid, Francis Fielding, A.B. .... Maryland
Rineberg, Irving Edward, B.S. New Jersey
Romano, Nicholas Michael .......... Pennsylvania
Rosenthal, Abner Herman, B.S. .... New York
Rozum, John Charles .......... New York
Shill, Benjamin, A.B. ...... New Jersey
Shulman, Louis Robert .......... Maryland
Smith, Joseph Jacob, A.B. .... Connecticut
Snoops, George John, Jr., A.B. .... Maryland
Snyder, Nathan, Ph.G. .......... Maryland
Soltroff, Jack Gerson, B.S. .... Pennsylvania
Sperling, Nathaniel Mortimer, B.S.,
  New York
Straka, Robert Paul, M.S. .... Maryland
Weinstein, Jack, B.S. .......... New York
Werner, Aaron Seth .......... New York
Woolley, Alice Stone, B.S. ...... New York
Young, Ralph Funk .......... Maryland
Zeiger, Samuel, B.S. .......... New York

*Did not complete the year.
FIRST YEAR CLASS

Adalman, Philip, Ph.G. ............ Maryland
Adams, Pius Edward ............. Maryland
Allen, Howard Stanley......... Pennsylvania
Andrew, David Holmes, A.B.......... Maryland
Baldwin, Kenneth Malson ......... Maryland
Bamberger, Beatrice, A.B. ....... Maryland
Barr, William Carlisle, Jr., .... District of Columbia

Baumgartner, Eugene Irving ....... Maryland
Berman, Henry Irving .......... Maryland
Bernstein, Joseph, Ph.G .......... Maryland
*Bradley, John Edmund ......... Maryland
Brayshaw, Thomas H. .......... Maryland
Brice, Arthur Talbott .......... Maryland
Brill, Bernard ................ New York
Brill, John Leonard, A.B .......... Pennsylvania
Clouse, Paul Ronald ........ Pennsylvania
Contract, Eli, A.B. .............. Maryland
Cudlipp, Irene Millis, B.S .......... Maryland
Davis, Melvin Booth .......... Maryland
Dawson, William Maddren, B.S. .... New York
Donohue, Bernard Walker, A.B. .... New York
Drenga, Joseph Francis, A.B. ....... Maryland
Eckstein, Harry, B.S. ............. New York
Edel, John Wesley, B.S. ............. Maryland
*Edgerton, Glenn S. ............ North Carolina
Empic, John Carl, B.S. .......... B.S.
Ernest, Roy Cooper, A.B. ......... Ohio
Fahey, Edward Vincent, A.B., Pennsylvania
Feldman, Samuel, A.M. ......... New Jersey
Feuer, Arthur, B.S. .............. New York
Fitch, Wilmer Price .......... New York
Foster, Ruth ................ New York
Fox, George DeGruchy, A.B. ......... Maryland
Friedman, Joseph, B.S. .......... New York
*Fuhrman, William Nelson ......... Maryland
*Funk, Zanerian Evangeline, B.S. Maryland
Ginewsky, Solomon Irving, A.B. .... Connecticut

Glantz, Albert LeRoy, A.B. ....... Maryland
Grossman, Isadore, A.B. ......... Maryland
Grove, Donald Birtmer .......... Maryland
Gundry, Rachel Krebs, A.B. ...... Maryland
Halper, Arthur Matthews, B.S. .... New York
Haskell, Marian Louise, Ph.G. ........ Maryland
Headley, Albert Emerson, A.B. .... Ohio
Helfrich, Raymond Frederick, A.B. Maryland
Hoffman, Reuben, A.B. .......... Maryland
Hollander, Mark Buckner, A.B. ..... Maryland
Hornbrook, Kent Maldow ........... West Virginia
Jacobs, Herman ................ New York
Jacobson, Samuel Maurice, Ph.G .... Maryland
Jaklitsch, Frank Henry, B.S. ......... New York
Jensen, Carl Dana F. .......... Washington
*Jett, Joseph Vincent, A.B. ...... Maryland
Jett, Page C., A.B. .......... Maryland
Jones, Arthur Ford ............. Maryland
Justice, James Thomas, Jr., A.B. .... North Carolina
Kahn, Herbert Adrian .......... Maryland
Karger, Abraham, B.S. .......... New York
Kaufman, Max, Ph.G. ........ New York
Keefe, Walter Joseph, A.B. ....... Connecticut
Kermisch, Albert, Ph.G. .......... Maryland
Klimes, Louis Frank .......... Maryland
Kohn, Walter .................. Maryland
Krieger, Jerome Leon, A.B. ...... Maryland
*Kulacki, Leo Lucas, A.B. ........ Maryland
Lachman, Harry, B.S. ........ Maryland
Lang, Abraham, B.S. .......... New York
Langelutig, Harry Vernon, A.B., Maryland
Lerner, Philip Frank, A.B. ......... Maryland
Leishine, Sidney Starr, B.S. ....... Connecticut
Levine, David Robert, B.S. ....... New York
Lieberman, Samuel, M.S. ......... New York
Lubin, Paul .................. Maryland
Mankovich, Desiderius George, Pennsylvania
Martin, Thomas Adrian, Ph.G. ....... Maryland
Marx, Ernest Burleigh .......... Maryland
Masterson, John Francis .......... New Jersey
*Mayolo, Larry Pete .......... West Virginia
McAllister, Benjamin, Jr., Ph.G., Maryland
*McGlynn, Patrick John .......... Pennsylvania
McHale, George Francis, A.B., Pennsylvania
Meyer, Leo Martin, A.M. .......... New York
*Miller, Henry Frank ............. Maryland
Moore, William Patterson, B.S. .... Ohio
Moyers, Waldo Briggs, A.B., West Virginia
Murphy, Richard Lawrence, A.B. .... New Hampshire
Myers, George Thomas, A.B. ......... Maryland
Newnam, Alpheus Carlton, Jr. .... Maryland
Nobera, Francisco Pablo .......... Porto Rico
Palitz, Leo Solomon, A.M. ......... New York
*Perdew, Paul Raymond, B.S. ........ Maryland
*Peters, William Howard, A.M., Pennsylvania
Pfaff, Joseph John .......... Maryland
Purinton, William Andrew .......... Maine
Rehmeyer, Walter Owen, B.S., Pennsylvania
Rodriguez, Manuel ............... Porto Rico
Rohm, Jack Zeth ................. Pennsylvania
Rohm, Robert Franklin ........... Pennsylvania
Rosenberg, Benjamin, B.S. .......... New York
*Ryan, John Paul, A.B. .......... Maryland
Seabold, William Mervin .......... Maryland
Schmuneck, Emmanuel Aloysius, A.B. .... Maryland

*Sechrist, Gurrien Preston ........ Pennsylvania
Seidman, Herman Harold, B.S. .... New York
Shanahan, Daniel Stephen, A.B. .... Maryland
Shelley, Harry Sandberg, B.S., Maryland
*Shenberger, Donald Clair .......... Pennsylvania
Shochat, Albert Joshua, B.S. ......... New York
Sliwinskl, Arthur George, A.B. .... Maryland
FIRST YEAR CLASS—Continued

Sklar, Isidore Allen, Ph.G. .......... Maryland
Slate, Marvin Longworth, A.B., ....... North Carolina
Smith, Solomon, A.B. ............. Maryland
Sowers, Lowell Martin, B.S. ...... Maryland
Spence, Thomas Turnbull, Jr., B.S., .... Pennsylvania
Sprecher, Milford Harsh, B.S. ...... Maryland
Stephens, Herbert Roosevelt, A.B. ... Maryland
Sterling, Susanne .................... Maryland
Stevens, Russell Alvin, A.B. ....... Pennsylvania

*Svitak, Adolph James, A.B. ....... Maryland
Taylor, Robert B.................. Pennsylvania
*Todd, Howard Davis, A.B. ......... Maryland
Van Ormer, William Alfred ......... Pennsylvania
Wigderson, Henry, B.S. ............ New York
Wirts, Carl Alexander ............. Pennsylvania
Wojcik, William Joseph, A.B. ....... Maryland
Woodward, Lewis K., Jr., A.B. ... Maryland
Zupnik, Howard Lester .......... Pennsylvania

*Did not complete the year.

GENERAL SUMMARY OF STUDENTS ATTENDING THE UNIVERSITY OF MARYLAND

SESSION OF 1927-1928

College of Agriculture .................................................. 124
College of Arts and Sciences ........................................... 558
  Regular ..................................................... 549
  Extension ................................................... 9
School of Dentistry ..................................................... 369
College of Education ................................................... 322
  Regular ..................................................... 139
  Extension ................................................... 183
College of Engineering ................................................ 409
  Regular ..................................................... 233
  Extension ................................................... 176
Graduate School ......................................................... 96
College of Home Economics .......................................... 53
School of Law ......................................................... 236
School of Medicine ................................................... 391
School of Nursing ...................................................... 113
School of Pharmacy ................................................... 358
Summer School, 1927, College Park ................................ 572

Total ................................................................. 3,661
Duplications ............................................................ 76

Net Total .............................................................. 3,585
GRADUATES OF UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, JUNE 2, 1928

Baer, Adolph .......... New York
Barley, Hugh Alvin, A.B. ... South Carolina
Bedri, Marcel Rechtman ... Palestine
Berger, William Adolph, B.S. ... New Jersey
Blecher, Irving Ezra ... New York
Bonelli, Nicholas William, A.B. ... New Jersey
Brager, Simon .......... Maryland
Chor, Herman, A.B. ... ... Maryland
Clemson, Earle Princeton .... Maryland
Duckwall, Frederick Mooman, West Virginia
Duncan, George Andrew, B.S. ... West Virginia
Friedman, Bernard ......... New York
Garred, Herbert William D., B.S. ... West Virginia
Gilbert, Jacques Saul ... Rhode Island
George, Jessie Ethelwyn, B.S. ... West Virginia
Goldberg, Victor, Ph.G. .... Maryland
Goodman, Jerome Edward, Ph. G. ... Maryland
Greer, Creed Collins, B.S. ... West Virginia
Grollman, Aaron Isaac, A.B. ... Maryland
Glick, Georg Krohn, B.S. ... Denmark
Gundry, Lewis Perkins, A.B. ... Maryland
Hankin, Samuel Jay ......... Maryland
Hayes, Paul .......... Maryland
Herold, Lewis Jacob, Ph.G. ... New York
Johnson, Walter Brenaman, A.B. ... Maryland
Jones, Henry Alvan, Ph.G. ... Maryland
Kaye, Philip Louis .......... New York
Kohn, Theodore, B.S. ... South Carolina
Kotch, Nathan Hersh ......... New York
Lampert, Hyman ........ New York
Lamstein, Jacob Irwin, B.S. ... New York
Laukatia, Joseph George ... Maryland
Lerner, Morris .......... New York
Levinsky, Maurice ....... Connecticut
Levinson, Louis Jack ...... New York
Limbach, Earl Frederick, A.B. ... Ohio
Litsinger, Edward Andrew, B.S. ... West Virginia
Little, Luther Emanuel, Ph.G. ... Maryland
Littman, Irving Isaac ....... Maryland
Lyons, Isadore Bernard, A.B. ... Maryland
Mace, John, Jr., B.S. .... Maryland
Maddi, Vincent Michael, A.B. ... New York
Maged, Alan John, A.B. ... New York
McCeney, Robert Sadler, A.B. ... Maryland
McPaul, William Neal, Jr., A.B. ... Maryland
McGee, William Buster, B.S. ... West Virginia
Mee, Robert Amos, A.B., B.S. ... New Hampshire
Melster, Aaron .......... New York
Merkosmer, David, A.B. ... New York
Merlino, Frank Anthony .... New Jersey
Messina, Vincent Michael .... Maryland
Mostwill, Ralph .......... New Jersey
Piacentine, Pasquale Anthony ... New York
Pleggi, Peter .......... New Jersey
Rascoff, Henry Morris .... New York
Rich, Benjamin Sunderland, A.B. ... Maryland
Roetling, Carl Paul ......... Maryland
Rosen, Marks Julius ....... New York
Rubinstein, Hyman Solomon, Ph.G. ... Maryland
Rutter, Joseph Howard ... Florida
Saffron, Morris Harold, A.B. ... New Jersey
Sardo, Samuel Robert, B.S. ... Pennsylvania
Shaw, Cecil Curry, A.B. ... Alabama
Silver, Abraham Alfred .... Connecticut
Singer, Jack Jerome ....... Maryland
Smoot, Aubrey Cannon, A.B. ... Maryland
Smoot, Merrill Clayville, B.S. ... Maryland
Stacy, Theodore Edwin, Jr., Ph.G. ... Maryland
Temple, Levi Wade, Jr., B.S. ... South Carolina
Tenner, David, Ph.G. .... Maryland
Varney, William Henry ... Maryland
Vernaglia, Anthony Paul ... New York
Warner, Carroll Gardner, A.B. ... Maryland
Weintraub, Fred Siegfried, B.S. ... Pennsylvania
Weisenfeld, Nathan, B.S. ... Connecticut
Wells, Samuel Robert, B.S. ... West Virginia
Wolf, Frederick Samuel ... Maryland
Warzel, Milton .......... New Jersey
Yarbrough, Oscar DeMelle ... Alabama
Zimmerman, Frederick Thomas, A.B. ... Pennsylvania

Honors

University Prize—Gold Medal—DAVID TENNER

Certificates of Honor

ADOLPH BAER
RALPH MOSTWILL

JACOB IRVING LAMSTEIN
AARON ISAAC GROLLMAN

BERNARD FRIEDMAN

The Dr. Jose L. Hirsch Memorial Prize of $50.00 for the best work in Pathology during the second and third years was awarded to David Tenner.

The Dr. Leo Karlinsky Memorial Scholarship for the highest standing in the Freshman Class was awarded to Samuel Feldman.
ALUMNI ASSOCIATION SCHOOL OF MEDICINE

President
Dr. C. Reid Edwards, Medical Arts Building, Baltimore, U. of M. 1913

Vice-Presidents
Dr. C. Emil Brack, 500 E. 20th Street, Baltimore, P. & S. 1895.
Dr. J. C. Lumpkin, 818 Park Avenue, Baltimore, B. M. C. 1898.
Dr. Fred W. Schlutz, 121 Millard Hall, University of Minnesota Medical School, Minneapolis, Minn., U. of M. 1902.

Secretary
Dr. Howard M. Bubert, Tudor Hall Apartments, Baltimore, U. of M. 1920.

Assistant Secretary
Dr. Nathan Winslow, 1900 Mt. Royal Terrace, Baltimore, U. of M. 1901.

Executive Committee
Dr. Frank W. Keating, Chairman, Owings Mills, Maryland, U. of M. 1896.
Dr. E. P. Smith, 920 St. Paul Street, Baltimore, P. & S. 1912.
Dr. J. W. Holland, University Hospital, Baltimore, U. of M. 1896.
Dr. Austin Wood, 817 Park Avenue, Baltimore, U. of M. 1914.
Dr. I. S. Zinberg, 2302 Eutaw Place, Baltimore, U. of M. 1920.

Advisory Committee
Dr. C. C. Habliston, Chairman, Latrobe Apartments, Baltimore, U. of M. 1914.
Dr. Frank W. Kirby, 110 E. North Avenue, Baltimore, U. of M. 1892.
Dr. W. H. Tripplett, 1324 W. Lombard Street, Baltimore, B. M. C. 1911.
Dr. John Evans, Medical Arts Building, Baltimore, B. M. C. 1903.

Hospital Council
Dr. G. M. Linthicum, 817 Park Avenue, Baltimore, P. & S. 1893.
Dr. Charles W. Maxson, 827 N. Charles Street, Baltimore, P. & S. 1910.

Alumni Council
Dr. Charles Bagley, Latrobe Apartments, Baltimore, U. of M. 1904.

Necrologist
Dr. William S. Love, 836 W. North Avenue, Baltimore, U. of M. 1890.

Editors
Dr. Bubert, University of Maryland.
Dr. Emil Novak, 26 E. Preston Street, Baltimore, B. M. C. 1904.

Treasurer
M. LeRoy Lumpkin, 914 N. Charles Street, Baltimore, U. of M. 1919.
ENDOWMENT FUND

The following constitute the Board of Trustees of this Fund:

Harry Adler, M.D.
J. M. H. Rowland, M.D.
Randolph Winslow, A.M., M.D., LL.D.
Stuart Janney

John B. Thomas, Ph.G.
Daniel Baker, Jr.
Horace M. Davis, D.C.D.
Robertson Griswold

Arthur M. Shipley, Sc.D., M.D.

This Board is incorporated by act of the Legislature of the State, its legal title being “The Trustees of the Endowment Fund of the University of Maryland,” and is independent and self-perpetuating. Its powers are limited to the expenditure of the interest derived from the fund, which is to be applied in the discretion of the Board for the benefit of the University. Contributions, donations and bequests are solicited from Alumni and friends. They may be made to the general or University Fund, to the Medical Fund or to any other department of the University. If intended for the School of Medicine, they may be given to the general medical fund or to some special object, as building, research, library, pathology, hospital, publication, laboratories, gymnasium, scholarship, medal, prize, etc., in which case the wishes of the donor will be strictly regarded. Attention is invited to the “Charles Frick Research Fund,” already established in memory of that distinguished investigator. Checks should be made payable to J. M. H. Rowland, Treasurer, Lombard and Greene Streets, Baltimore, Md.

FORMS OF DEVISE OR BEQUEST

To School of Medicine

I give, devise and bequeath to the Regents of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.................................

(Here state amount or describe property)

To Endowment Fund

I give, devise and bequeath to the Trustees of the Endowment Fund of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.............

(Here state amount or describe property)
THE UNIVERSITY OF MARYLAND
SCHOOL OF NURSING

FACULTY AND INSTRUCTORS

Superintendent of Nurses and Director of School of Nursing
ANNIE CRIGHTON, R.N.

Assistant Superintendent of Nurses
FRANCES M. BRANLEY, R.N.

Instructor in Nursing
ISABEL ZIMMERMAN, R.N.

Instructor in Nursing and Supervisor of Wards
HELEN WRIGHT, R.N.

Instructor in Surgical Technique for Nurses and
Supervisor of Operating Pavilion
ELIZABETH AITKENHEAD, R.N.

Instructor in Dietetics
MIRIAM CONNELLY

Instructor in Massage
EDITH WALTON

Instructor in Social Service
GRACE PEARSON, R.N.

Assistant Instructor in Nursing and Supervisor of Wards
BERTHA HOFFMAN, R.N.

ALICE BENNETT, R.N. .................. Night Supervisor
JANE MOFFATT, R.N. .................. Supervisor—Dispensary
REBA DAVIS, R.N. .................... Head Nurse—Obstetrical Ward
ESTELLA BALDWIN, R.N. ............ Head Nurse—Children's Ward
HELEN J. MORGART, R.N. .......... Head Nurse—Men's Medical Ward
ELIZABETH CANNON, R.N. .......... Head Nurse—Men's Surgical Ward
REBECCA HALL, R.N. ............... Head Nurse—Men's Surgical Ward
RIHAE GERBER, R.N. ............... Head Nurse—Women's Medical, Surgical and Gynecological Ward

LUCY BRUDE, R.N. ................. Head Nurse—Private Hall
FANNIE MAE MUNDY, R.N. ........ Head Nurse—Private Hall
FRANKIE MULLIGAN, R.N. ......... Assistant Head Nurse—Operating Room
CORI MASON WILSON, R.N. ...... Head Nurse—Surgical Supply Room
FRANCES LEISHHEAR, R.N. .......... Head Nurse—Accident Room
LECTURERS FROM THE SCHOOL OF MEDICINE

Anatomy
C. L. Davis, M.D.

Physiology
F. A. Ries, M.D.

Bacteriology
F. W. Hachtel, M.D.

Chemistry
Ruth F. Carr, B.S.

Materia Medica
W. H. Schultz, Ph.B., Ph.D.

Medicine
Maurice C. Pincoffs, M.D.
J. S. Hogan, M.D.
L. A. M. Krause, M.D.
V. L. Ellicott, M.D.

C. Hampson Jones, M.D.

Pediatrics
Charles L. Summers, M.D.

Psychiatry
R. McClury Chapman, M.D.

Skin and Venereal Diseases
Harry M. Robinson, M.D.

Ophthalmology
Harry Friedenwald, M.D.

Otology
J. W. Downey, M.D.

Surgery
Joseph W. Holland, M.D.

Laryngology and Rhinology
E. A. Looper, M.D.

Gynecology
Hugh Brent, M.D.
SCHOOLS OF NURSING

Orthopaedic Surgery
R. Tunstall Taylor, M.D.

Obstetrics
L. H. Douglass, M.D.

Social Service
Special Lecturers

STUDENTS ENROLLED, 1927-1928.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Post-graduates</td>
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<tr>
<td>Affiliates</td>
<td>7</td>
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<tr>
<td>Seniors</td>
<td>22</td>
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<tr>
<td>Intermediates</td>
<td>39</td>
</tr>
<tr>
<td>Juniors and Preparatory</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
</tr>
</tbody>
</table>

GENERAL STATEMENT

The University of Maryland School for Nurses was established in the year 1889.

Since that time it has been an integral part of the University Hospital, coming under the same government.

The school is non-sectarian, the only religious services being morning prayers.

The University Hospital is a general hospital containing about 250 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing, including experience in the operating room.

The school offers the student nurse unusual advantages in its opportunity for varied experience and in its thorough curriculum taught by best qualified instructors and members of the Medical Staff of the University.

Admission—Requirements: In order to become a candidate for admission to the Training School, application must be made in person or by letter, to the Superintendent of Nurses. An application by letter should be accompanied by a statement from a clergyman testifying to good moral character and from a physician certifying to sound health and unimpaired faculties. No person will
be considered who is not in a good physical condition between the ages of 18 and 35. She must also show that she has a High School education or its equivalent. This is the minimum requirement, as women of superior education and culture are given preference provided they meet the requirements in other particulars.

The fitness of the applicant for the work and the propriety of dismissing or retaining her at the end of her term of probation, is left to the decision of the Superintendent of Nurses. Misconduct, disobedience, insubordination, inefficiency, or neglect of duty are causes for dismissal at any time by the Superintendent of Nurses, with the approval of the President of the University.

**TIME:** Students are admitted in February and September.

**Hours on Duty:** During the probation term the students are on duty not more than six hours daily. During the Junior, Intermediate and Senior years the students are on eight-hour day duty, with six hours on Sunday and Holidays, and ten-hour night duty. The night duty periods are approximately five or six months during the three years.

**Sickness:** A physician is in attendance each day, and when ill, all students are cared for gratuitously. The time lost through illness in excess of two weeks during the three years must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

**Vacations:** Vacations are given between June and September. A period of three weeks is allowed the student at the completion of the first year and four weeks at the completion of the second year.

**Expense:** A student receives her board, lodging, and a reasonable amount of laundry from the date of entrance. During her period of probation she provides her own uniforms made in accordance with the hospital regulations. After being accepted as a student nurse, she wears the uniform furnished by the hospital. The student is also provided with textbooks, and in addition to this is paid five dollars ($5.00) a month. Her personal expenses during the course of instruction and training will depend entirely upon her individual habits and tastes.
GENERAL PLAN OF INSTRUCTION

The course of instruction covers a period of three years.

JUNIOR YEAR

First Term

The Junior Year is divided into two periods. The first term is the preparatory period (4 months) and the second the junior term.

In the preparatory term the student is given practical instruction in:

I. The making of hospital and surgical supplies. The cost of hospital materials, apparatus and surgical instruments.

II. Household economics and the preparation of foods.

III. The hospital out-patients' department and dispensary.

During this term the practical work is done under constant supervision, and teaching is given correlative.

Excursions are made to markets, hygienic dairies, linen-rooms, laundry and store-room.

The maximum number of hours per week in formal instruction divided into laboratory and lecture periods is thirty hours and includes courses in Anatomy and Physiology, Dietetics, Materia Medica, Personal Hygiene, Drugs and Solutions, Household Economics, Short Course in Ethics and History of Nursing.

At the close of the first term of the Junior Year the students are required to pass satisfactorily both the written and oral tests, and failure to do so will be sufficient reason to terminate the course at this point.

SUBSEQUENT COURSE

The course of instruction, in addition to the probationary period, occupies two and three-fourths years, and students are not accepted for a shorter period.

After entering the wards, the students are constantly engaged in practical work under the immediate supervision and direction of the head nurses and instructors.

JUNIOR YEAR

Second Term

During this period the students receive theoretical instruction in Massage, Bacteriology, General Surgery and Introductory Medicine.
Practical instruction is received in the male and female, medical, surgical, and children's wards.

INTERMEDIATE YEAR

During this period the theoretical instruction includes Pediatrics, General Medicine, Infectious Diseases, Obstetrics, Gynecology and Orthopaedics. The practical work provides experience in the nursing of obstetrical and gynecological patients, in the operating-rooms and the out-patient department.

SENIOR YEAR

During this period the student receives short courses of lectures on subjects of special interest. This includes a consideration of the work of institutions of public and private charities, of settlements, and various branches of professional work in nursing.

Experience is given in executive and administrative work to those showing exceptional ability in the Senior Year. With these students conferences are held on administration and teaching problems.

Examinations—which are both written and oral—include practical tests, and the standing of the student is based upon the general character of work throughout the years, as well as the results of the examinations. Students must pass all subjects before entering upon the work of the following year.

Graduation: The diploma of the School will be awarded to those who have completed satisfactorily the full term of three years and have passed successfully the final examinations.

Scholarships: One scholarship has been established by the Alumnae of the Training School. It entitles a nurse to a six weeks' course at Teachers' College, New York. This scholarship is awarded at the close of the third year to the student whose work has been of the highest excellence, and who desires to pursue post-graduate study and special work. There is a second prize of fifty dollars, known as the Elizabeth Collins Lee prize, which is awarded at the close of the third year to the student whose work has been of the second highest excellence.
An Alumnae Pin is presented by the Women’s Auxiliary Board to the student who at the completion of three years shows exceptional executive ability.

A prize of fifty dollars, known as the “Edwin and Leander M. Zimmerman Prize,” is given in the senior class to the student whose practical nursing is of the highest excellency and whose interest and sympathy in the patients is greatest.

GRADUATES, 1928

MARGARET E. CURRENS
HILDA LOUISE DUGGER
EDITH ELIZABETH HALL
MARTHA ALICE HASTINGS
ANNE HOFFMAN
GOLDIE IWILLA HOUGH
IRENE ELIZABETH HAMRICK
THELMA LEE HUDDLESTON
MARY LYNDALE KELLY
FRANCES MILDRED LEISHEAR
MARTHA AGNES MAGRUDER

MILDRÉD MAY MARCUS
MARIE CLARKSON PEARCE
ELIZABETH S. PENNEWELL
ELIZABETH AUGUSTA PRIESTER
MARGARET MARY RIFFLE
KATHERINE LANDWEHR ROTH
YADA BRUNETTA SMITH
EMILY ROSE SLACUM
GRACE BELL WAGNER
EMMA ARLINE WINSHIP
ELIZABETH WORK

MERCY HOSPITAL SCHOOL OF NURSING

The Mercy Hospital School of Nursing was established in 1899 and incorporated in 1901. It has developed the art of the profession according to the high standard requisite to qualify for Registered Nurse.

The Mercy Hospital School of Nursing was organized and incorporated under the laws of the State of Maryland in 1899, and has operated successfully for a quarter of a century.

Requirements for Admission.

A candidate desiring to enter the School of Nursing should apply to the Superintendent of Nurses by letter or in person at least six weeks before the entrance date. It is preferred that she apply in person, accompanied by her mother or guardian. If a personal interview is not possible, a written application may be submitted.

Age.

Candidates should preferably be between the ages of eighteen and thirty-five years. Exceptions to this rule are sometimes made at the discretion of the Superintendent of Nurses.
Physique.

Applicants should be of average height and good physique. Teeth and eyes should be attended to before entering the School, and tonsils removed if not in good condition. Every applicant is required to send in a certificate of a physical examination by her family physician. A physical examination is also made by the school physician during the preliminary period.

Education.

Applicants for admission should present at least high school certificate of graduation or its equivalent in educational values. The credits of preliminary education are fully accounted and the nurse who is the better qualified finds such a foundation more to her advantage as she progresses through the years of study.

Calendar.

Students are admitted September 1st and January 15th.

Length of Course.

The course of instruction covers three years. It is divided into a preliminary term of four months, a freshman term of eight months, a junior term of one year, and a senior term of one year.

Conditions of Acceptance.

The Superintendent of Nurses decides as to the fitness for the work and the propriety of retaining or dismissing a student at the end of the term of probation or during its course. She may also, with the approval of the faculty, terminate the connection of a student with the School in any justifiable instance. At the end of the preliminary period, if the student’s health, general education, and natural aptitude prove satisfactory to the Director of the School and the Sister Superior, she shall be appointed for enrollment as a student nurse.

Expenses.

An admission fee of fifty dollars is required from all students. This covers the cost of uniforms and books required during the preliminary course.
Should the student for any reason leave the school before completing the course, this fee will not be returned, nor may she take with her any part of the equipment.

After four months' probation, candidates, if they possess the necessary qualifications, are admitted to the School of Nursing proper. They receive ten dollars per month to help defray incidental expenses. No compensation is given, the education received being considered sufficient return for service rendered. Board, laundry, etc., are furnished by the institution.

Four weeks before admission candidates should forward the fifty-dollar entrance fee, and measurements for uniforms and aprons, which will be in readiness upon their arrival. No orders will be considered until this fee is received.

Uniform Equipment.

After acceptance students are required to wear the uniform of the School. They are not permitted to appear on the street away from the hospital in uniform at any time.

A list of the necessary articles of clothing and other equipment will be sent to each accepted candidate for admission.

Hours of Duty.

During the preparatory period of four months, the students are on duty in the Wards not more than four hours daily.

During the freshman, junior, and senior years, the number of hours of duty does not exceed eight hours during the day and ten hours during the night. One-half day off duty is given each week. Students on night duty are given one night off each week and two days at the end of each night duty period.

Vacations.

Vacations are given between May 15th and October 1st, and at no other time. Students are granted four weeks' vacation at the end of the first and second years. Absence other than this, is not allowed, except in extreme cases. Students are not allowed during their course of instruction to return to their homes to care for sick relatives or friends, or absent themselves for other personal reasons.
Illness.

Students who are ill are cared for at the expense of the Hospital for a reasonable length of time. Members of the Medical Staff of the Hospital give professional service gratuitously to students of the School of Nursing. Time lost from illness or for other reasons must be made up. Absences are allowed for emergencies only. If absence is prolonged, students may lose their class position.

Examinations.

Examinations, both written and oral, are held at the end of the course of instruction in each subject. These examinations include practical tests. The standing of the pupil is based upon the general character of her work throughout the year, as well as upon the results of her examinations. Pupils are required to pass in all subjects of a given year before entering upon the work of the following year. Careful and complete records of class work, of examinations, and of the general deportment of all pupils are kept on file in the School office.

Graduation.

The diploma of the School will be awarded to those who have completed satisfactorily the full term of three years and have passed successfully the final examinations.

THE FIVE YEAR COURSE

Leading to B.S. Degree and Diploma of Graduate Nurse

The University of Maryland, in affiliation with the Mercy Hospital School of Nursing, offers a combined Academic and Nursing program.

The completion of this course entitles the student to the degree of Bachelor of Science from the University of Maryland, and to the diploma of the Mercy Hospital School of Nursing.

Graduate nurses who hold college degrees are greatly in demand, especially for positions in administration and teaching. This program consequently offers a distinct advantage.
Outline of Course.

Two years of this course (pre-nursing or post-nursing period) consisting of 70 semester hours are spent in the College of Arts and Sciences of the University, with the usual College vacations. At least the latter of these two years must be spent in residence at College Park in order that the student may have her share in the social and cultural activities of College life.

Requirements for Admission.

Students electing such a course must before entering the School of Nursing, satisfy the entrance requirements of the University of Maryland. Applicants must be personally adapted to professional nursing.

Fees and Other Expenses.

During the two years which the students spend at College Park they maintain themselves, and pay their own College fees. (See University of Maryland bulletin.)

Throughout the Nursing School Course the hospital provides without expense to the student maintenance and care during temporary illness.

GRADUATES, 1928

Albaugh, Susan Elizabeth......Maryland
Billingslea, Agnes L.............Maryland
Billmeyer, Julia Ethiel...........Maryland
Carey, Mary Evelyn.............West Virginia
Carmody, Eileen Grace..........Maryland
Coolahan, Mary Loretta........Maryland
Edelen, Frances Forbes.........Maryland
Guy, Thyrza Catherine..........Maryland
Hampson, Marjorie Lillian.....Maryland
Humelsine, Mary T.............Maryland
Hunt, Mary Maude..............Maryland
Judge, Genevieve Teresa.......Maryland
Kane, Ethel Margaret..........Maryland
Louderman, Carmelita Estelle..New Jersey
Matthews, Catherine Eugenia...Maryland
McWilliams, Ruth Corinne......Maryland
Quill, Grace V..................Maryland
Rose, Elizabeth................Virginia
Seigman, Anna Virginia........Pennsylvania
Sheets, Anna Geraldine........Pennsylvania
Shetla, Mary Dorothy..........Maryland
Shipley, Mary Marcella........Maryland
Hitchcock, Sister Mary Euphrasia.Maryland
Daily, Sister Mary Veronica....Maryland
Smith, Cosma Valeria.........Pennsylvania
Sullivan, Ida Lavinia.........Georgia
Sullivan, Rita Mary............Glengarriff, Ireland
Toston, Elaine................Maryland
Van de Grift, Eydthe B........Maryland
Ways, Mary Virginia..........Maryland
Wooddell, Martha Stark........West Virginia
Young, Margaret Magdeline...Pennsylvania
TREATMENT OF CANCER OF THE CERVIX

WILLIAM S. GARDNER, M.D.
Baltimore, Md.

The object of this paper is not to advocate any particular line of treatment, but to try to impress a few cardinal pathological facts upon which rational treatments must be based.

The prognosis and treatment of carcinoma of the cervix depends, as in all other diseases, upon the pathology present. Innumerable papers are read and published upon the treatment of uterine cancer, but in most instances no reference is made to the pathology and only in very rare cases is there any indication that there are any differences between the various growths except that due to the progress of the disease.

It is generally recognized that adeno-carcinoma of the cervix and the body differ from the epitheliomata of the cervix, but there differentiation stops.

Look over operation or radium statistics and observe how rarely any statement as to what conditions either the operation or the radium was expected to remove. Because there are no available statistics of value which give even an approximate statement of the
pathology present none will be quoted. It would be just as rational to quote statistics on the treatment of fever, without reference as to whether the fever was typhoid, typhus, scarlet, or malarial, as to quote the final results of any form of treatment of cancer of the cervix without at the same time classifying the types of cancer. The usual statistics show how many patients suffering from cancer of the cervix were treated, how many survived the treatment, and how many lived three to five years afterwards. There is nothing to show whether the cancer was of the scirrhus type, basal cell type or whether it was of the so-called squamous cell type. Any one dealing with the first two types mentioned ought to get a high per cent. of permanent recoveries, if any efficient treatment is used, but in the third type the permanent cures approach zero.

If we are to think of uterine cancer intelligently we must stop thinking of it as a single entity with a fixed progression, and learn that the cancers of the uterus have only one characteristic in common and that is that sooner or later all will cause death; but the rapidity of growth, the time of the beginning of metastasis and the rapidity of spread vary with the different types of carcinoma within very wide limits.

Cancers of the cervix developed from the squamous epithelium can be divided into three general pathological groups. It is true that these forms merge into each other and it is often difficult to place exactly in its proper group every cancer, but there is usually no difficulty in arriving at a sufficiently exact classification to indicate both treatment and prognosis.

These groups may be designated as A, B, and C.

The cases that fall into group A, from want of a better name called squamous carcinoma, are easily recognized even by the amateur microscopist, by the great variety in size and great variations in staining qualities of the cells composing the growth. The latter variation is due, of course, to the irregular distribution of chromatin. There are other characteristic indications that are mentioned by the expert, but the two points mentioned are all that is necessary to recognize the members of this group. The growth even in the earlier stages presents large masses of carcinomatous tissue invading the deeper structure and destroying every thing before it.
These growths metastasize early and rapidly into the broad ligaments. It is doubtful if one is ever seen that has not already spread beyond the uterus. This type is present in almost every instance where the patient is under thirty-five years of age, but fortunately its frequency decreases as the age of the patient increases.

A. SQUAMOUS CARCINOMA OF CERVIX.

Group B, usually called the basal cell carcinoma, from the theory that is derived from the basal layer of the squamous epithelium or from the fact that its cells resemble the cells of the basal layer. The general appearance of this type when first viewed is that of dense masses of cells arranged in groups, and surrounded by relatively broad areas of normal cervical tissue. When the cancer masses are examined it is noted that the cells are very uniform both in size and in staining qualities, and that many of the groups of cancer cells have areas of necrosis in the centers. This type grows relatively slowly and does not metastasize nearly so early as those in group A.
Group C, or the scirrhus type, is recognized by the relatively small masses of dense, apparently compressed cancer cells that are surrounded by a new growth of connective tissue. This type develops slowly, and does not metastasize to a distance early. It is found chiefly among women of the later years of life.

**B. BASAL CELL CARCINOMA OF CERVIX.**

*Prognosis:* Cases of type A, however early seen or vigorously treated, are nearly all hopeless from the time the diagnosis is made. There is scarcely a fighting chance. I have not seen a single one of these cases that has survived five years.

Groups B and C are amendable to treatment and when diagnosed early can be cured.

It must be remembered that none of the squamous cell carcinomas grow upward into the body of the uterus. The metastasis is outward by direct continuity of tissue into the broad ligaments. It is estimated that about thirteen per cent. of all uterine carcinomata metastasize through the lymphatics. Consequently, the whole problem, except for the thirteen per cent., is one of removing invaded
tissue in the cervix and nearby broad ligaments. It is generally con-
ceded that the best results in the early cases are had by surgical
means, the only remaining question is: What operation offers the
best results? And by best results we mean the aggregate prolon-
gation of life.

C. SCIRRHS CARCINOMA OF CERVIX.

To me it is perfectly clear and logical that the proper operation
removes the diseased tissues and a reasonable margin beyond, and
does not disturb unaffected tissues. For these reasons I believe that
an amputation of the cervix with a removal of the bases of the broad
ligament is the operation of choice. The morbidity following such
an operation is very slight; the mortality is practically nothing; the
permanent results are equal to those from any method of treatment
that has been proposed.

Amputation of the cervix by an electric cautery was the operation
done by Dr. John Byrne, and no one has had better results than he.

In some cases it will be found easier to do a vaginal hysterectomy.
With this operation the mortality is very low and the final results
about the same as the cervical amputation.
The advocates of the extensive abdominal operation for cervical cancer claim that the infected glands can be removed and a wider area of the broad ligament can be resected than by any vaginal method. The latter statement I do not believe to be true; certainly as much of the base of the broad ligament can be removed through the vagina as by any method.

It is true that a part of the glands into which the uterine lymphatics drain can be removed better through an abdominal incision. But the price paid for this advantage is a tremendously increased operative mortality. The best that Wertheim, who introduced the operation could do gave an operative mortality of nineteen per cent. Some of our American operators have reduced this operative mortality to about eleven per cent., but many of them do not do the wide dissection advocated by Wertheim and it is questionable whether any of them do the operation advocated by Wertheim just as he did it. Now, if it is admitted that the only real reason for the abdominal operation is the removal of the malignant glands which occur in thirteen per cent. of these cases and the immediate mortality when the operation is done by the most expert is nineteen per cent., it is clear that there is an immediate loss of six per cent. over the deaths that would have occurred from gland involvement, if nothing had been done. No one pretends that all the cases of involved glands operated upon by the abdominal method recovering from the operation are permanently cured, and then the six per cent. difference between operative mortality and gland involvement is much increased. The years of life lost by the high operative mortality are not made up by the increased number getting prolonged relief.

**Inoperable Cancer.**

That large group of cancers of the cervix that have progressed beyond the point where it is at all probable that they can be removed demand a large share of our consideration. This group embraces more than two-thirds of all such cases seen. While so few of them are cured that the percentage is almost nothing, still much can be done to make these people more comfortable and prolong their lives.
The two complaints that call for relief are hemorrhage and pain, but the stopping of the absorption into the system of the toxic products of decomposition is also important.

One of the most efficient means of controlling these three conditions is the use of the cautery. Any kind of a cautery can be used, but by far the most efficient with which I am acquainted is the Percy Cautery. It combines the bulk and relatively low temperature of the soldering iron with a continuance of action. I have no faith in the value of the roasting process as originally advocated by Dr. Percy, but a temperature high enough to actually destroy any tissue subjected to it is of great value. Before using the cautery I scrape and cut away all tissue that can be removed with a large sharp curet. This curetment saves time and gives some idea of the extent of the growth. The cautery is then applied and the tissues destroyed as far from the cervix as it is thought safe to go. Special care must be taken not to injure either the bladder or the rectum.

After the cauterization for a few days there is some discharge due to the casting off of the burned tissue, but the active bleeding stops at once and the pain is either greatly relieved or entirely disappears.

In many of these patients seen two months after cauterization the vault of the vagina will be found healed over and smooth. Of course, these patients are not cured but they are temporarily comfortable.

Pretty much the same results are brought about by radium; even the most ardent radiologists do not claim to cure these advanced cases. Many of the patients that I have seen complained bitterly of the discomfort following the use of radium. Injuries to the bladder and rectum probably occur in a larger proportion of cases in which radium is used than follow the use of the cautery. The cautery has a much wider applicability, because anyone can get a cautery, but only a relatively few can secure sufficient radium to use in these massive growths.
A CASE OF NASOPHARYNGEAL ATRESIA TREATED WITH ENDOOTHERMY.

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A review of the literature on this subject will not be included in our report, but those sufficiently interested are referred to the excellent monograph of John E. MacKenty which appeared in the July, 1927, issue, Archives of Otolaryngology.

Nasopharyngeal atresia may be congenital or acquired. The comparatively few cases of the congenital variety reported have been seen in children between eight and ten years of age, and these we cannot consider true atresias, since all of them are characterized by the presence of a thin membranous diaphragm between the soft palate in front and the posterior wall of the epipharynx behind. This membrane is situated well up above the free edge of the soft palate, and is not visible on casual inspection of the throat; also the scar tissue about the posterior wall of the pharynx and the soft palate, which characterizes acquired atresia, is entirely wanting. Relief in such cases has been obtained by simple destruction of the false membrane with the index finger, and there was but little, if any, tendency to recurrence.

The acquired variety, or true nasopharyngeal atresia, invariably follows some form of inflammation or ulceration. The entire soft palate and uvula is adherent to or actually merges with the posterior wall of the pharynx, preventing completely passage of air and secretion from the nose and the epipharynx above into the oropharynx below. Generally there is a small aperture about the center of the adhesion, through which a probe may be passed up into the nasopharynx for orientation. The posterior wall of the pharynx is generally the site of more or less scar tissue which at times almost completely fills the nasopharyngeal space.

Difficulty of a permanent cure in this condition by surgical measures is in direct proportion to the amount of scar tissue. The absence of the small aperture above referred to, through which a probe may be passed to ascertain extent of the adhesions above, also
adds to the difficulty in obtaining a surgical result. It is generally believed that a shallow antero-posterior diameter of the nasopharynx is a predisposing factor in all such cases. Besides this, it seems to me that there must also exist some underlying and not yet recognized condition in the tissues of these subjects conducive to the formation of much scar tissue, as well as a susceptibility to adhesions in the presence of an exciting cause, just as we see in certain individuals a marked susceptibility to keloid formation.

All observers concede that syphilis is the exciting cause in a vast majority of cases. In 69 cases collected by Wright and Smith, 58 followed syphilitic ulceration. The same authors place traumatism, following adenoid and tonsil operations together with other operative procedure in the throat, second, diphtheria third, tuberculosi fourth, and still other inflammatory conditions fifth on the list of causative factors.

The difficulty of permanent relief in these conditions through surgical measures has long been recognized as being due to a tendency of the outer angles to become adherent. It is here that the two raw surfaces are practically always in contact. Nichols in 1896 was the first to stress this fact in the correction of nasopharyngeal atresia. The principle, therefore, in plastic surgery of covering all raw apposing surfaces with either skin or mucous membrane, holds equally good in operating for the relief of nasopharyngeal atresia.

MacKenty, in the article referred to, truly states that "The many procedures advocated for the cure of nasopharyngeal atresia bear witness to the inadequacy of all, and to the extreme difficulty in the way of even a moderate degree of accomplishment."

Gradual dilatation rarely succeeds except in minor cases. Nichols, in order to prevent recurrence by securing epithelization in the angles before liberating the soft palate, passed a silk seton through each outer angle from above downward, and tied the two ends together in the center of the throat below. By drawing the thread from side to side each day over a long period, until epithelium had covered the raw surface of the small canal formed by the thread, adhesion of the angles were prevented. Roe used large silver wire instead of the silk thread for this purpose.
In the ingenious operation of MacKenty, where he turns two flaps taken from the posterior wall of the pharynx, below the soft palate, upward into the epipharynx, after liberating the adhesions of the soft palate to the posterior pharyngeal wall, so that the raw surfaces of the flaps are in apposition with that of the soft palate and the mucous membrane covered surface of the flap opposite the raw surface of the posterior pharyngeal wall, he offers the best surgical procedure yet advocated. Success by this method is assured, unless the posterior wall of the pharynx is so scarred that flaps cannot be obtained.

MacKenty says that this method is not likely to succeed in cases where extensive scars of the pharynx are present, following previous surgical failures. Besides, its execution is difficult in absence of the small central opening. In such cases he advocates splitting the soft palate by a central vertical incision, extending downward from its attachment to the edge of the hard palate above to the lowermost limit of the adhesion on the posterior wall of the pharynx. Thus, on freeing its adhesions to the pharyngeal wall, the soft palate becomes divided into two halves. He then thins out the edges of these halves, and stitches the mucous membrane of the anterior and posterior surfaces of the soft palate together with continuous silk sutures, thereby creating a partial or complete cleft of the soft palate.

He makes no mention, however, of the possible inconvenience from regurgitation of food and liquids into the nose following this procedure. It seems to me certain that regurgitation could not fail to occur and cause much inconvenience in these cases. Bourgevevis and Poyet, French surgeons, used diathermy successfully in 1914 and 1919, but I am not familiar with their technique.

My case, which is being reported tonight, belonged to the most unfavorable type for surgical intervention. There was no small central opening through which the probe could be passed for orientation, and, to make the case more difficult, practically the entire nasopharynx was filled with dense scar tissue, with the entire posterior pharyngeal wall one mass of scars, as a result of four futile surgical attempts at correction made prior to the patient’s coming under my observation.
Mr. E. T. H., 30 years of age, first consulted me May 14, 1927. When nineteen years old, i.e., eleven years before seeing me, his tonsils and adenoids were removed under chloroform. An infection followed, erysipelas of the face ensued, and for some weeks his life was despaired of. During the following seven years four distinct surgical efforts were made by two different surgeons, to relieve him of the resultant nasopharyngeal atresia. Instead of relief these operations resulted in more dense adhesions, so that when he consulted me the task was indeed a most difficult one.

After consideration of the case from every angle, it was decided to attempt correction by means of endothermy. On October 24, 1927, at the Sinai Hospital, under local anesthesia (instillation of three per cent. alypin sol. through the nose into the nasopharynx by means of a spray, and deep novocain injection from below by means of a five c.c. long angular platinum needle), a large aneurism needle, armed with a heavy Pagenstecher carrier, was introduced from below upward, through the extreme outer limit of the palatal attachment to the posterior pharyngeal wall on the left side, until the point came in contact with the base of the skull. The needle was then so turned that the point might pass from above downward, through the extreme right side attachment of the adhesion. When the point of the needle emerged into the oropharynx the carrier was pulled through and the needle withdrawn.

A piece of silver wire eighteen or twenty inches long was then made fast to the carrier and pulled up through the right side, down through the left side, and the two ends brought outside the mouth. These two ends were passed through the cannula of a long insulated electric snare and made fast. The cutting current was then turned on, and with a rather quick closure of the snare, the intervening attachment of the soft palate to the wall of the pharynx cut through, without the least bit of bleeding.

The index finger, covered with sterile rubber glove, was now introduced into the nasopharynx, and it was found that scar tissue completely filled this space. We then proceeded to destroy this scar tissue as thoroughly as possible, by the bipolar coagulation current and the monopolar or desiccating current. In addition, the apposing raw areas of the posterior surface of the palate and wall
of the pharynx were lightly scared with the monopolar or desiccating current. By this last procedure it was hoped to cover these surfaces with a dry eschar, which would prevent recurrence of adhesion until healing could take place, and in a large measure it succeeded.

The reaction following this procedure was quite intense, necessitating the patient's remaining in hospital about ten days. Three days after operation, i.e., October 27th, an otitis media, left side, necessitated incision of the drum membrane, and there was a slight oozing of blood from the desiccated surfaces. The bleeding had entirely stopped by the next day, however, and except for an occasional show of blood did not further annoy us. The ear cleared up in about a week, without complication, and in another week's time the nasal breathing was very gratifying. With a further disappearance of swelling, breathing improved still more, and there was a very satisfactory space in the nasopharynx, as seen with the post-nasal mirror.

There was, however, some interference in nasal breathing, owing to a septal deflection and bilateral lower turbinate hypertrophy. On November 14th a submucous resection was performed, both lower turbinates compressed, and the pendulous posterior ends snared away.

On December 5th patient was again sent to the hospital for the destruction of a small amount of scar tissue still remaining in the nasopharynx, with the monopolar or desiccating current. Two days later we were again obliged to open the left drum membrane because of otitis. This cleared up within four days.

From this time on patient was very comfortable, with good nasal breathing and drainage, though there was some contraction of the opening from each outer angle. With the posterior mirror one could easily see the posterior nares, and could also observe that the existing opening into the nasopharynx was well lined with epithelium. On January 11th, 1928, by means of the small turbinate compressor, this opening was further dilated, and the patient left for his home in North Carolina on the fourteenth.

Returned for observation on February 4th, and again two weeks later, showing very satisfactory nasal breathing.
Conclusions.

1. Endothermy certainly proved most useful in this case.
2. Surgery in this case would in my opinion have been hopeless.
3. Silver wire for snare is much better and safer than steel. Silver wire, because of its flexibility, can be drawn within cannula of snare even though, on account of the line of traction, the loop must be at right angles to the cannula.

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SOME UNUSUAL OBSERVATIONS FOLLOWING X-RAY TREATMENT OF ENLARGED THYMUS GLANDS IN CHILDREN

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It is the author's intention, in this short paper, to present some interesting observations following the x-ray treatment of enlarged thymus glands in small children. It is not the author's desire, nor within the scope of this short paper, to discuss at length the causative factors which lead to that distressing condition, status thymico lymphaticus. However, a brief review of the origin of this gland and its subsequent behavior may help us to more clearly understand some of the serious sequelae resulting from a persistently enlarged thymic gland.

Origin: The thymus gland is present in all the vertebrates, but has not been found in the amphibia. It develops from the third branchial cleft chiefly, and according to Grosschuff¹, from the fourth branchial cleft also, which accounts for its intimate relationship with the thyroid and parathyroid glands. With the appearance of this anlage, called Thymus III, the epithelium of the dorsal diverticulum of the third branchial cleft, proliferates and undergoes histologic differentiation into Parathyroid III. The mesial portion atrophies and disappears, so that Thymus III and Parathyroid III become independent structures.
Case 1. E. H. Age 9 months. Complaint: Extreme restlessness, wakefulness, fever, slight intermittent blueness of extremities. No respiratory stridor. Tuberculin skin reaction negative. These films illustrate the condition before and after each series of x-ray treatments with the following technique: 5 M.A., 1 mm. al. filter, 9 in. spark gap, F.S.D. 35 cm., duration 3 mins. twice a week for four treatments. In most of the instances the mass was slightly reduced, but promptly returned as soon as treatments were stopped. The last picture taken February 8th, 1928, shows the mass one year after the last treatment was given. The child has continued to grow and is perfectly well and free of symptoms.
Case 2. W. P. C. Age 7 months. Complaint: Difficulty swallowing, choking, slight stridor, crowing respiration. Tuberculin negative. X-rays before, during and after the completion of the x-ray treatments. This child was given ten x-ray treatments of two and one-half minutes each from February 25th, 1927, through May 30th, using 5 M.A., 1 mm. al. filter, 9 in. spark gap, F.S.D. 35 cm. Note the hazing in the right apex. This hazing was thought to be a fibrosis, a result of the x-ray treatments. It is not known to what it is actually due; a question of foreign body with a partial atelectasis has been considered. Note the film taken February 8th, 1928. The lung has cleared up, but the mediastinal mass is still moderately enlarged, but the child is well and free of symptoms.
The thymus anlage or thymus cord elongates into a caudal and cranial end. The thin cranial end atrophies and disappears with the exception of the lowermost part which persists and forms the cervical process. The caudal end becomes thicker, and extending into the thorax, joins with the opposite side to form the thoracic thymus. The completely developed gland consists of the cervical and thoracic portions of the paired anlage. The close relationship between the thymus, thyroid and parathyroid might explain the origin of the thymic nodules so often found around the region of the thyroid and also in the midst of the thyroid parenchyma itself.

These intra thyroid nodules, according to Grosser and Betke, are more or less constant in children up to three years, but are often found in specimens in later life if sufficient time and trouble is taken to search for them with serial sections. They may play a part in the production of hyperthyroidism or they may give rise to the development of tumors.

Histologically, the thymus is composed of two parts, the cortex and the medulla, a fibrous capsule and connective tissue trabeculae. During the developmental stage, the epithelial elements are invaded by growing lymphoid tissue and blood vessels and broken up into irregular islands. The latter become smaller and smaller, until finally the lymphoid elements predominate. The Hassal bodies represent derivatives from the primary epithelial elements, but the true nature of these lymphoid and epithelial elements has not been determined.

Involution: Modification of the structure of the thymus during different phases in its growth is spoken of as physiologic involution. From birth and after, as late as puberty it increases in weight and during this period the lymphoid cells are so massed together that the cortex and medulla are differentiated with difficulty.

Location and Form: The position and form of the thymus is altered during foetal life and infancy by the growth of the child and the establishment of respiration, and during early life by the process of involution. During foetal life and persisting throughout infancy the cervicothoracic thymus is the predominating type, the larger part lying within the thorax while the smaller part extends upward within the region of the thyroid. The thymus in late foetal
life and in still-born children is broad and flat and its lateral surfaces are convex, and bulge against the medial surfaces of the lungs. It rarely overlies the right border of the heart. After the establishment of respiration the thymus is molded, becoming narrowed and elongated by the expansion of the lungs, so that its anterior, lateral and posterior surfaces bear the imprint of all the organs with which it comes in contact. It extends over the right ventricle. The right auricle, trachea and esophagus lie posteriorly. The main blood supply is derived from the internal mammary, innominate and intercostal vessels. The thymus is composed of a closed lymphatic system. The nerve supply is derived from the sympathetic system, which terminates in the blood vessel walls.

Case. 3. J. D. Age 1 month. Complaint: Respiratory stridor, cyanosis, restlessness, blueness. Note large mediastinal mass and "cap-like" shadow over the base of the heart. A typical picture of an enlarged thymus. This child was given five treatments from November 27th, 1926, to December 10th, 1926. The first three treatments were of one and one-half minutes duration, using 5 M.A., 1 mm. al. filter, 9 in. spark gap, F.S.D. 35 cm. The last two treatments were three minutes each. The child died suddenly, December 12th, 1926, two days after the last treatment.

Function: Is the thymus a blood forming organ and does it produce lymphocytes? What is its relation to the body as an internal secretory organ? Is it essential to life? These and many other questions have been asked and answered, but to date there are few positive statements which can be made regarding the function of this gland. Park and McClure⁴, in a very critical review, suggest that some causes for the conflicting experimental results are due to close confinement of the animals, unsuitable foods, failure to remove
Case 4. J. R. Age 1 month. Previous loss of baby probably due to thymic death. Complaint: shortness of breath, stridor, cyanosis, marked cough and crowing. Tuberculin negative. This child has been given seventeen x-ray treatments from January 17th, 1927, through August, 1927. These treatments were each of three minutes' duration, 5 M.A., 1 mm. al. filter, 9 in. spark gap, F.S.D. 35 cm. After each treatment the gland apparently reduced in size but would promptly return to its original size soon after the treatments stopped. The child today is free of symptoms but note the cloudy right apex. There is dullness, changes in the breath sounds with tubular breathing over the cloudy right apex. The child has gone through measles, cough has disappeared and there is no cyanosis. The gland, however, is still considerably enlarged. Child well.
thymic rests, and improperly controlled experiments and he and his colleagues have concluded that the thymus gland is not essential to life in the dog, that extirpation of the thymus probably does not influence growth and development; neither does it produce alterations in the organs of internal secretion. These findings have been corroborated by many other workers and the evidence gained by extirpation fails to support the theory of an internal secretory activity of the thymus gland and an existing thymic hormone.

Use of Thymic Preparations: If, as the evidence would seem to point, the thymus gland has no internal secretion then the employment of preparations of the thymus in the treatment of those diseases in which there is a hyperplasia of the thymus there is no rational basis.

Status Thymicolymphaticus: Blackfan states: "There is no convincing proof that the sudden death which so often follows trauma, anaesthesia, fright or that diminished resistance to infection are due to disturbances of thymic function. Preventative and curative therapeutic measures are purely speculative until the role played by hyperplasia of the thymus in this condition is more definitely determined. But the frequency with which hyperplasia of the thymus, unassociated with hyperplasia of other lymphoid structures, has been found in infants and children dying suddenly.

Renewed efforts, on the part of investigators and clinicians, have brought to light in recent years valuable information in the knowledge that an enlarged thymus is a much more common occurrence in small children than was generally thought.

Symptoms: The symptoms most commonly seen are cough, dyspnea, and laryngeal stridor. They may appear intermittently or occur continuously. If the dyspnea is not relieved suffocative attacks with intense cyanosis, convulsions and death may ensue.

Diagnosis: Any of the above symptoms should be sufficient evidence to warrant an x-ray examination which will usually show an enlarged thymus which casts a shadow to the right and left of the midsternal line, continuous with the heart shadow, either obliterating the normal cardiac angles or being superimposed on it as a broad cap.
It must be borne in mind that enlarged bronchial glands, congenital heart disease, foreign bodies, tetany, congenital malformation of the larynx, etc., may be the cause of symptoms which are identical with those seen in thymic hyperplasia.

Roentgen Diagnosis: The thymus gland varies in weight from birth to two or three years from seven to ten grams. The roentgenogram unquestionably reveals the most interesting findings in suspected cases of enlarged thymus glands. In a very large percentage of cases of normal, healthy children, without symptoms of thymic enlargement, a roentgenogram will often reveal a mediastinal mass which may measure from four to seven cm. in diameter. This measurement, of course, will vary according to the focal distance from which the picture is made. It has also been shown and demonstrated that the size of the thymus gland varies with prolonged expiration and inspiration. (This is beautifully shown in Case 5.) We have noted in a number of instances in which the children have been very unruly and it has been difficult to make satisfactory pictures owing to yelling and crying, that the shadow of the gland in subsequent pictures made with the child quiet failed to show the thymus as large as in the previous examination, made when the child was crying. We have also noted, but not to a very striking degree, that in a series of roentgenograms made of a child with the head turned to the extreme left, extreme right, acute flexion and hyperextension, that the width of the mediastinal mass varies.

Case 5. (Courtesy of Marcus Ostro.) A very good example of the size of the mediastinum during inspiration and expiration when a child is crying.
with each position and that the gland appears largest with the head in acute flexion and rotated to the right, this, in all probability, is due to pressure on the innominate artery. Unquestionably, many children are treated by roentgenization in which there is absolutely

no need but the parents so often give a history of losing a child by some unexplained, sudden death, and report that in the next child they have noted a curious, noisy breathing with or without attacks of cyanosis or respiratory stridor. In this group of cases, in which there is not pronounced and definite clinical manifesta-

Case 6. R. M. (Courtesy of Dr. M. Ostro.) Age 6 months. Right arm and leg shorter than left. Complaint: Difficult respiration, wheezy breathing. Premature birth—8 mos. Tuberculin negative. No physical signs. The enlarged mediastinal mass was an accidental finding. The child was given 11 x-ray treatments from November, 1924, to June, 1925, using 5 M.A., 1 mm. al. filter, duration 3 mins. F.S.D. 35 cm. The mass has gradually reduced somewhat in size, but the last picture, taken December 8, 1927, still shows a large mediastinal mass. The child has grown and is apparently well.
tions of thymic enlargement, a tuberculin test should be made and repeated until 0.5 milligram has failed to produce a reaction. In such cases, roentgen therapy should be given a trial.

Morgan, Rolph and Brown state that the recurrence of thymic enlargement without clinical manifestations following roentgen therapy occurs in 22 per cent of roentgenized children. They further state that in this group of cases, further roentgen treatment results in complete recovery and it is from this standpoint that the author wishes to present some interesting cases which have recently come under his observation.

Case 7. (Courtesy of Dr. J. W. Pierson.) Age 3 months. Complaint: Fever, extreme wakefulness, restlessness and cyanosis once. Tuberculin negative. The x-ray, June 13th, 1927, shows a huge mass completely filling the right lung. This child received several rather light x-ray treatments. June 23rd, ten days later, the mass was almost completely gone, leaving a huge cavity in the right lung which was interpreted as a cavity produced by pressure from the large mass. Subsequent x-rays show the lung expanding nicely and the last x-ray, October 5th, shows the lung almost normal.
According to Blackfan\textsuperscript{4}, a shadow is cast in the roentgenogram in a large number of otherwise normal children which cannot be differentiated from the shadow cast in patients suffering from thymic asthma.

\textbf{Dangers:} In the author’s series there are several cases in which the mass has been destroyed by a small amount of roentgen therapy with cessation of the symptoms, only to be followed by a regeneration of the gland and return of the symptoms. In two cases the gland has regenerated after four series of x-ray treatments. It is in this group of cases that a warning should be sounded; that prolonged radiation to the thymus might cause damage to the pulmonary structures and even to the heart, and abdominal organs, liver, spleen and kidneys. However, Pohle\textsuperscript{6} has very definitely shown that the heart muscle is very resistent to radiation and unless extremely large doses are given over a long period of time no damage is apt to result. Doub\textsuperscript{7} and his colleague’s work on the production of experimental nephritis from roentgen therapy is sufficient proof that a real danger exists where x-ray therapy is used, but if care is taken and over radiation is guarded against no untoward serious damage should result.

\textbf{Conclusions:} From a roentgenological standpoint many interesting observations have been made in this study.

1st. All cases of suspected enlarged thymus glands should have tuberculin tests done and Park recommends that the tuberculin test should be carried from 0.1 mgm. to 0.5 mgm.

2nd. That many cases have a return of the enlarged gland following x-ray therapy, some with symptoms and some without symptoms.

3rd. That enlarged tuberculous mediastinal glands often coexist with an enlarged thymus.

4th. In our series of cases, changes in the lungs, especially the right apex, have been found following radiation treatment, the character of which is not clearly understood. (Two cases.)
5th. That many cases after intensive radiation still show apparently an enlarged thymus gland one year after treatment without symptoms.

REFERENCES.


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WANTED—P. & S. CATALOGUES

The file of P. & S. catalogues at the University is very incomplete, especially the issues prior to 1900. Almost daily inquiries which can only be answered by referring to these catalogues must remain unanswered. Those of you having such in your possession would be conferring a much-needed gift upon the University as well as an invaluable addition to the University archives by forwarding them to the dean, Medical School, University of Maryland, Lombard and Greene streets, Baltimore, Maryland. The BULLETIN takes this opportunity to thank in advance those of you helping to remedy this deficiency.
MENTAL HYGIENE CLINICS

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Hygeia to the ancient Greeks was a goddess who personified health; hygiene today is a word used in exactly the same way. It is important to realize, however, that health is not merely absence of disease; it is a definite and positive possession. A knife may be free from rust or serious defect and yet not sharp. It will serve after a fashion and may last long, but it will not be efficient. Mental health not only means absence of mental disease or defect, but is the cutting edge that makes the best use of the abilities with which man is endowed. To gain this edge, it is necessary to build up habits that will bring happiness to the individual as well as render him an efficient member of society. Mental hygiene deals with the meaning of and the manner of learning such habits as are rendered necessary by the fact that men live in a social group. To protect itself, society places many restrictions on the way in which a man may behave, restrictions that bear heavily on selfish pleasures and require the use of the mind and the substitution of happiness for pleasure. Falling short in the struggle with social restrictions means discontent and its consequences,—unrest, strife, inefficiency and wasted effort. Greater degrees of failure mean mental disease.

The larger field of positive health, as opposed to the avoidance of disease, concerns everybody without exception. It enters into every activity of life, for it means getting the best out of life both for the individual and for society. Mental hygiene means education in how to live in ways that will be both happy and efficient. This education must start with the unborn child and must guide his training before and through school, his discipline and quite especially his play, his selection of a vocation and his work. The realization of the importance of mental health to the welfare of the individual and the community has grown at a rapid pace as a result of the experience of the past few years and yet even today the far-reaching importance of this factor is but vaguely appreciated and to many people the term arouses little more than thoughts of insanity and
feeblemindedness. These two varieties of mental ill-health, although striking and more or less obvious, are but a fraction of the real problem. The size of it is better indicated by stating that the ability to adjust to the conditions of social life, to subordinate the individual to the good of the group and to find an outlet with satisfaction for those longings and cravings which are innate in life itself without harm to social relationships, is dependent upon mental development. Social existence with the necessary control of individual desires which this implies is impossible without corresponding mental development in which is included not merely intelligence but also the manner in which intelligence is used.

Obviously, behavior depends partly upon the tools with which the individual must operate—the health and efficiency of the various organic systems of which the body is composed and especially of the nervous system which serves to select and coordinate the activities of the others into that integrated whole which we call behavior—but this is not all. Good, that is to say socially acceptable, behavior may exist in spite of severe organic handicaps and, conversely, unsocial behavior—insanity, crime, etc.—may appear in spite of well-formed and healthy organs. Behavior also depends in part upon training and experience in the use of the organs available. Such a conclusion seems unescapable in spite of the time-honored dictum of *mens sana in corpore sano*, which has done much to retard the development of behavior studies. All persons are not born with an equal equipment in the way of working tools or of vital energy. Hence, it is readily intelligible that even with identical opportunity in the way of training and experience, some individuals will surpass others in the successful adjustment of their innate personal desires to the restrictions of society. Some are so poorly equipped or so differently constituted that shipwreck is certain even under the ordinary routine of life and training through which the average person would pass without difficulty.

While it may be unnecessary in addressing physicians, it is, nevertheless, important for our purpose to insist upon the need for a conception of mentality which does not regard the "mind" as a separate and distinct organ or entity. Mind is not a thing and hence is not subject to disease as this term is usually understood. Mental
activity represents only the activity of the body as a whole under the guidance of individual experience and training. These last are effective chiefly through nerve connections in the brain which, when in action, are consciousness. Mind is therefore not a separable, independent entity, a realm in which guardian angels and evil spirits struggle for victory, nor is it governed only by inheritance and thus the special field for eugenics and euthanasia. In studying mentality it is necessary to take into account not only the endowment with nerve connections of the brain (intelligence) and lower parts of the nervous system together with all the various body organs, but also the training the man has received by his individual experience in the use of these endowments. Furthermore, it is obvious that treatment must be fundamentally educational in the broadest sense of that term, due consideration being given to the deficiencies and handicaps in endowment or to those arising from disease or accident.

Shortly after the launching of the modern health movement, health and social agencies, parents and educators, began to realize that health has a mental as well as a physical basis and broadened their definition of hygiene as they became better acquainted with advances already made in the closely allied mental hygiene field. In any case, various professional groups have come to believe that the mental and physical health of the individual are not only intimately related but inter-dependent and that preventive health work involves study not of isolated organs in an isolated body but consideration of the individual as a living, functioning, physical and mental whole. As for the mental health field, two decades cover the period of development of a modern point of view. The advance guard of physical health was well on its way when the term “mental hygiene” was coined. “Insane asylums” were all there were to start with and in the public mind they were regarded with even more horror than the obsolete “pesthouses” of medical history. Naturally mental hygienists centered their first attention on the problems involved, on the legal aspects, housing, treatment, etc., of “insanity.” The gradual shift of attack from the most pathological to the preventive aspects of the situation is a familiar occurrence in medicine. In this case the initial program was soon followed by the development of centers for research and teaching in mental diseases. The re-
search effort likewise was at first directed toward the grosser pathological conditions, the so-called "insanities," but later included the borderline psychopathic and psychoneurotic states and other mental disorders whose existence in the community had to be handled by other measures than institutionalization. At about this time numerous surveys of penal institutions, reformatories and jails revealed psychiatric problems as the root of many conduct disorders, and, likewise, studies revealed that many of the dependents carried by social and welfare agencies, and most of the misfits in industry were mental hygiene problems. This, of course, stimulated an increased interest in the possibilities of preventive work in the mental hygiene field. Subsequent investigation of various mental and behavior disorders in adult life indicated that treatment was often hopeless in the late stage at which it was begun. Many individuals under observation had run a long and obstinate course, had frequently started in childhood and should have been treated years before if treatment was to be effective. The significance of common early symptoms, previously regarded as things the child would "outgrow" was not appreciated, but only in the light of serious developments and in many instances found to be almost beyond the reach of treatment. All these data placed fresh emphasis on the importance of preventive work at an earlier stage, often in childhood, as the next practical step in the mental hygiene movement.

Clinics for the study and treatment of diseases of various parts of the body have long been in existence, and it seems but logical that others devoted to the study and treatment of the man as a whole, his behavior, are at least equally important and equally medical. As a matter of fact, there has been an increasing number of psychiatric, mental hygiene, child guidance, habit, etc., clinics, whatever their name, established during recent years. For the most part all of them have common purposes and differ chiefly in the ages and types of problems handled and their extra-clinical activities. The principal trend in all of these clinics has been the great growth of interest in the study and treatment of "problem" children and the educational and preventive work in behalf of healthy children carried to those responsible, especially parents and teachers. With the beginning of the present year there was established at the Univer-
sity of Maryland, in connection with the out-patient department of the University Hospital, a psychiatric or mental hygiene clinic. The clinic was made possible through the cooperation of the Mental Hygiene Society of Maryland. It serves as the out-patient psychiatric clinic and as the clinical teaching centre in psychiatry of the University Hospital and the Medical School. The staff acts as psychiatric consultants on the hospital wards. The clinic staff consists of two psychiatrists, one psychologist, two psychiatric social workers and two stenographers. All but one member of the staff are full-time people. The clinic is equipped to handle social, medical, psychological, educational and psychiatric study and treatment of behavior problems in all ages. It accepts for study and treatment nervous (so-called "neurotics" and "nervous breakdowns") and mental (so-called "insanities") diseases, delinquencies, epilepsy, mental deficiency (feeblemindedness), personality disorders, and other less serious behavior problems. Its services are without charge and it is open 9 A. M. to 5 P. M. week days, except Saturdays 9 A. M. to 12:30 P. M.

Within the limit of its time schedule, the clinic is serving and cooperating with the various health, social, educational, recreational, court and religious agencies of the community. Perhaps later, and when more working space is available, it will be possible for those interested in the clinic's activities to take part in its work as volunteer clinical assistants. It is planned to give an intensive type of clinical service to a limited number of well-selected patients for the special purposes of teaching and research; a general type of service to a greater number and variety of patients; and a consultation service when actual clinical study is not made but a family or other situation is discussed with the responsible person. The primary aim of the clinic is to assist in the adjustment of those individuals, children and adults, who present behavior problems or social mal-adjustments and thus to make known to those interested and responsible the factors involved in the causation, prevention and treatment of mental ill-health. There are, of course, in the community many more individuals presenting behavior problems than the clinic can hope to study and treat adequately. At the same time, there are other agencies equipped to meet certain types of mal-adjust-
ments and the clinic will cooperate with these agencies, and also encourage the development of additional facilities whenever possible. The cooperation of physicians and the other health groups in the community is necessary for the success of the clinic.

The brief period of activity of the clinic does not permit one to formulate definite conclusions about the work on the basis of the material handled and certainly any attempt to evaluate results is useless just now. The first 100 cases referred to the clinic, however, might illustrate by actual experience the trend of the patient material in relation to the sources from which they came, their ages and the problems for which they were referred. The problems as found in the patients are tabulated so far as they have been worked out.

**Table I**

*Agencies by Which Referred*

<table>
<thead>
<tr>
<th>Agency</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Hospital</td>
<td>22</td>
</tr>
<tr>
<td>Hebrew Benevolent Society</td>
<td>19</td>
</tr>
<tr>
<td>Henry Watson Children's Aid Society</td>
<td>17</td>
</tr>
<tr>
<td>Family Welfare Association</td>
<td>11</td>
</tr>
<tr>
<td>Family or parent</td>
<td>10</td>
</tr>
<tr>
<td>Nurses and physicians</td>
<td>4</td>
</tr>
<tr>
<td>Home of the Friendless</td>
<td>3</td>
</tr>
<tr>
<td>Children's Aid Society (Baltimore County)</td>
<td>2</td>
</tr>
<tr>
<td><em>Total</em></td>
<td>100</td>
</tr>
</tbody>
</table>

The number of cases (Table I) referred by agencies (University Hospital excepted) is perhaps due to the agencies' awareness of these problems, their interest in better understanding their clients and the fact that they have more free time to spend on the study and treatment in cooperation with the clinic. Certainly the variety of referral sources represented in the table indicates the widespread relations of the clinic in the community and the ramifications of behavior problems.
Table II

Ages of Patients

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 years and under</td>
<td>4</td>
</tr>
<tr>
<td>6 to 10 years, inclusive</td>
<td>22</td>
</tr>
<tr>
<td>11 to 15 years, inclusive</td>
<td>18</td>
</tr>
<tr>
<td>16 to 20 years, inclusive</td>
<td>10</td>
</tr>
<tr>
<td>21 to 30 years, inclusive</td>
<td>17</td>
</tr>
<tr>
<td>31 to 50 years, inclusive</td>
<td>24</td>
</tr>
<tr>
<td>Over 50 years</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Nearly fifty per cent. of the cases referred to the clinic were under sixteen years of age (Table II) and nearly seventy-five per cent. were under thirty years of age. The age factor is rather striking for a beginning clinic and indicates that many of its patients are younger people and children who present better opportunities for treatment work. The youngest patient was two years of age and the oldest patient was seventy.

Table III

Problems as Referred

<table>
<thead>
<tr>
<th>Problem</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspected mental disease</td>
<td>22</td>
</tr>
<tr>
<td>Behavior problem</td>
<td>21</td>
</tr>
<tr>
<td>Nervousness</td>
<td>12</td>
</tr>
<tr>
<td>Mental retardation</td>
<td>12</td>
</tr>
<tr>
<td>Personality difficulty</td>
<td>7</td>
</tr>
<tr>
<td>Vocational problem</td>
<td>7</td>
</tr>
<tr>
<td>Educational problem</td>
<td>5</td>
</tr>
<tr>
<td>Enuresis</td>
<td>1</td>
</tr>
<tr>
<td>Domestic difficulty</td>
<td>4</td>
</tr>
<tr>
<td>Psychological examination</td>
<td>3</td>
</tr>
<tr>
<td>Sex offender</td>
<td>2</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>1</td>
</tr>
<tr>
<td>Attempted suicide</td>
<td>1</td>
</tr>
<tr>
<td>Convulsions</td>
<td>1</td>
</tr>
<tr>
<td>Temper tantrums</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Table III represents the outstanding problems which caused the referring sources to send the patients to the clinic. It must be understood that many of the patients might well be included in several different groups, but it was thought best to indicate only the problem that seemed to stand out most prominently in each case. In only a few instances are symptoms alone noted. There were many instances of such symptoms as stealing, truancy, temper outbursts, sex habits and other sex activity, fainting or related attacks,
sleeping and eating habits, etc., but these are included under the general headings used. The outstanding picture revealed in this table is that about fifty per cent. of the patients were sent to the clinic for problems other than the usual dispensary types of suspected mental disease (so-called “insanity”), nervousness, mental retardation (feeblemindedness) and epilepsy. In other words, the material offers possibility for work with a better lot of material than ordinarily visits the usual out-patient psychiatric dispensary. Behavior, vocational, educational, personality, domestic and habit problems, especially in relation to children are unusual in the average psychiatric dispensary practice and undoubtedly are unusual in general dispensary work.

**Table IV**

*Problems as Found*

<table>
<thead>
<tr>
<th>Problem</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental retardation</td>
<td>18</td>
</tr>
<tr>
<td>Psychoneuroses</td>
<td>12</td>
</tr>
<tr>
<td>Situation reactions</td>
<td>11</td>
</tr>
<tr>
<td>Personality disorders</td>
<td>11</td>
</tr>
<tr>
<td>Inferiority compensations</td>
<td>7</td>
</tr>
<tr>
<td>Lack of habit training</td>
<td>7</td>
</tr>
<tr>
<td>Psychoses</td>
<td>6</td>
</tr>
<tr>
<td>Organic mental diseases</td>
<td>3</td>
</tr>
<tr>
<td>Organic nervous diseases</td>
<td>2</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>1</td>
</tr>
<tr>
<td>Physical disease</td>
<td>1</td>
</tr>
<tr>
<td>No disease found</td>
<td>3</td>
</tr>
<tr>
<td>Unfinished</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table IV presents only the chief problem presented by each patient. For instance, medical disease may have been present and acted as a contributing cause of behavior in a number of cases, but only in one instance was it found to be the chief cause of trouble. Eighteen of the hundred patients have not been completely studied and diagnosed. The table indicates that the greatest number of patients presented mental retardation as the central problem. This does not necessarily mean that this group of patients are hopelessly feebleminded and that that condition is the actual problem which brought the patient to the clinic. As a matter of fact, six patients were found mentally retarded although it had not been suspected by those referring them to the clinic. There are, of course, patients in this group who present behavior problems in addition
to mental retardation and who can be adjusted in spite of their intellectual handicaps. There were only six patients diagnosed as having psychoses as compared with (see Table III) twenty-two individuals referred as "suspected mental diseases." Institutional treatment was recommended in eighteen instances for the psychotic, mentally retarded, etc., which means that community care and treatment was believed possible in a fair portion of the patients so diagnosed. Not only can many of the problems associated with mental retardation in the community be helped by clinic study and treatment but certain of the psychotic, epileptic and organic nervous and mental disorders can be treated with fair success. Certainly the psychoneurotic, situation, reactions, and the balance of the disorders listed under Table IV, or more than fifty per cent. of all in this table, should be improved or adjusted through clinic treatment.

Practically every patient examined at the clinic has a complete social investigation made by a social worker, a physical and frequently a neurological examination by a physician, a survey of the patient's mental capacity and performance by the psychologist, and a behavior or psychiatric study by a psychiatrist. Following the completion of these studies a conference is held at which those actively concerned with the patient discuss the various findings and outline the treatment. These conferences are open to the medical profession. The staff conference may be followed by any number of treatment conferences. The various medical and surgical specialties of the University Hospital, its laboratories and wards, are available for the use of the clinic when needed. Since the problems with which the clinic is concerned are frequently social, it is obvious that trained social workers to investigate conditions in the home, school, industry and the general community are absolutely necessary. This assistance for the most part is secured by the cooperation with the agencies that refer patients to the clinic. Social workers are also essential in treatment because treatment falls in general under two headings: first, that which attempts to correct the deficiencies or faults in the patients; and second, that which is designed to modify the conditions under which he must live. It is with the latter especially that social treatment is indicated under the guidance of the psychiatrist.
The following case summary will serve as an example of the routine clinical study:

**Staff Report**

Name, Joseph Smith. Age, 14\(\frac{1}{4}\) years. Case No. 16. Date, March 9, 1928.

Referred to Clinic by: A children's society.

Problem as Referred: Stealing and running away from home.

Should patient be continued in present foster home? Advice and recommendations desired.

**Significant Findings**

I. **Physical Examination:** Twenty pounds over weight. Vision right and left 20/200. Tendency to stuttering. A coarse general nystagmus in both eyes. A limping gait caused by shortening of left lower extremity. Marked atrophy of left leg muscles, the result of an old poliomyelitis. Operative scars on left leg and ankle with absence of left Achilles reflex. Puberty established.

II. **Psychological Examination:** Stanford Revision of Binet-Simon.

Chronological age, 14 years three months; mental age, 12 years 8 months. Intelligence quotient, 88. This indicates that the patient belongs in the dull normal group intellectually. His performance on the test was rather scattered and showed good imagination. The patient has been under-placed in school.

III. **Social Examination:** Father died of tuberculosis in 1924, after four years' illness in a sanatorium. Mother has a vision defect and is said to be nervous. Brother 9\(\frac{1}{2}\) years was under-nourished, had fibroid tuberculosis and was enuretic and truant, but now greatly improved in a foster home. The patient's birth and early development are negative. At three years he had poliomyelitis, followed by atrophy in the left lower extremity. He has had measles, chicken pox, diphtheria, pneumonia and influenza. At 10 years of age, when he came to the agency's attention, he was truant, a bed-wetter, masturbated, defecated in bed and had temper outbursts. Later in an orphanage he ran away fifty-two times within
a year, dressed in girl's clothes on several occasions, was mimicked by the other children, involved in sex episodes with the boys and younger girls, and stole a number of things not necessarily useful to himself and secreted them. A physician diagnosed the boy's reaction as one of a potential dementia praecox or schizophrenic state. Following his orphanage experience he was placed in several homes, but continued to run away and steal, and because of his behavior and lack of adjustment he was admitted to a hospital for the insane, at the age of thirteen, for observation. The hospital physicians found no mental disorder sufficient to retain the patient indefinitely as psychotic and recommended that he be removed and placed in a private home. The patient was again placed in a series of homes, including his own, but his stealing and running away continued with short periods of good behavior until he came to the clinic for study and treatment. He was at that time, and continues, with foster parents in the country who are kind and understanding and who have three well-behaved foster children in their home whose ages are thirteen, ten and eight years.

IV. Psychiatric Examination: An adolescent boy, rather stout but good looking, except for the nystagmus. He is talkative, active, smiles and laughs freely and entertains the examiner with various jokes and situations. His reactions and personality are rather childish. Regarding play interests, he likes to play with others, "if I can get anybody to play with me." He reads most of the time and likes the "Merriwell boys—Frank and Dick"—best and books of adventure and "about heroes." Thinks he is "not much on the outdoors" and he is not a leader with others. He dreams a great deal about putting himself over. Is informed about sex matters and admits having masturbated, but stopped when he went to the hospital for the insane. Claims he began truanting at eight years of age, but first ran away from a children's hospital while waiting for one of his many operations and went home before he was eight years. He couldn't learn well in school because of headaches and his "head was wrong as a result of paralysis." He was in 5A grade when he quit school. He claims to have taken ether eight or nine times because of his leg operations and a T. & A. operation, and this prevented regular school attendance and he learned to dislike school.
At about eight years he thinks he began to run away from home and also to take money which he used for food, movies and to treat other boys. He speaks of his eyes troubling him soon after entering school and "they gave me tin glasses, but I always lost them." He was teased about his eyes and glasses. A pair of shell glasses supplied him last year, however, he kept for a year or more. He talks enthusiastically about his family, especially about how kind his father was to him. About his mother being lonesome and working so hard for a living and the great improvement in his brother's physical condition and behavior. He would like very much to see his family together again and happy, and it is his ambition to stop running away and build up a home for his mother and brother.

When the question of his leg condition is approached and the possibility of this being a handicap, he tells the most thrilling stories about his athletic abilities and fighting qualities and then again he evades various issues by bringing up something to side-track the examiner from probing him about his weaknesses. He frequently dodges questions related to his behavior and he is rather reticent and tends to stutter more when discussing his sex life. He has no complaints about his present foster home and foster parents and he thinks he has no trouble there. At the orphanage the children teased him about his gait and leg condition and mimicked him a great deal. He was wearing short pants at that time and he put several pairs of stockings on his withered leg and dressed in skirts and on one occasion ran away so dressed. His behavior was worse, he thinks, while at the orphanage than any other place. Claims he doesn't want to run away, "but notion or something tells me or strikes me and off I go." "I'd be glad to stop, by golly." Often he goes to his mother. He usually takes money for subsistence before leaving. When questioned about his excessive enthusiasm and laughing, he says, "Best to laugh instead of cry." He is proud of his bigness, the result of excessive eating and overweight. He lacks insight and his rather blind compensatory drive has not made for balanced judgment.

**Diagnosis:** An adolescent boy who is compensating for feelings of insecurity and inferiority by attempting to attract attention and "act big."
Etiology: His inferiority feelings seem to be based on his physical condition and social situation, namely, organic brain disease (probably encephalitis), old invaliding poliomyelitis at three years, broken home (father admitted to tuberculosis sanatorium when patient was seven and one-half years of age), poor habit training and supervision. He is highly imaginative, has taken refuge in reading and his behavior is largely an attempt to escape from reality and to find satisfaction in adventure and to receive attention or stand out through his anti-social activities.

Who is to carry treatment? Agency worker to carry social treatment and clinic to carry medical and psychiatric treatment.

General Plan of Treatment.

Medical: Orthopedic study and perhaps building up of the left shoe. Diet regulation and weight reduction. Suitable glasses to correct vision defect.

Psychological: To remain out of school perhaps permanently. Vocational guidance later. Re-testing after plan has been effective for a period.

Social: Adjustment of the boy in the present foster home should be undertaken, where the foster parents are intelligent and understanding and where competition for the boy is at a minimum. Healthy interests and outlets should be provided. Praise, encouragement and legitimate opportunities for him to stand out and to succeed in achievement should be kept in mind. His assets should be held up and his liabilities should not be stressed. When he runs away let him return voluntarily and not pursue him as has been done heretofore. He should have definite duties and should be given responsibilities. Reading period and material should be supervised. His imaginative qualities should be utilized. He should have an opportunity to earn money or have an allowance.

Psychiatric: Much of the above social treatment should be directed toward building up a feeling of security in the boy in his present home and the possibility held out to him of becoming a man, with a job, when his own home might be reconstructed and he might assume a bit of his late father's responsibility in the family. He should, of course, be given insight into his childish behavior by
playing on his assets and his ability to rise above his present situation. Further observation and study are indicated and treatment interviews may be necessary over a long period before an adjustment is perfected.

The boy's behavior is undoubtedly due to emotional compensation and it is largely a question of giving him insight, modifying his social environment and substituting healthy interests and outlets for the present unhealthy compensatory trends. It is, of course, obvious that much better results might have been expected had the youngster been studied and treated earlier and if his physical handicaps were not so decided and long standing. However, he may surprise us at this late date, regardless of his long list of handicaps, his bitter experiences, and the resulting behavior.

The purposes of this special mental hygiene clinic appear to be as follows:

1. The diagnosis and treatment of behavior problems, especially in cooperation with existing agencies in the community.
2. To serve as the out-patient psychiatric clinic of the University Hospital.
3. A center for teaching clinical psychiatry in the University Medical School.
4. Research into the causes, prevention and treatment of behavior disorders.
5. Education work through lectures, conferences, literature, etc., with parents, teachers, social workers and other groups who have to do with, and who are responsible for, the early training of children and the later behavior of children and adults.
6. Cooperation with related groups and encouraging the establishment of mental hygiene work in the public health and welfare fields.

All of these purposes are under way except the clinical teaching, which is being planned. Such an undertaking must, of course, proceed slowly and build firmly. Its territory and scope of activities must not be too large but rather limited and well done. It is with these things in mind that those responsible for the clinic are proceeding.

1014 St. Paul Street.
THE MANAGEMENT OF HAY-FEVER*
HOWARD M. BUBERT, M.D.
BALTIMORE, MD.

The Management of Hay-Fever

The condition known variously as hay-fever, rose-colds, pollinosis or allergic coryza is a very common one in this country. The treatment of this condition is an attractive field for the efforts of any physician who is willing to devote a sufficient period of study to the subject.

The treatment of hay-fever suffers at present from a certain degree of ill repute. The modern methods, to be described later, require careful technic, experience and good judgment for their successful application. Any carelessness is apt to bring about serious or even dangerous reactions in the patient. It is not justifiable to decry the method of treatment because of this. Then again there has been a period of undue optimism about the results. This is especially noticeable in the advertising propaganda of certain drug firms. If all this be discounted, however, the fact remains that we now possess the means of curing some, and of alleviating the majority of cases of hay-fever.

The Taking of the History

As in most conditions in medicine, history plays the most important role in determining the type etiology present in any given case. Several angles should be considered in taking a history of any case as follows:

Anatomical distribution of symptoms: It should be remembered that so-called hay-fever is not manifested in the same manner in all sufferers. Some will have the typical picture of hay-fever, namely, conjunctivitis with lachrymation, injection of the cornea, swelling of the lids, burning and itching of the eyes, swelling of the mucous membrane of the nose with the production of a thin serous discharge, interference with the passage of air through the nostrils, sneezing, injection of the pharynx with cough and, if the larynx is involved, changes in voice production.

*From the Protein Clinic, University Hospital.
On the other hand, instead of these typical symptoms, there may be hypersensitivity of the mucous membrane of the bronchi with the production of bronchitis, or, in certain individuals, true bronchial asthma occurring seasonally.

Or again the eyes and the entire respiratory tract may be involved, or symptoms may be localized in the eyes or in one portion of the bronchial tree, as the nose, pharynx or bronchi.

As examples of the less usual types I may cite two cases, the first illustrating the occurrence of seasonal asthma and bronchitis and the second strict anatomical localization of symptoms in one organ, in this case the nose.

Case 1. An example both of asthmatic praoxysms complicating the usual symptomatic picture of hay-fever and of the condition continuing after the termination of the season of pollination, due to secondary infection.

Mr. D., age 59, began with the usual eye and upper respiratory tract symptoms of spring hay-fever, in the spring of 1918. About July, practically total relief occurred which continued until August, when the symptoms reappeared and lasted until frost. In the latter part of August, 1920, two years after onset, the usual picture was complicated by shortness of breath and wheezing and his physician made a diagnosis of bronchial asthma. The greater part of his symptoms disappeared with frost, but there was slight dyspnoea present throughout the following winter.

The next spring asthma occurred during his spring hay-fever, with the usual relief in the middle of the summer.

Periodicity remained the same with a gradual increase in severity of symptoms until this spring, when he had only slight hay-fever and no asthma.

This fall symptoms occurred as usual, including those of asthma, but, whereas the hay-fever symptoms stopped with the appearance of frost, those of asthma have continued, recurring almost nightly up to the time of this examination. (October 18, 1927.)

Diagnosis: 1. Seasonal spring and fall hay-fever with seasonal asthma.
           2. Secondary respiratory infection with perennial, bacterial asthma.

Case 2. An instance of definite anatomical localization of symp-
toms, as well as eventual secondary infection occurring in untreated hay-fever:

Mrs. M., age 40, came to me April 4th of this year, stating that for 12 years she has had recurring fall pollen disease, beginning the latter part of August, ending with frost and with symptoms limited almost entirely to the nares, her eyes being very slightly, if at all, affected.

The fall of last year, 1927, she had rather milder nasal symptoms of hay-fever, but instead of terminating upon the appearance of frost, they continued unchanged up until about six weeks ago. At that time she felt as if she
were contracting a cold, with aggravation of nasal obstruction and sensation in head, as if it were gathering with heavy, dull ache in back of her nose and in the middle of her forehead. The clear, watery secretion, which had been present almost continuously up until that time, changed to a thick, purulent material. The dull headache was worse in the morning and the discharge was of such character that the patient described it as “looking like a gathering had broken.”

For the last three weeks she has been under the care of a very competent nose and throat man who gave her quite a little temporary relief, mostly by the local application of epinephrin.

Diagnosis: 1. Seasonal fall pollinosis limited to the nares.
2. Secondary bacterial rhinitis (this winter).
3. Secondary frontal sinusitis following bacterial rhinitis (confirmed by x-ray).

These two cases seem to me to show very clearly the danger of allowing hay-fever to continue, year after year, without some logical attempt at control.

Seasonal Variation: Most cases of pollen disease have definite seasonal aggravation of symptoms in the spring, so-called rose-colds; in the fall, so-called hay-fever or both. This is a very valuable point, of course, because when this history is obtained certain plants immediately suggest themselves as the offending ones.

In an endeavor to discuss the relationship of specific pollens to causation in an orderly manner, I shall start with the spring cases. The etiological factors vary, of course, in different sections of the country. I shall consider the middle eastern States especially and, therefore, some of my statements must be adjusted to suit other sections of the country.

When a patient states that symptoms start late in April or early in May, vegetations pollinating early, that is, at this time, must naturally be considered. Trees which are wind pollinated, such as the pine, play some part here, but the greater importance is to be placed in the first of the grasses, sweet vernal grass, which pollinates at this period.

The grasses are great factors in hay-fever, as are the members of the goose foot family, the pigweed family and the composite group which includes the ragweed, thistle and dandelion families, because they are wind pollinated and because of the abundance of small, light pollen grains produced for distribution as part of their reproductive system.
Reverting to the time of pollination, the short period of pollen activity of the sweet vernal grass is sufficient to overlap that of June grass, which, in turn, is followed rapidly by orchard, timothy, fescue, rye grass and, lastly, red top which flowers early in July. A consideration of these facts would naturally suggest certain possibilities as to relationship between the time of occurrence of symptoms and trees or grasses pollinating at that time.

In this section of the country neither the goose foot (*Chenopodiaceae*) nor the pigweed (*Amaranthaceae*) families are of much importance, as they are relatively rare and are given very little attention. This is far from being the case farther west, however.

The greatest offenders of all, in producing hay-fever, are two members of the ragweed family (*Ambrosiaceae*), called, respectively, giant ragweed (*Ambrosia trifida*) and short ragweed (*Ambrosia clatior*). They are concerned in the production of late summer and fall hay-fever and it is variously estimated that they are implicated in up to 95 percent of all pollen disease at this season of the year, in the eastern States.

The members of all of these groups have many characteristics in common with other members of their own group, both in the structure of the plant and in the morphology of the pollen grains. Of great interest to the clinician is the fact that commonly, more than one member of the same group will cause a reaction in the patient sensitive to some member of that group; that is, a patient sensitive to one grass will very likely react to others to a greater or lesser degree. This, fortunately extends to the desensitization as a result of treatment, because of it one uses the pollen or pollens giving the greatest reaction in the implicated group or, the one or more that are most prevalent in the region involved, knowing the patient’s tolerance to all that group will be raised.

A patient may give the history that his symptoms of pollinosis (hay-fever, asthma, etc.) have usually occurred during some definite season, but that, more recently, they have shown a tendency to persist after that season is over. For instance, he may have had asthma in late August and up to frost but now has asthma continuing well into the winter. Such asthma after frost is hard to relate to pollens. The explanation in such cases is usually that secondary infection
has occurred and is perpetuating the asthma. The diagnosis of seasonable pollinosis is nevertheless correct and the case should be treated on that basis, because of the seasonal congestion and oedema.

Another case, usually a woman, will state she has hay-fever all the year around and before dismissing the possibility lightly, stop and question her. The history is usually of year-around hay-fever, but in most cases there will be seasonal exacerbation at the conventional times. The possibility of spring and fall pollen sensitivity, together with an added element of orris root, cotton, silk or animal idiosyncracy must be seriously considered. A case in point is the following:

Miss T., age 23, came to me last year, late in the fall hay-fever season, giving the following history:

The present illness started three years ago as a constant sneezing with terrible itching sensation in the nose. After about a year of symptoms, she was tested out by a physician and found sensitive to orris root, and large and small ragweed. No tests were made for spring products.

Thinking she was too young for hay-fever, she consulted a physician about her nose, who told her there was a condition present similar to urticaria and caused by hay-fever. He advised her to refrain from face powder, but this she refused to do at that time.

Last fall her eyes were so badly affected she consulted an eye specialist who told her she had acute conjunctivitis due primarily to hay-fever.

Her symptoms occur throughout the entire year with marked increase in severity during both spring and fall hay-fever seasons, especially the latter.

Late last fall she consulted me and skin tests were again positive to orris root and fall pollens, but, in addition, spring pollens gave a definite reaction. The absolute necessity of substituting rice powder for powder having an orris root base, together with the need of pollen therapy was explained.

This regime was not put into effect until several weeks before the pollination of sweet vernal grass this spring, to which she was sensitive, with immediate and complete subjective and objective cessation of the conjunctivitis and rhinitis, both of which had been present constantly since the onset of her present illness, three years ago.

In this it may be valuable to quote Cook\(^1\) as to the percentage of occurrence of different etiological agents. He states, of all cases of hay-fever, or as he calls the condition, allergic coryza, 10 to 15 percent are caused by animal emanations, 10 to 15 percent by sachets and perfumes, particularly those containing orris root, and the remaining 70 to 75 percent by pollens. Needless to say, the last group contains practically all of the seasonal cases.

He further admits the possibility of foods or drugs causing symptoms of hay-fever alone, but state he has never seen it occur except
in combination with some other manifestation of allergy, such as asthma, urticaria, or angioneurotic oedema.

I believe it is apparent from the foregoing that there is more to be considered in the diagnosis of hay-fever than is commonly realized.

As a result of the above type of questioning, the physician has usually formed some definite general ideas as to the etiological possibilities of the case under consideration and the next step is, of course, to find definitely the specific agent or agents concerned; this involves the use of tests for the different proteins felt to be under suspicion.

Before going into the details of this procedure, several points in interpretation should be considered. One must first remember that the different tissues may react differently to different proteins; that is, the skin may be insensitive to pollens to which the mucous membranes of the eyes are exquisitely sensitive or, on the other hand, the skin may be sensitive to air borne substances to which the tissues usually involved in hay-fever are insensitive. Examples of the latter are frequently seen in hay-fever cases in which the skin tests may be positive to both spring and fall pollens, whereas, the patient may have allergic coryza limited to one or the other season, with absolutely no trouble during the other one.

These possibilities but stress again the paramount importance of history; it would obviously be absurd to treat a patient upon the basis of pollen tests, in the face of a history showing that no clinical evidence of the sensitivity had ever appeared.

The Tests.

Several types of tests have been advocated by different workers and I shall mention them briefly in the order given by Duke:

Specific Clinical Tests: This is a crude method of distinct value, if possible to perform, and consists simply of exposing the patient to the offending substance in such a manner, and in such dosage as to cause the appearance of symptoms. Needless to say, it is many times difficult of attainment.
Ophthalmic and Nasal Tests: These consist of spraying pollen solutions into the conjunctival sac or into the nose, and should be used with great caution, and only after careful history and skin tests to determine the degree of the patient's sensitivity. The results consist of injection of the conjunctiva and lachrymation lasting, according to Duke, at least five minutes. The reaction can be abruptly terminated by the local use of a drop or two of 1-1000 adrenalin solution. The nasal test is essentially the same with the production of sneezing, mucous membrane swelling and clear secretion. It may be terminated in the same manner.

I feel these tests are unnecessary, except in the case showing skin tests at variance with the history, as stated above; fortunately, the vast majority of these so-called contact cases of allergy, which we are considering, give reliable skin tests.

Inhalation Tests: In the event one is led to suspect certain substances in any given case, another procedure may be attempted in an effort at confirmation, especially if the skin should be negative, namely, inhalation by the patient of the material under consideration. Needless to say, should this substance be of an irritating nature, such as pepper or dust, great care must be exercised in interpreting findings.

Subcutaneous Tests: It is possible to confirm a given diagnosis by injecting subcutaneously a weak solution of the material and thus create symptoms. This is a very dangerous procedure and one that, I feel, should not be used except, possibly, in rare instances.

Skin Tests: Because of their constancy, especially in the so-called contact cases, their lack of danger and the ease of performing them, they are used by practically all workers as routine in specific etiological diagnosis.

I may state here that a great fund of information, as to the plants concerned in the production of hay-fever, has been accumulated by the firms selling the proteins for use in testing and in treatment. They are always willing to assist one in determining the proper pollens for any specific locality. A communication addressed to them will receive prompt attention.
There are two methods in common use, the intracutaneous of Cooke and the cutaneous or scratch method of Walker, each having a very large number of advocates.

Personally, I favor the latter because of several reasons, as follows:

1. **Ease of Performance.** In spite of the entire practicability of the very clever one-syringe method described by Duke\(^3\) for intracutaneous testing, to me the scratch method seems less difficult. In the scratch procedure the skin is scratched with a dull knife for about one-fourth inch, care being exercised not to draw blood. The solution being used is applied to this incision by means of the large end of a flat tooth-pick and gently rubbed in. If desired, a drop may be applied by means of a hypodermic syringe, cleansed as described for intracutaneous tests in the next paragraph.

The one-syringe method, advocated for intracutaneous testing by Duke, consists of having three dishes of sterile water at hand and washing your syringe after each test in all three dishes, and always in the same order. Its originator has used it in a very great number of tests with entire satisfaction and, seemingly, without contamination of one solution with the ones preceding it.

2. **Discomfort:** Cooke, Duke and others claim there is less discomfort to the patient in using the intracutaneous method. To me this is difficult to believe, even with a No. 26 hypodermic needle as advocated, and using a small amount of solution in the injection, 0.1 cc. My patients have uniformly preferred the scratch method. Needless to say, there is a wide variation in personal skill here as in any other “surgical” manipulation, however slight.

3. **Danger:** The sensitivity of some individuals to foreign proteins is almost unbelievable. I recently tested a medical student to different pollen solutions by the scratch tests and his reaction was quite severe, with hives, angioneurotic oedema and pruritus, lasting for some hours in spite of the use of ephedrine by mouth. Had these been intracutaneous tests, and had the solution entered a small vessel, a not too remote possibility, disaster might well have resulted.

4. **Value of Results:** In contact cases, as I have mentioned above, the skin is quite active in a large proportion of cases and
in most of them, in direct ratio to the patient's symptoms, therefore, I see no reason for the almost too sensitive, intracutaneous tests.

In the general reactions such as urticaria, angioneurotic oedema or asthma in older subjects the intracutaneous tests are of distinct value, but excessive general reactions and false positives must be constantly kept in mind.

Treatment

It is possible in many cases of hypersensitivity, especially those in which contact substances, such as the pollens, are at fault, to increase the patient's tolerance to the substance or substances, by administering increasing amounts of the material by hypodermic injection. Such so-called specific desensitization is the backbone of all such therapy at the present and is of great value, as proven by the results of widely separated workers. They almost uniformly agree that 80 percent of all cases, adequately treated, obtain 80 percent relief of symptoms; those who report otherwise, vary unfailingly in claiming an even more favorable result. Some state 100 percent symptomatic improvement may be expected, if the case is treated correctly, in 100 percent of the cases.

The consensus of opinion up until recently has been that the good results were only for the season. Many are beginning to disagree with this, however. They feel the condition gets progressively less severe from season to season under vigorous, well-directed treatment. This has been my experience.

Pollen Therapy: Many firms are manufacturing satisfactory solutions for treatment, using several different methods of determining the dosage and strength of their solutions. The method used to standardize solutions is a matter of little importance, as all solutions used should be tested by skin or conjunctival tests upon the patient under treatment. In other words, actual potency in a given case is the important thing, no matter whether the extract is said to contain so many nitrogen or pollen units or is said to be of a certain percentage strength. Some commercial firms test their pollen products for potency before putting them upon the market.

The procedure at first advocated by all workers was the long interval one; that is, weekly doses begun months before the usual
time for symptoms. This is rapidly giving way to the more recent short interval method in which, at first, doses are given daily and, if possible, twice daily; when the stronger solutions are reached, every two to four days depending upon the response of the patient.

A very satisfactory method is as follows: About four to six weeks before the beginning of symptoms, a skin test is made with the weakest solution in the treatment set to be used. If the response is marked, give even less than called for in the directions for that set. If the response is negligible, do skin tests with the stronger solutions to make sure you have the correct pollens and a potent solution. Should you obtain a reaction with the stronger vials only, give a greater dose than called for in the circular and increase more rapidly with the contents of the weaker vials giving no reaction, thus saving time. The doses are increased as indicated in a given case and not according to any hard and fast rule, several things being used as criteria for dosage, as follows:

1. When the skin test is negative for any one of the vials, increase dosage more quickly while using that vial.
2. When there is a local reaction, increase the dose slightly or repeat the same dose, depending upon the severity of the reaction.
3. If general symptoms result, return to the highest previous dose giving no symptoms, and increase more slowly.
4. Do not allow the patient to leave your office for at least an hour after the first few treatments, until you learn something of his degree of sensitivity. This also applies when the doses become large, although untoward results are much less likely after treatment has been well established and you learn your patient.
5. Never fail to withdraw the plunger of your syringe before injecting the solution, to make sure you have not entered a vein. I know of a case that almost ended in disaster because this precaution was not observed.
6. Have adrenalin solution and some quickly acting heart stimulant at hand, in the event untoward reaction occurs. Here, may I say, that smaller doses of adrenalin, quickly and frequently repeated, are better than one large initial dose, because, during a pollen reaction, the blood pressure falls rapidly and you suddenly cause it
to rise too much by an over dose of adrenalin, you may create a very serious situation.

7. The greater the degree of tolerance you establish, that is, the higher the dosage of pollen solutions you reach without symptoms before the season starts, the greater freedom that patient will experience from the unpleasantness of hay-fever\(^5\). It is here that the commercial pollen solutions frequently fail, because the manufacturers naturally desire to have their solutions used as widely as possible, and because they know the danger of the solutions of higher concentrations in inexperienced hands, their tendency is to keep their strongest treatment solutions below the actual requirements for satisfactory protection to the patient. The result is that a great percentage of sufferers so treated are inadequately desensitized. Hence, most clinics prepare their own pollen solutions. Nevertheless, if the product of a high-grade pharmaceutical firm is used and pushed to the limit of dosage they recommend, or higher, if possible, results are found to be quite satisfactory for all practical purposes.

This procedure of desensitization is the backbone of all therapy, in the usual cases of seasonal hay-fevers caused by the ubiquitous pollens that act as etiological agents in the vast majority of cases. Needless to say, should your case be an unusual one caused by a pollen peculiar to a certain section and further, a case, which is also unusual, perfectly able to take prolonged trips to distant sections free of the plant to which he is hypersensitive, then removal of the patient from the cause is indicated, but usually unnecessary.

*Treatment of Secondary Factors.*

A patient with hay-fever should have local nasal defects corrected, if possible, not because they will cure his condition, however, because they emphatically will not, but because he will naturally do better and receive more perfect results from your procedures directed toward an allergic cure, if aggravating secondary factors are eliminated. As Vaughn states so clearly, it tends to upset the allergic equilibrium\(^6\).

Should it be found that the exposure is excessive, as in a patient living in the midst of a tremendous growth of the plant implicated, obviously it is desirable to transfer him to a place less capable of
aggravating his condition. The dose of pollen is important in symptom causation, consequently, even a move into the city for the season may be of distinct value in reducing the dosage and thus the symptoms. Nothing more, such as a complete cure, should be ex-
pected. 

Face powder, irritating gases, riding in automobiles into the country, wind and such aggravating factors, should be avoided as much as possible.

*Drugs.*

In order of importance, ephedrine should be listed first, in my opinion, without serious challenge from any other medicinal preparation. It is of value in two forms.

First, in liquid form, either as an oily spray or as an aqueous solution. The former may be used as a nasal spray as frequently as desired. Personally, I prefer the latter as a 3 percent solution, because not only can it be used intranasally, but, by diluting it to 1 percent with water, it gives a great deal of relief to those patients with severe eye symptoms, when applied locally with an eye dropper.

The second form of ephedrine of value is in capsule form and it may be utilized to assist your local and hypodermic procedures in patients that have a very severe grade of pollen sensitivity. As in the case of epinephrin, better results are obtained in contact cases by local application than by oral or hypodermic administration. The latter two may, however, be of definite help even here.

I use capsules containing gm. .025 of the drug giving one every ten minutes until some relief is obtained or symptoms of hypertension appear, namely, breathlessness, palpitation, light-headedness, throbbing in the head and what not. Larger doses are advocated by most men, namely, gr. ½, ¾ or 1. This, to my mind, is much less satisfactory because your control of the drug is better with the smaller amounts and, frequently, relief can be obtained without unpleasant symptoms of overdosage that would be impossible with the larger units of administration.
Treatment of Complicating Factors.

As mentioned above, these are of two main classes, concomitant sensitivity to some other factor as face powder or, a continuation of symptoms, subsequent to disappearance of pollen from the air.

The contributory treatment of the first demands the removal of the other cause; if that is impossible, specific desensitization after cessation of pollination.

The latter possibility, namely, secondary infection may be treated at the conclusion of pollen therapy by stock, mixed catarrhal vaccine with very gratifying results in many cases, if pollen treatment has been thorough, the voluminous, skeptical literature of the present to the contrary notwithstanding.

Needless to say, the matter of correction of anatomical defects applies here with special force. Prolonged nasal treatments, however, without something definitely "treatable" present, cannot be too strongly condemned because it almost invariably aggravates rather than ameliorates a condition that is not anatomic but allergic.

In summing up, may I say:
1. Pollen solutions to sensitive people are deadly poisons if handled carelessly.
2. They are of great value if handled carefully and with some knowledge. Results of value are obtained by individualizing your cases and having a clear-cut idea of what the treatment is, what it has to offer and what its limitations are. No formula will work for all cases here any more than it will in any other therapy based upon such a complexity of factors.

BIBLIOGRAPHY.


Medical Arts Building.
CLINICAL NOTES

A NEW SPLINT FOR CERTAIN FRACTURES OF THE VERTEBRAE.

Dr. Robert W. Barton, P. & S., 1884, of Sagerton, Haskell County, Texas, has devised an improved splint for the treatment of fractures occurring between the third and seventh cervical vertebrae. This splint is intended to provide support to the broken bone after partial healing has taken place, and is used as a second dressing after removal of the original plaster of Paris fixation.

BARTON'S SPLINT.

The line extending across face above orbits and extending to near edge of card is not part of splint but a shadow from large electric lamp used by photographer.
Dr. Barton's splint is made from sole leather, which is first softened by means of a water bath and then moulded to fit snugly about the posterior surface of the neck and occiput. The base of the support is at the junction of the neck with the shoulders. As is shown in the illustrations the splint is held in position against the neck and head by a bandage and adhesive plaster, which passes around the upper third of the splint, the side of the head and forehead and by adhesive straps passing from the back to the front of the chest over the shoulders.
This new splint differs from the Thomas collar and similar braces in the absence of the chin and jaw support. Used in the type of case for which it was devised, Dr. Barton's splint should be effective as well as comfortable.

On December 5th, 1927, Dr. Barton was injured by an automobile and sustained a fracture of the fourth and fifth cervical vertebrae. The new sole leather splint found its first use in the treatment of the broken neck of its inventor.

CASE OF GANGRENE OF THE PENIS.

ANTONIO BALART Y CROS, M.D.

GUANTANOMO, CUBA.

Name—G. M., white, male, Spaniard, 39 years, a resident of Cuba for last 15 years.

Occupation—Coachman.

Family History—Unimportant.

Past History—Had measles at 7, and several malarial attacks during his residence in Cuba.

History of Present Illness—On the night of May 12th, on getting off from coach's seat, fell straddle over front wheel, receiving a blow over the perineum, that was not sufficiently painful to make him abandon his work. Three days later felt some pain on the scrotum and about the perineum, which obliged him to take to bed. I was called to see him on May 15th.

Examination of the perineum at that time showed some tenderness, but no inflammation or infiltration of blood. A catheter was introduced without difficulty into the bladder and clear urine was withdrawn. There were no signs nor symptoms of rupture of the urethra.

Examination of the Penis—There was no inflammation noted at this time; but there was a black discoloration around the external meatus, hardly over the size of a dime in circumference.

Next morning the patient was again examined, and to my surprise the area of discoloration had increased in size, having involved the whole glans penis, and there was a good deal of swelling of the body of the penis.

The patient was taken to a private hospital.

July 17—The gangrenous infiltration and swelling had increased. Consultation was held with Dr. Morales and he agreed with the diagnosis of gangrene of the penis.

Next day the swelling and infiltration had increased so much that the body of the penis had become three or four times its normal size. The line of advancing gangrene is shown clearly in the picture; also the swelling of the scrotum, at this date.
Operation was resorted to, but at an attempt of complete emasculation, it was found that the whole perineum was so infiltrated that the result would have been negative.

Patient began running a fever, and a septicemia put an end to this rare condition.

The pathology of this case is interesting as there was no sign of ruptured urethra. But there was probably a thrombosis of the penial arteries, traumatic in origin, or a laceration of the same arteries by the trauma.
WILLIAM BRINTON PERRY

Dr. William Brinton Perry died at the Maryland General Hospital, November 25, 1927, of a malignant abdominal growth after an illness of one year’s duration.

Born near Alexandria, Va., on November 5, 1866, he was brought by his parents to Baltimore at the age of two. His education was received at Knapp’s German American School, at that time one of the best known private schools in Maryland. After he had finished, he entered the service of the Baltimore and Ohio Railroad for a short time, then matriculated at the Baltimore Medical College, from which he graduated with honor in 1889, receiving the second college prize.

From 1889 to 1896 he practiced general medicine with marked success, acquiring in a short time a large following. While engaged in general work he maintained a close connection with his alma mater, serving first as Clinical Assistant, later as Instructor in Gynaecology and Obstetrics. In this period he spent much time in the laboratories studying gross and microscopic anatomy of the abdominal organs, particularly of the organs of the pelvis. This work in the pathological department laid a foundation which subsequently proved of tremendous value in his career as teacher and made him known to his colleagues as a microscopist whose judgment could be relied upon.

In 1896 he decided to retire from general practice to devote himself to Gynaecology, and spent one term at the New York Post-Graduate School. In the following year he worked in Berlin,
Leipzig and Vienna. Returning to Baltimore in 1898 he opened a private hospital for the treatment of diseases of women which he conducted until his appointment, in 1904, as Associate in Operative Surgery at the Baltimore Medical College.

The position, which put him in charge of the Laboratory of Animal Surgery, brought him into close contact with the student body and his course in surgical technique demonstrated that he was a teacher of unusual ability.

Promotions then came rapidly. In 1905 he was made Associate Professor of Operative Surgery, and in 1909, following the resignation of Dr. William E. Mosley, he was elected to the Professorship of Gynaecology. When, in 1913, the Baltimore Medical College was merged with the University of Maryland, Dr. Perry became Clinical Professor at the University of Maryland, and held the position until 1924; after this he devoted himself to his own practice.

His surgical work was done generally at the Maryland General Hospital, where he was Chief Gynaecologist, or at St. Joseph's Hospital, where for eighteen years he had been Visiting Gynaecologist. He joined the American College of Surgeons when it was organized; served during the World War in the Medical Corps of the United States Army, with the rank of captain; and was a member of the Board of Supervisors of Charities of Baltimore City.

As a teacher Dr. Perry was clear, concise, rather dogmatic, emphasizing the salient points of a lesson in a way to impress students; as a diagnostician and surgeon he was recognized by his associates to be reliable and skillful. He was, in addition, a man of marked personality, attracting a large number of loyal, enthusiastic followers; and when he undertook a task devoted himself to it with great intensity. In his passing the profession has lost a valued member.

His wife, who was Miss Jennie Meister of Baltimore, survives him.
DR. ROSCOE C. METZEL

Roscoe C. Metzel was born in Harford County, Maryland, on April 24, 1880. He had his premedical education at Fawn Grove Academy, Belair High School and the Maryland State Normal School, from all of which institutions he graduated.

He entered the freshman class in the Medical Department of the University of Maryland in the fall of 1900, and throughout his student days was an outstanding man in his class. He was especially noted for solid, thorough scholarship and was an excellent influence among the undergraduates because of his steadfastness, conscientiousness and modesty. A class of medical students is a true democracy and they soon learn to know each other's personalities quite well. Long before their teachers are able to acquire any definite knowledge of their relative merits and shortcomings, the students themselves have accurately gauged the worth of each other, so that from the beginning of his freshman year he was a marked man. He led his class throughout and even as an undergraduate showed those traits which were to mark him later as the ideal family physician. He was very serious and painstaking in approaching any duty. He was never hurried and could not bring himself to do things in a slipshod manner. In his clinical clerkship service he found it an easy and congenial task to make contacts with sick people, to listen patiently to their histories and to take infinite pains in examining them. He was essentially an honest man and this honesty reached to the very foundations of his character and as a corollary to this there was an outspoken directness and frankness in all of his human relationships.

Following his graduation he spent a year as an intern in the University Hospital on the Medical Service, and at the expiration of this year began the practice of medicine in northwest Baltimore where he continued to live and work until his death. On October 19, 1911, he married Miss Daisy Hines and he is survived by his widow and two sons, William Hines and John Webster Metzel.

Dr. Metzel continued his connection with the University of Maryland following graduation and devoted a considerable portion of his time, first to the instruction of students in the laboratories connected
with the Department of Medicine and afterwards in the University Hospital Dispensary. He became especially interested and proficient in the teaching of Physical Diagnosis and later on was Visiting Physician to the University Hospital. He was a fine example of family physician, a type that is rapidly disappearing from urban medical life; interested, intelligent, earnest, serious and courageous; he spent the greater part of his time visiting his patients and, among all his large circle of friends, it is this group of patients who will miss him most, because he gave to them the best that was in him. Of all the physicians I have known no one merits more abundantly the fine tribute paid to them by Ian McClaren in "Beside the Bonnie Brier Bush," when Burnbrae prays by the bedside of the dying Dr. McClure, "Almighty God, dinna be hard on Weelum McClure, for he has nae been hard on anybody in Drumtochty, Mind the women and bairns he has tended, and gae him a safe hame bringing for he will be sair needing it after all his work."

BOOK REVIEWS.

"PRACTICAL DIETETICS FOR ADULTS AND CHILDREN IN HEALTH AND DISEASE." By Sanford Blum, A.B., M.S., M.D., Head of Department of Pediatrics and Director of the Research Laboratory, San Francisco Polyclinic and Post Graduate School, 380 pages. Third edition. Published by F. A. Davis Company, Philadelphia, 1928.

This practical book on dietetics is divided into two parts: (1) Dietary for Adults in Health and Disease; and (2) Dietary for Infants and Children in Health and Disease.

The subject matter of this "compendium" is arranged in alphabetical order, which facilitates the prescribing of diets for the busy practitioner, but this arrangement is rather disconcerting to the reader when such unrelated conditions as pregnancy, psoriasis, and pyloric stenosis are treated in direct succession.

Diet lists containing the articles of food permissible and those contra-indicated are given under each disease considered. Schedules of feeding and resting periods are also indicated. The general considerations which precede the dietary directions in the more important subjects contain useful and interesting data.
Such descriptive terms as college professor, clerk, adult business woman following each disease detracts from the subject matter, since the diet indicated is in no material way influenced by the occupation, sex or type of the individual.

The subject of pernicious anemia deserves much more space, although the directions given are useful and stress the importance of the Murphy-Minot diet. No mention, however, is made in this book of any of the names of the workers who have added valuable contributions to this important field.

In connection with the discussion on diabetes, diet lists, and the value of insulin is briefly but clearly described. The obsolete starvation method of treatment could easily be eliminated.

In discussing the subject of ulcer of the stomach and duodenum the Sippy diet is not mentioned, although the lists given are fairly adequate. No distinction is made between an ambulatory and a rest diet regime.

In the system of infant feeding, the author describes his method which is based on an experience of twenty years of special work in pediatrics. Dietaries are given based upon the age and weight of the infant. The directions are so simple and comprehensive that they can be easily followed without the intervention of a pediatrician. Some may differ with him, however, regarding the caloric requirements of healthy infants, the necessity for the addition of carbohydrates to the formulae, the question of cod liver oil, fruit juices, etc.

The diet of children in disease is briefly discussed, the more important diseases only being considered.

On the whole, this book is a splendid example of a sincere attempt to simplify the science of dietetics and to make it more practical for the general practitioner. Whether this has been fully accomplished in this small volume, however, remains a matter of some doubt in the mind of the reviewer.

"HANDBOOK ON DIET." By Eugene E. Marcovici, M.D., formerly Assistant to Professor von Noorden in Vienna; Instructor, Post Graduate Hospital, Assistant Attending Physi-
There is a great deal of valuable information contained in this volume, especially the first four chapters, entitled The Dietetic Task in the Kitchen; Food: Its Utilization in the Body; Various Types of Food, and Contamination of Food.

When the treatment of specific diseases is discussed it is presented in an empirical manner that leaves much to be desired. The section upon diabetes suffers from this particularly, as the author makes purposeless and arbitrary division of diabetics and gives diets to be used in each class, instead of stressing the individuality of cases. His suggestion for the management of diabetics are many times archaic, and almost constantly complex, difficult and unsatisfactory according to the standards of this country.

Another glaring defect is a chapter upon the Insulin Treatment of Diabetes. There is no such thing because insulin is simply one weapon in the general armamentarium available for combating the disease.

His writing is not always clear and there is a regrettable tendency to ramble from one subject to another, that is confusing.

Granting the tremendous role diet should play in therapy yet, one feels in reading this book that the author fails to limit diet to its proper field and frequently seems to suggest dietary treatment as the most important in conditions commonly understood to demand other therapeutic measures. Such over-enthusiasm tends only to weaken the cause of diet.

Many of the recipes given in the latter part of the book are excellent, although the composition of the foods should be given, especially those suggested for use in diabetes.

The tables of foods given to show, first, the time taken to leave the stomach and, secondly, the percentage of protein, carbohydrate and fat, are useful.

The chapter on mineral waters and bath resorts contains a great volume has many things to commend it, its shortcomings make it of doubtful value for general use.
ALUMNI ASSOCIATION SECTION

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Hospital Council
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Editors
EMIL NOVAK, M.D.

CHARLES W. MAXSON, M.D.

GRACE BACON CABLE

ELECTION OF OFFICERS

The names listed above are our officers for the term beginning June 1st, 1928, and ending June, 1929.

PREAMBLE TO OUR CONSTITUTION AND BY-LAWS

We, Alumni of the School of Medicine of the University of Maryland, comprising the graduates of the University of Maryland School of Medicine, the Baltimore Medical College and the College of Physicians and Surgeons of Baltimore City, desirous of perpetuating those associations which began during our professional student life and of keeping alive our interest in our Alma Mater, and advancing in every legitimate way her welfare, do hereby form an association for the above purposes and do enact the following Constitution and By-Laws for the government of same.
A feeling of distinct achievement for our organization during the past year, makes this report a pleasure. My last annual report was all inclusive, I think, consequently, nothing will be gained by departing to any marked degree from the form adopted for it.

The activity and interest displayed by our officers is best indicated by giving some statistics upon the attendance at the many meetings held during the past year. In all there were eighteen meetings of different groups held during the year ending today, divided as follows:

Nine (9) Executive Committee meetings, attendance percentage, eighty.
Three (3) Advisory Committee meetings, attendance percentage, eighty.
There were three “Special” meetings and three “General” meetings of the entire group of officers with an attendance percentage of approximately the same as that given above, namely, eighty percent.

When one considers that every man concerned is a doctor, subject to the many real and fancied deterrents to attending meetings, so common amongst them, I feel the record above is rather remarkable and speaks for itself.

The Bulletin, as mentioned last year, is the official means of communication with our members and prospective members. Because of this, and because of the feeling of many of us that it is probably the best means of advertising possessed by the University, this office has made great efforts to aid in every way the splendid work of its Board of Editors. So much so, that its affairs at present take up a considerable part of the time of our office force.

Inextricably connected with the Bulletin is the work of keeping up a live, authentic list of our graduates. When one considers the number of men living who have received degrees from the three original schools forming the present Medical Department of the University of Maryland, namely, between six and seven thousand, the magnitude of such a task is immediately apparent. The value of such a list to the University would seem to be quite as apparent, but unfortunately our aid from the authorities of the University, designated to
attend to this vital activity, has not been all it might have been, and, although we have to a great degree managed to bring order out of chaos, it has been only by an inordinate expenditure of time and money. We have hopes that steps will be taken in the near future to place these matters on a more satisfactory and equitable basis.

Our headquarters here have been active in the promotion of interest in the school amongst our graduates; to this end we instigated and materially aided in arranging numerous “get-to-gethers” of our men in different parts of the country, as follows:

Southern Medical Association, Memphis, Tenn., November 15th, 1927. Arranged by Dr. Vincent Demarco. Representative from Baltimore, Dr. W. Houston Toulson.

Branch Chapter. Annual Dinner, Tidewater Virginia Alumni Association, University of Maryland. Norfolk, November, 1927-April 24th, 1928. Dr. Albert E. Wilson, President. Representative from Baltimore, Dr. Randolph Winslow.


Oklahoma State Faculty Convention, Tulsa, Okla., May 18. Dr. C. C. Hoke, Field Secretary, in charge.

Georgia State Meeting, Savannah, May 10th. Dr. C. Wesley Roberts, Field Secretary, in charge.

American Medical Association Convention, Minneapolis, Minn., June 13th. Alumni banquet arranged by Drs. Frederick W. Schlutz, of Minneapolis, and Porter P. Vinson, of Rochester, Minn. The latter is our field secretary for that section. Representative from Baltimore, Dr. Randolph Winslow.

I believe this is convincing evidence of the efficiency and hard work of our Executive Secretary, Mrs. Cable, and her assistants.

Our officers feel that missionary work of gaining the good-will of our graduates should, like charity, begin at home, consequently, we are making numerous efforts toward gaining friendly contacts with the student body. This, for reasons I shall not attempt to state, has been woefully lacking in the past—many of the boys left with a fervent prayer asking the intervention of heaven in our affairs, but not to our benefit.
Along this line the Executive Committee has created a Students' Rotating Fund, the purpose of which Dr. Love, Chairman of the Trustees of the Fund, will explain later in detail. If by any chance there were times during your student days when a moderate loan would have been helpful, particularly if previous loans had reduced your personal belongings to a minimum, plus a ticket, then I suggest a gift to this fund would be of great assistance to many boys that need and deserve our help. These should be given Dr. William S. Love, the Elder (he denies the correctness of the term of Senior), or to one of our other officers.

Further, we are conducting a book store in the Alumni Office. This store pays full dues to our treasury for every graduate his first year out, two dollars of these dues his second year out and one dollar his third year out. The dues are then taken care of by the alumnus himself. We feel this will get them "into the habit" of belonging to our Association. Further, it pays each year two hundred and fifty dollars ($250) to the Students' Council for its running expenses. Starting with no capital we did a gross business of twelve thousand seven hundred and thirty-five dollars ($12,735) last year, and showed a profit of eighteen hundred dollars ($1800). This is under the direction of the Secretary and is run by Mrs. Cable.

Our active members last year totalled 1681 and we have added this year 125, making 1806, of which number we have lost a large quota by death, others "unfound," and some by atrophy of their check book. We sincerely trust these latter will to a great extent regain their health in the near future.

There are present at these activities ten class reunions, as detailed in the last issue of the Bulletin. I desire to thank all of the Committees responsible for these very successful ventures and trust the custom will continue to grow from year to year.

It seems only fitting to say that the cooperation received at all times from Dean Rowland, and many of the faculty men, has made the secretaryship a pleasure to me rather than a hardship, as it might have been. Never have I asked for help of any kind from Dr. Rowland or any of his immediate office staff that it has not been readily forthcoming. Any success my office may have achieved is to a great degree dependent upon this fact.
The enthusiastic support of all of you is asked for our organization. Its purposes are worthwhile, namely, putting over the Medical School of the University of Maryland, in the last analysis, the ultimate source of the successes achieved by each and every one of us.

SPRING ACTIVITIES IN BALTIMORE

The great success of our activities held in Baltimore, May 31st, June 1st and 2nd, is a source of gratification to our officers. The large number of graduates who came back, many for the first time in years, seemed to enjoy themselves fully and, we believe, felt amply repaid for the time taken from their work.

Every function was exceedingly well attended and the banquet, on the evening of May 31st, was the largest and one of the most successful ever held by the Association. The splendid luncheon, arranged at the University Hospital for our Association by Dr. Lomas, the Superintendent, was served to one hundred and fifty visitors; unfortunately more could not be taken care of because of limited accommodations. The outing at the Hillendale Country Club, June 1st, at which several prizes for proficiency in golf were given, was one of the most enjoyable features of the entire affair. And, while some of the golf might have been improved upon the day could not have been. A word of appreciation must be given to Drs. Rankin and Buie of the Mayo Clinic and to the men arranging the many splendid class reunions, participating in these activities. Drs. Rankin and Buie gave most splendid papers that were intensely interesting to the several hundred men who heard them and, those getting together class reunions, worked hard to get back their classes with most gratifying results.

Under the direction of Mrs. Joseph W. Holland, wife of our senior Vice-President, a committee of ladies entertained the ladies in the parties of our visiting graduates, with a tea at Mrs. Holland's home, a theatre party and a luncheon at Gibson Island.

Encouraged by the extraordinary enthusiasm displayed by everyone, the officers hope to repeat and to better our efforts next year.
LIST OF ALUMNI REGISTERED DURING SPRING ACTIVITIES IN BALTIMORE

Dr. Samuel T. Earle, Baltimore, Md. ...............................U. of Md. 1870
Dr. Randolph Winslow, Baltimore, Md. .............................U. of Md. 1873
Dr. O. H. W. Ragan, Hagerstown, Md. .............................U. of Md. 1874
Dr. Henry F. Hill, Baltimore, Md. .................................U. of Md. 1877
Dr. M. R. Adams, Statesville, N. C. ..............................U. of Md. 1878
Dr. L. E. Neale, Baltimore, Md. ..................................U. of Md. 1881
Dr. Charles H. Hubert, Baltimore, Md. ............................U. of Md. 1888
Dr. A. B. Glascock, Baltimore, Md. ...............................U. of Md. 1888
Dr. H. B. McDonnell, College Park, Md. ...........................U. of Md. 1888
Dr. Charles W. Hartwig, Reisterstown, Md. ........................U. of Md. 1889
Dr. J. W. D. Haynes, Mathews, Va. ...............................U. of Md. 1889
Dr. C. H. Hampson Jones, Baltimore, Md. ........................U. of Md. 1889
Dr. J. F. Khnedinst, York, Pa. ...................................U. of Md. 1889
Dr. T. J. Stanley, Beaver Dam, Va. ................................U. of Md. 1889
Dr. William J. Todd, Mt. Washington, Md. ........................U. of Md. 1889
Dr. Julius Friedenwald, Baltimore, Md. .........................P. & S. 1890
Dr. Joseph E. Gichner, Baltimore, Md. ...........................U. of Md. 1890
Dr. William S. Love, Baltimore, Md. ..............................U. of Md. 1890
Dr. Alexander D. McConachie, Baltimore, Md. ..................U. of Md. 1890
Dr. G. C. McCormick, Sparrows Point, Md. ........................U. of Md. 1890
Dr. J. Chas. Macgill, Catonsville, Md. ............................U. of Md. 1891
Dr. C. S. Woodruff, Baltimore, Md. ...............................U. of Md. 1891
Dr. Frank J. Kirby, Baltimore, Md. ...............................U. of Md. 1892
Dr. M. D. Norris, Sykesville, Md. ................................U. of Md. 1892
Dr. L. J. Turlington, Baltimore, Md. .............................U. of Md. 1892
Dr. John Norfolk Morris, Sykesville, Md. .........................U. of Md. 1893
Dr. Alfred T. Gundy, Catonsville, Md. ............................P. & S. 1894
Dr. John R. Abercrombie, Baltimore, Md. ........................U. of Md. 1895
Dr. W. B. Morrison, Hagerstown, Md. .............................U. of Md. 1895
Dr. Charles Emil Brack, Baltimore, Md. ..........................P. & S. 1895
Dr. William Edward Magruder, Baltimore, Md. ................B. M. C. 1895
Dr. Harvey G. Beck, Baltimore, Md. ..............................P. & S. 1896
Dr. Albertus Cotton, Baltimore, Md. ..............................P. & S. 1896
Dr. J. W. Holland, Baltimore, Md. ...............................U. of Md. 1896
Dr. Frank W. Keating, Owings Mills, Md. ........................U. of Md. 1896
Dr. Albert Edwards Wilson, Norfolk, Va. ........................U. of Md. 1896
Dr. Charles R. Foutz, Westminster, Md. ...........................U. of Md. 1897
Dr. J. M. King, Wellsville, Ohio ..................................U. of Md. 1897
Dr. J. Compton Riely, Baltimore, Md. ............................U. of Md. 1897
Dr. E. F. Edwards, Trinway, Ohio .................................U. of Md. 1898
Dr. W. E. Anderson, Englishtown, N. J. .........................B. M. C. 1898
Dr. J. W. Barker, Newark, Ohio .................................B. M. C. 1898
Dr. Samuel I. Conduff, Roanoke, Va. ............................B. M. C. 1898
Dr. R. L. Hoyt, Baltimore, Md. .................................B. M. C. 1898
Dr. E. L. Averell, Akron, Ohio ................................B. M. C. 1898
Dr. F. Lahmers, Barberton, Ohio ................................B. M. C. 1898
Dr. A. A. Lamar, Middletown, Md. ...............................B. M. C. 1898
Dr. A. M. Loope, Bartland, N. Y. ...............................B. M. C. 1898
Dr. J. M. B. Ray, Leakesville, N. C. ............................B. M. C. 1898
Dr. E. H. Sloan, Pittsburgh, Pa. .................................B. M. C. 1898
Dr. A. B. Sollenberger, Waynesboro, Pa. .......................B. M. C. 1898
<table>
<thead>
<tr>
<th>Name</th>
<th>City, State</th>
<th>Year</th>
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<tbody>
<tr>
<td>Dr. Geo. S. Weges</td>
<td>Redlands, Calif.</td>
<td>1898</td>
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<tr>
<td>Dr. John E. Legge</td>
<td>Baltimore, Md.</td>
<td>1899</td>
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<td>Dr. S. Demarco</td>
<td>Baltimore, Md.</td>
<td>1900</td>
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<td>Dr. Howard Kahn</td>
<td>Baltimore, Md.</td>
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<td>Dr. R. S. Kight</td>
<td>Norfolk, Va.</td>
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<td>Dr. W. H. Smith</td>
<td>Baltimore, Md.</td>
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<td>Dr. Robert P. Winterode</td>
<td>Crownsville, Md.</td>
<td>1900</td>
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<td>Dr. R. P. Carman</td>
<td>Baltimore, Md.</td>
<td>1901</td>
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<td>Dr. E. H. Hayward</td>
<td>Baltimore, Md.</td>
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<td>Dr. J. Dawson Reeder</td>
<td>Baltimore, Md.</td>
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<td>Dr. Nathan Winslow</td>
<td>Baltimore, Md.</td>
<td>1901</td>
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<td>Dr. J. Morley Hoag</td>
<td>Baltimore, Md.</td>
<td>P. &amp; S. 1902</td>
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<td>Dr. H. D. Purdum</td>
<td>Sykesville, Md.</td>
<td>1902</td>
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<td>Dr. Guy P. Asper</td>
<td>Castle Point, N. Y.</td>
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<td>Dr. Howard E. Ashbury</td>
<td>Baltimore, Md.</td>
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<td>Dr. Hugh Brent</td>
<td>Baltimore, Md.</td>
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<td>Dr. Jos. A. Cahoon</td>
<td>Middletown, Del.</td>
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<td>Dr. Joseph G. Evans</td>
<td>Los Angeles, Calif.</td>
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<td>Dr. Bernard S. French</td>
<td>Baltimore, Md.</td>
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<td>Dr. Louis B. Henkel, Jr.</td>
<td>Annapolis, Md.</td>
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<td>Dr. Rollin Jefferson</td>
<td>Tampa, Fla.</td>
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<td>Dr. Carroll Lockard</td>
<td>Baltimore, Md.</td>
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<td>Dr. Howard J. Maldeis</td>
<td>Baltimore, Md.</td>
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<td>Dr. T. A. Mann</td>
<td>Fairfiel, N. C.</td>
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<td>Dr. D. A. Watkins</td>
<td>Hagerstown, Md.</td>
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<td>Dr. F. W. Weed</td>
<td>Washington, D. C.</td>
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<td>Dr. L. E. Brown</td>
<td>Akron, Ohio</td>
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<td>Dr. D. A. Dees</td>
<td>Bayboro, N. C.</td>
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<td>Dr. C. B. Ensor</td>
<td>Baltimore, Md.</td>
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<td>Dr. John Evans</td>
<td>Baltimore, Md.</td>
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<td>Dr. D. A. Hart</td>
<td>Wapwallopen, Pa.</td>
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<td>Dr. Herbert E. Laroque</td>
<td>Baltimore, Md.</td>
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<td>Dr. W. D. Olmstead</td>
<td>Atlantic, N. J.</td>
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<td>Dr. E. P. Roop</td>
<td>New Market, Md.</td>
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<td>Dr. J. B. Rutherford</td>
<td>Wilmington, Del.</td>
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<td>Dr. E. Y. Seyler</td>
<td>Reading, Pa.</td>
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<td>Dr. William R. Silverstein</td>
<td>Newark, N. J.</td>
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<td>Dr. Houghton Smith</td>
<td>Trenton, N. J.</td>
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<td>Dr. W. C. Stone</td>
<td>Westminster, Md.</td>
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<td>Dr. I. M. Wertz</td>
<td>Hagerstown, Md.</td>
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<td>Dr. C. F. Abbott</td>
<td>Elmira, N. Y.</td>
<td>P. &amp; S. 1903</td>
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<td>Dr. C. Melvin Coon</td>
<td>Athens, Pa.</td>
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<td>Dr. T. J. Cummins</td>
<td>Mineville, N. Y.</td>
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<td>Dr. Thomas F. Ellis</td>
<td>New York City</td>
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<td>Dr. Edgar B. Friedenwald</td>
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<td>Dr. J. A. Guthrie</td>
<td>Huntingdon, W. Va.</td>
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<td>Dr. John J. Heck</td>
<td>Baltimore, Md.</td>
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<td>Dr. R. L. Jenkins</td>
<td>Winston-Salem, N. C.</td>
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<td>Dr. Peter J. Johnson</td>
<td>New York City</td>
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<td>Dr. M. B. Kelly</td>
<td>Wheeling, W. Va.</td>
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<td>Dr. W. A. McMillan</td>
<td>Charleston, W. Va.</td>
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<td>Dr. John J. Magner</td>
<td>Hackensack, N. J.</td>
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<td>Dr. R. W. Moe</td>
<td>Peekskill, N. Y.</td>
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<td>Dr. T. Richard Paganelli</td>
<td>New York City</td>
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<td>Dr. A. F. Ries</td>
<td>Baltimore, Md.</td>
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Dr. G. F. Sargent, Baltimore, Md........................................ P. & S. 1903
Dr. Edward W. Sprague, Baltimore, Md................................ P. & S. 1903
Dr. James J. L. Young, Yonkers, N. Y................................ P. & S. 1903
Dr. Andrew C. Gillis, Baltimore, Md.................................. P. & S. 1904
Dr. Emil Novak, Baltimore, Md........................................ B. M. C. 1904
Dr. Henry Orff, Reading, Pa........................................... B. M. C. 1904
Dr. Charles Bagley, Jr., Baltimore, Md................................. U. of Md. 1904
Dr. A. W. Valentine, Washington, D. C................................ U. of Md. 1904
Dr. Herbert E. Zepp, Baltimore, Md.................................... U. of Md. 1904
Dr. J. W. Downey, Baltimore, Md....................................... U. of Va. 1905
Dr. Robert L. Mitchell, Baltimore, Md................................ U. of Md. 1905
Dr. D. O. Thomas, New Kensington, Pa................................ U. of Md. 1905
Dr. Thos. M. Pascall, Newark, N. J.................................... B. M. C. 1906
Dr. Henry J. Walton, Baltimore, Md.................................... B. M. C. 1906
Dr. W. F. Sowers, Baltimore, Md....................................... U. of Md. 1906
Dr. Adolph Flachs, Newark, N. J....................................... B. M. C. 1907
Dr. W. M. Carmine, Dundalk, Md...................................... U. of Md. 1907
Dr. Jos. L. Kepler, Baltimore, Md..................................... U. of Md. 1907
Dr. Frank D. Lynn, Baltimore, Md..................................... U. of Md., 1907
Dr. Martin J. Hanna, Baltimore, Md.................................... Vanderbilt 1908
Dr. O. G. Matheke, Newark, N. J...................................... B. M. C. 1903
Dr. J. A. Craig, Gary, Ind............................................. U. of Md. 1908
Dr. Lawrence Kolb, Washington, D. C................................ U. of Md. 1903
Dr. Franklin D. Wilson, Norfolk, Va................................ U. of Md. 1908
Dr. G. E. Bennett, Baltimore, Md...................................... U. of Md. 1909
Dr. Paul Brown, Baltimore, Md.......................................... U. of Md. 1909
Dr. W. G. Queen, Baltimore, Md........................................ U. of Md. 1909
Dr. Harry M. Robinson, Baltimore, Md................................ U. of Md. 1909
Dr. J. G. Schweinsberg, Baltimore, Md................................. U. of Md. 1909
Dr. R. G. Willse, Baltimore, Md....................................... U. of Md. 1909
Dr. M. L. Yubas, Philadelphia, Pa..................................... U. of Md. 1909
Dr. E. T. Quinn, Jenkintown, Pa...................................... P. & S. 1910
Dr. Alfred E. Foster, Wilkes-Barre, Pa................................. B. M. C. 1910
Dr. Maurice E. Shamer, Baltimore, Md................................ B. M. C. 1910
Dr. Hugh D. Spencer, Baltimore, Md................................... B. M. C. 1910
Dr. H. B. Foster, Baltimore, Md........................................ U. of Md. 1910
Dr. L. Winfield Kohn, New York City................................. U. of Md. 1910
Dr. Ralph P. Truitt, Baltimore, Md................................. U. of Md. 1910
Dr. Henry B. Athey, Baltimore, Md................................. U. of Md. 1911
Dr. Walter C. Bacon, Baltimore, Md................................. U. of Md. 1911
Dr. Herbert A. Coldington, Baltimore, Md............................ U. of Md. 1911
Dr. R. C. Dodson, Rising Sun, Md.................................... U. of Md. 1911
Dr. L. H. Douglass, Baltimore, Md.................................... U. of Md. 1911
Dr. J. J. Greengrass, Paterson, N. J................................ U. of Md. 1911
Dr. W. B. Jones, Annapolis Junction, Md............................. U. of Md. 1911
Dr. W. B. Niblett, Baltimore, Md..................................... U. of Md. 1911
Dr. Ralph J. Vreeland, Paterson, N. J................................. U. of Md. 1911
Dr. Sydney Wallenstein, Baltimore, Md.............................. U. of Md. 1911
Dr. Charles A. Waters, Baltimore, Md................................. U. of Md. 1911
Dr. A. C. Sorensen, York, Pa......................................... P. & S. 1911
Dr. W. F. Zinn, Baltimore, Md.......................................... P. & S. 1911
Dr. Charles C. W. Judl, Baltimore, Md................................ J. H. U. 1911
Dr. William R. Geraghty, Baltimore, Md............................. B. M. C. 1912
Dr. Edward S. Johnson, Baltimore, Md................................ U. of Md. 1912
Dr. C. Loring Joslin, Baltimore, Md.................................. U. of Md. 1912
Dr. Edward A. Looper, Baltimore, Md. .......................... U. of Md. 1912
Dr. William Michel, Baltimore, Md. ............................. U. of Md. 1912
Dr. H. Boyd Wylie, Baltimore, Md. .............................. U. of Md. 1912
Dr. Harry M. Bittar, College Point, N. Y. ....................... P. & S. 1912
Dr. C. J. Coughlin, Baltimore, Md. .............................. U. of Md. 1912
Dr. A. M. Evans, Baltimore, Md. ................................. U. of Md. 1912
Dr. A. E. Goldstein, Baltimore, Md. ............................ U. of Md. 1912
Dr. Edward P. Smith, Baltimore, Md. ............................ U. of Md. 1912
Dr. E. G. Marr, Baltimore, Md. ................................. B. M. C. 1913
Dr. V. C. Nah, Wilmington, Del. ................................. B. M. C. 1913
Dr. Grover A. Silliman, Sayville, N. Y. ........................ B. M. C. 1913
Dr. Ira Zimmerman, Williamsport, Md. ........................ B. M. C. 1913
Dr. L. G. Breeding, Washington, D. C. ......................... U. of Md. 1913
Dr. Charles R. Edwards, Baltimore, Md. ......................... U. of Md. 1913
Dr. W. Frank Gemmill, York, Pa. ................................. U. of Md. 1913
Dr. William T. May, Baltimore, Md. ............................. U. of Md. 1913
Dr. William Houston Toulson, Baltimore, Md. .................. U. of Md. 1913
Dr. F. W. Hachtel, Baltimore, Md. .............................. B. M. C. 1914
Dr. A. J. Gillis, Baltimore, Md. ................................. P. & S. 1914
Dr. J. S. Fenby, Baltimore, Md. ................................. U. of Md. 1914
Dr. Charles C. Habliston, Baltimore, Md. ....................... U. of Md. 1914
Dr. J. F. Lutz, Baltimore, Md. ................................. U. of Md. 1914
Dr. Benjamin Pushkin, Baltimore, Md. .......................... U. of Md. 1914
Dr. Theodore H. Morrison, Baltimore, Md. ...................... P. & S. 1915
Dr. Louis A. Buie, Rochester, Minn. ........................... U. of Md. 1915
Dr. Harry Goldman, Baltimore, Md. .............................. U. of Md. 1915
Dr. Robert B. Hill, Washington, D. C. ........................ U. of Md. 1915
Dr. M. H. Jenkins, Washington, D. C. .......................... U. of Md. 1915
Dr. Robert W. Johnson, Baltimore, Md. ........................ U. of Md. 1915
Dr. D. Moffett, Washington, D. C. ............................... U. of Md. 1915
Dr. M. Raskins, Baltimore, Md. ................................. U. of Md. 1915
Dr. Harry L. Rogers, Baltimore, Md. ............................ U. of Md. 1915
Dr. E. H. Tonolla, Baltimore, Md. .............................. U. of Md. 1915
Dr. J. Mason Hundley, Jr. ................................. J. H. U. 1916
Dr. Edward W. Benson, Overlea, Md. .......................... U. of Md. 1916
Dr. B. B. Brumbaugh, Elkridge, Md. ............................ U. of Md. 1916
Dr. H. E. Gillette, Ramsey, N. J. ............................ U. of Md. 1916
Dr. H. I. Hammer, Baltimore, Md. ............................... U. of Md. 1916
Dr. A. W. Reier, Dundalk, Md. ................................. U. of Md. 1916
Dr. N. W. Voss, Wilmington, Del. ............................. U. of Md. 1916
Dr. Monte Edwards, Baltimore, Md. ............................ London, Eng. 1917
Dr. Leo Brady, Baltimore, Md. ............................... J. H. U. 1917
Dr. L. A. M. Krause, Baltimore, Md. .......................... U. of Md. 1917
Dr. Kenneth G. Legge, Baltimore, Md. ........................ U. of Md. 1917
Dr. C. A. Reifschneider, Baltimore, Md. ...................... U. of Md. 1917
Dr. N. W. Wheaton, Baltimore, Md. .............................. U. of Md. 1917
Dr. H. L. Wheeler, Lansdowne, Md. .......................... U. of Md. 1917
Dr. Lang W. Anderson, Wilmington, Del. ................... U. of Md. 1918
Dr. Everard Briscoe, Prince Frederick, Md. ................ U. of Md. 1918
Dr. John B. Bonner, Aurora, N. C. ........................... U. of Md. 1918
Dr. E. A. Cafritz, Washington, D. C. ........................ U. of Md. 1918
Dr. Clarence E. Macke, Baltimore, Md. ......................... U. of Md. 1918
Dr. Zack R. Morgan, Baltimore, Md. ............................ U. of Md. 1918
Dr. Cyrus F. Horine, Baltimore, Md. ......................... U. of Md. 1919
Dr. M. LeRoy Lumpkin, Baltimore, Md. ....................... U. of Md. 1919
Dr. H. E. Wright, Baltimore, Md. ............................. U. of Md. 1919
Dr. Lynn H. Brumback, Hagerstown, Md. ..................... U. of Md. 1920
Dr. Howard M. Babert, Baltimore, Md. ......................... U. of Md. 1920
Dr. L. C. Dobihal, Baltimore, Md. ............................ U. of Md. 1920
Dr. D. J. Pessango, Baltimore, Md. ............................ U. of Md. 1920
Dr. J. Morris Ries, Baltimore, Md. ............................ U. of Md. 1920
Dr. Fred B. Smith, Baltimore, Md. ......................... U. of Md. 1920
Dr. I. S. Zinberg, Baltimore, Md. ............................. U. of Md. 1920
Dr. Carl F. Benson, Baltimore, Md. ............................ U. of Md. 1921
Dr. Leon Freedom, Baltimore, Md. ............................. U. of Md. 1921
Dr. Lyle J. Millan, Baltimore, Md. ............................ G. W. U. 1921
Dr. Frank A. Pacienza, Baltimore, Md. ......................... U. of Md. 1921
Dr. Moses Paulson, Baltimore, Md. ............................. U. of Md. 1921
Dr. F. A. Ries, Baltimore, Md. ................................. U. of Md. 1921
Dr. James Herbert Wilkerson, Baltimore, Md. ................. U. of Md. 1921
Dr. John A. O'Connor, Baltimore, Md. ......................... U. of Md. 1922
Dr. M. Alexander Novey, Baltimore, Md. ....................... J. H. U. 1923
Dr. H. F. Bongardt, Baltimore, Md. ............................ Rush College 1923
Dr. George A. Knipp, Baltimore, Md. ............................ U. of Md. 1923
Dr. William S. Love, Jr., Baltimore, Md. ................. U. of Md. 1923
Dr. C. F. Smith, Uniontown, Pa. ................................. U. of Md. 1923
Dr. A. A. Sussman, Baltimore, Md. ............................. U. of Md. 1923
Dr. Frederick S. Wolf, Baltimore, Md. ..................... U. of Md. 1923
Dr. Robert B. Wright, Baltimore, Md. ......................... J. H. U. 1924
Dr. B. S. Abeshouse, Baltimore, Md. .......................... Yalie 1924
Dr. R. Glenn Gross, Harmony, N. C. ............................. U. of Md. 1924
Dr. K. B. Boyd, Baltimore, Md. ................................. U. of Md. 1924
Dr. Leo T. Brown, Baltimore, Md. ............................... U. of Md. 1925
Dr. Thos. J. Coonan, Mt. Washington, Md. ............... U. of Md. 1925
Dr. James W. Nelson, Baltimore, Md. ..................... U. of Md. 1925
Dr. Knight Reynolds, Baltimore, Md. ........................... U. of Md. 1925
Dr. Frank R. Di Paula, Baltimore, Md. ......................... U. of Md. 1926
Dr. J. C. Elliott, Baltimore, Md. .............................. U. of Md. 1926
Dr. J. T. Hibbitts, Baltimore, Md. .............................. U. of Md. 1926
Dr. Frank F. Lushby, Baltimore, Md. ............................ U. of Md. 1926
Dr. Walter C. Merkel, Baltimore, Md. .......................... U. of Md. 1926
Dr. Louis O. Taynor, Baltimore, Md. ........................... U. of Md. 1926
Dr. E. B. Wallace, Baltimore, Md. ............................. U. of Md. 1926
Dr. Charles E. Gill, Baltimore, Md. ................................ U. of Md. 1927
Dr. J. Frank Hewitt, Baltimore, Md. ............................ U. of Md. 1927
Dr. Clarence W. Peake, Baltimore, Md. ......................... U. of Md. 1927
Dr. J. R. Phillips, Baltimore, Md. ............................. U. of Md. 1927
Dr. F. V. D. Wack, Baltimore, Md. .............................. U. of Md. 1927
Dr. Adolph Baer, Baltimore, Md. ................................. U. of Md. 1928
Dr. William Adolph Berger, Bloomfield, N. J. ................ U. of Md. 1928
Dr. Nicholas W. Bonelli, Lyndhurst, N. J. ..................... U. of Md. 1928
Dr. Simon Brager, Baltimore, Md. ............................... U. of Md. 1928
Dr. Herman Chor, Baltimore, Md. ................................. U. of Md. 1928
Dr. Earle P. Clemson, Baltimore, Md. ........................... U. of Md. 1928
Dr. Frederick M. Duckwall, Baltimore, Md. .................... U. of Md. 1928
Dr. George A. Duncan, Baltimore, Md. .......................... U. of Md. 1928
Dr. Bernard Friedman, Brooklyn, N. Y. .......................... U. of Md. 1928
Dr. Herbert W. Garred, Charleston, W. Va. ..................... U. of Md. 1928
Dr. Victor Goldberg, Baltimore, Md. ............................ U. of Md. 1928
Dr. Jerome E. Goodman, Baltimore, Md. ........................ U. of Md. 1928
<table>
<thead>
<tr>
<th>Name</th>
<th>City, State</th>
<th>Institution</th>
<th>Year</th>
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<td>Dr. Creed C. Greer</td>
<td>Baltimore, Md.</td>
<td>U. of Md.</td>
<td>1928</td>
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<td>Dr. Aaron I. Grollman</td>
<td>Baltimore, Md.</td>
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<td>1928</td>
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<td>Dr. George K. Guick</td>
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<td>Dr. Louis P. Gundry</td>
<td>Relay, Md.</td>
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<td>Dr. Samuel J. Haukin</td>
<td>Baltimore, Md.</td>
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<td>Dr. Paul Hayes</td>
<td>Baltimore, Md.</td>
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<td>Dr. Louis J. Herold</td>
<td>New York City</td>
<td>U. of Md.</td>
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<td>Dr. Walter B. Johnson</td>
<td>Baltimore, Md.</td>
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<td>Dr. Philip L. Kaye</td>
<td>New York City</td>
<td>U. of Md.</td>
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<td>Dr. Theodore Kohan</td>
<td>Columbia, S. C.</td>
<td>U. of Md.</td>
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<td>Dr. Hyman Lampert</td>
<td>New York City</td>
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<td>Dr. Jacob Irving Lamstein</td>
<td>Brooklyn, N. Y.</td>
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<td>Dr. Joseph G. Laukaitis</td>
<td>Baltimore, Md.</td>
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<td>Dr. Morris Lerner</td>
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<td>Dr. Louis J. Levinson</td>
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<td>Dr. Edward A. Litsinger</td>
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<td>Dr. Luther E. Little</td>
<td>Darlington, Md.</td>
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<td>Dr. Irving I. Littman</td>
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<td>Dr. Isadore B. Lyon</td>
<td>Baltimore, Md.</td>
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<td>Dr. John Mace, Jr.</td>
<td>Cambridge, Md.</td>
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<td>Dr. Vincent M. Maddi</td>
<td>Baltimore, Md.</td>
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<td>Dr. Allan J. Maged</td>
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<td>Dr. Robert S. McCeney</td>
<td>Laurel, Md.</td>
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<td>Dr. William M. McFaul, Jr.</td>
<td>Baltimore, Md.</td>
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<td>Dr. William B. McGee</td>
<td>Charleston, W. Va.</td>
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<td>Dr. Robert A. Mee</td>
<td>Boston, Mass.</td>
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<td>Dr. Aaron Meister</td>
<td>Brooklyn, N. Y.</td>
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<td>Dr. David Merksamer</td>
<td>Brooklyn, N. Y.</td>
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<td>Dr. Frank A. Merlino</td>
<td>Providence, R. I.</td>
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<td>Dr. Vincent M. Messina</td>
<td>Baltimore, Md.</td>
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<td>Dr. Ralph Mostwill</td>
<td>Jersey City, N. J.</td>
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<td>Dr. Pasquale A. Piacentine</td>
<td>New York City</td>
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<td>Dr. Peter Pileggi</td>
<td>Newark, N. J.</td>
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<td>Dr. Benjamin Sunderland</td>
<td>Rich, Catonsville, Md.</td>
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<td>Dr. Carl P. Roetling</td>
<td>Leeds, Md.</td>
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<td>Dr. Mark J. Rosen</td>
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<td>Dr. Hyman S. Rubenstein</td>
<td>Baltimore, Md.</td>
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<td>Dr. Joseph H. Rutter</td>
<td>Daytona, Fla.</td>
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<td>Dr. Morris H. Saffron</td>
<td>Passaic, N. J.</td>
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<td>Dr. Samuel P. Sardo</td>
<td>Baltimore, Md.</td>
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<td>Dr. Cecil C. Shaw</td>
<td>Wylie, Ala.</td>
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<td>Dr. Abraham A. Silver</td>
<td>Baltimore, Md.</td>
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<td>Dr. Jack J. Singer</td>
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<td>Dr. Aubrey C. Smoot</td>
<td>Fullerton, Md.</td>
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<td>Dr. Merrill C. Smoot</td>
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<td>Dr. Theodore E. Stacy, Jr.</td>
<td>Baltimore, Md.</td>
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<td>Dr. Levi Wade Temple, Jr.</td>
<td>Birmingham, Ala.</td>
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<td>Dr. David Tenner</td>
<td>Baltimore, Md.</td>
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<td>Dr. Nathan H. Tkach</td>
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<td>Dr. William Henry Varney</td>
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<td>Dr. Anthony Paul J. Vernaglia</td>
<td>Baltimore, Md.</td>
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<td>Dr. Carroll Gardner</td>
<td>Warner, Baltimore, Md.</td>
<td>U. of Md.</td>
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<td>Dr. Fred S. Weintraub</td>
<td>Pittsburgh, Pa.</td>
<td>U. of Md.</td>
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<td>Dr. Nathan Weisenfeld</td>
<td>Baltimore, Md.</td>
<td>U. of Md.</td>
<td>1928</td>
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Dr. Samuel Robert Wells, Baltimore, Md. .................. U. of Md. 1928
Dr. Frederick Samuel Wolfe, Baltimore, Md. .................. U. of Md. 1928
Dr. Frederick Thomas Zimmerman, Baltimore, Md. ............. U. of Md. 1928
Dr. Oscar D. Yarbrough, Auburn, Ala. ......................... U. of Md. 1928

STUDENTS' ROTATING FUND OF THE MEDICAL ALUMNI ASSOCIATION

Certain members of the Executive Committee, of this Association, impressed by the need of, and encouraged by the success of similar projects in numerous other institutions and organizations, suggested the advisability of forming a fund to aid worthy students, who, for some good reason, found themselves embarrassed financially in the course of their progress through medical school.

The Executive Committee immediately appreciated the need and unanimously approved the sponsoring of such an attempt, stipulating that the President, Dr. Frank W. Keating, should appoint a permanent committee authorized to raise and administer the fund. Dr. Keating appointed a committee of five men, consisting of Dr. Charles Emil Brack, Dr. Robert L. Mitchell, Dr. Emil Novak, Dr. G. Milton Linthicum with Dr. William S. Love as Chairman.

In order to add impetus to the movement, one hundred dollars was voted from the treasury of this Association and the management of the Alumni Book Store offered five hundred dollars from the funds of the book store. The Students' Council heartily endorsed the project.

The plan to be put into effect is to loan the money for relatively short periods to assist students in temporary emergencies; thus it will be used over and over again as is now done by alumni groups in other schools and universities and by the Rotary Club of Baltimore. This work has been carried on for the last five years by the Rotary Club and to date, they have not lost one penny; every loan has been repaid. The enthusiasm of the members of the Club is best shown by citing a recent luncheon held by them at which voluntary subscriptions totalling almost $2000.00 were obtained and some six of the contributors stated that they, themselves, had been enabled to complete their courses by financial assistance from friends, and were, therefore, glad to contribute to so worthy a cause.
Needless to say, we cannot go very far with the $600.00 at hand; the main support must come from our members and the Committee appeals to our Alumni to contribute $5.00 each to this fund.

The need and the worthiness of such a fund we believe is immediately apparent to all, so, while this appeal is fresh in your mind, take up your pen, open your check book and mail a check for $5.00 to the Students’ Rotation Fund Committee, Dr. Wm. S. Love, Chairman, care of Medical Alumni Association, Lombard and Greene Streets, Baltimore, Maryland.

DEATHS

Dr. Augustine Palmisano, Baltimore, Md.: P. & S., class of 1904; formerly demonstrator of pathology and histology at his alma mater; aged 51; died, April 27, 1928.

Dr. William Edward Wiegand, Baltimore, Md.; class of 1876; aged 75; died, May 13, 1928, of angina pectoris.

Dr. Charles Percy Kemp, Baltimore, Md.: P. & S., class of 1895; aged 59; died, April 8, 1928, of facial erysipelas and lobar pneumonia.

Dr. Arthur Pendleton Herring, Baltimore, Md.; B. M. C., class of 1896: commissioner of mental hygiene of Maryland; member of the American Psychiatric Association; prosector and associate professor of anatomy and physiology of the nervous system and associate in nervous and mental diseases at his alma mater, 1896-1906; associate professor of physiology, neuropathology, neurology and psychiatry, College of Physicians and Surgeons, Baltimore, Maryland, 1906-1912; formerly assistant in neurology, Johns Hopkins Hospital; neurologist in chief, St. Agnes Hospital, Baltimore, Md.; visiting neurologist and psychiatrist to the Mount Hope Retreat, Baltimore, Md.; visiting neurologist and psychiatrist, department of insane, Baltimore City Hospitals; consulting psychiatrist, United States Marine Hospital No. 1, 1923-1928; ex-secretary of the State Lunacy Commission of Maryland, 1908-1922; served during the World War; for many years correspondent from Maryland for the American Medical Association Journal; aged 53; died, May 29, 1928, of carcinoma of the abdomen.

Dr. Harry H. Sumner, Lowell, Mass.; B. M. C., class of 1901; aged 55; served during World War with the rank of captain; died, May 20, 1928.

Dr. Ellsworth H. Hinman, Lower Marlboro, Md.; P. & S., class of 1890; aged 64; died November 16, 1927, of arteriosclerosis.

Dr. John Henry Robinson, Palo Alto, Calif.; U. of Md., class of 1883; aged 81; died, April 9, 1928, of recurrent sarcoma.

Dr. Louis Nicholas Blank, Newark, N. J.; B. M. C., class of 1904; died, February, 1928.

Dr. George L. Jolly, Chicago, Ill.: P. & S., class of 1883; aged 72; died, April 13, 1928, of heart disease.

Dr. Andrew J. Dick, Watertown, N. Y.; P. & S., class of 1893, and University of Buffalo School of Medicine, class of 1895; aged 64; was found dead in bed May 21, 1928, of heart disease.

Dr. Thomas Fraser Thomas, Gainesville, Fla.; P. & S., class of 1882; aged 69; died, April 29, 1928, of angina pectoris.
Dr. Richard T. Stone, West Columbia, W. Va.; class of 1892; aged 59; died in May, 1928, of paralysis.
Dr. N. T. Carswell, Macon, Ga.; P. & S., class of 1886; aged 67; died, May 1, 1928, of angina pectoris.
Dr. Robert McMath Sands, Pittsburgh; class of 1883; aged 71; died, May 10, 1928, of lobar pneumonia.
Dr. James P. Battle, Nashville, N. C.; class of 1889; aged 60; died, April 16, 1928, of paralysis.
Dr. William Hewson Baltzell, Wellesley, Mass., formerly of Baltimore, Md.; class of 1889; resident surgeon, Johns Hospkins Hospital, 1890-1893; aged 70; died, June 3, 1928.
Dr. Robert Kemp Jefferson, Federalsburg, Md.; class of 1890; aged 59; died, January 3, 1928, of angina pectoris.
Dr. Nathaniel S. Smith, Chincoteague Island, Va.; class of 1864; Civil War Veteran; aged 86; died, April 3, 1928, of heart disease.
Dr. John M. Crook, Columbus, Ga.; P. & S., class of 1885; aged 80; died, March 28, 1928, of broncho-pneumonia.
Dr. Peter W. Turman, Providence, R. I.; B. M. C., class of 1902; aged 57; died, April 5, 1928, of nephritis, myocarditis and bronchitis.
Dr. John S. Offutt, Capon Bridge, W. Va.; class of 1887; aged 64; died, April 2, 1928, following an operation for gall-stones.
Dr. Howard Nason Freeman, Baltimore, Md.; B. M. C., class of 1912; aged 45; died, April 1, 1928.
Dr. Joseph H. Ray, Coalton, O.; P. & S., class of 1885; aged 70; died, April 21, 1928, of angina pectoris.
Dr. Seth Warner Jones, Portsmouth, N. H.; class of 1894; aged 64; died recently of diabetes mellitus and tuberculosis.
Dr. Emory E. Ward, Bryceville, Fla.; P. & S., class of 1881; aged 74; died, April 3, 1928, of acute urinary retention consecutive to prostatic hypertrophy.
Dr. John Jacob Snyder, Portsmouth, N. H.; Medical Director and Captain, United States Navy; P. & S., class of 1893; served in the World War; aged 58; died, April 19, 1928, of pyelonephritis.
Dr. Frank Waring Lewis, Morattico, Va.; class of 1878; aged 70; died, February 14, 1928, of heart disease.
Dr. Arthur Lewis Martin, Naulaka, Va.; P. & S., class of 1891; aged 60; died, March 10, 1928, of pneumonia consecutive to erysipelas.
Dr. George F. Taylor, Baltimore, Md.; P. & S., class of 1878; aged 71; died, March 29, 1928, of carcinoma of the tongue and stomach.
Dr. Thomas Edward Peery, Bluefield, W. Va.; P. & S., class of 1895; aged 54; died, March 26, 1928, of chronic nephritis, hypertension and cerebral softening.
Dr. William D. Meeks, Massies Mill, Va.; P. & S., class of 1883; aged 67; died, March 25, 1928, of myocarditis.
Dr. Charles C. Purdum, Pawtucket, R. I.; P. & S., class of 1896; aged 53; died, January 31, 1928, of myocarditis, nephritis and hypertension.
Dr. Millard Leiter Raemore, Williamsport, Pa.; P. & S., class of 1915; served during the World War; aged 38; was found dead in his home March 12, 1928, from asphyxiation.
Dr. Nathan Rinebold, Athens, Pa.; P. & S., class of 1892; aged 70; died, March 3, 1928, of heart disease.
Dr. Robert Franklin Hardey, Baltimore, Md.; class of 1894; aged 66; died, March 18, 1928, of gastric carcinoma.
Dr. Robert Bonniwell Quilen, Rocky Mount, N. C.; class of 1904; aged 46; died, March 7, 1928, of pneumonia.
Dr. Samuel S. Gaulden, Quitman, Ga.; class of 1886; past-president State Board of Medical Examiners (Georgia); ex-member Georgia State Legislature; aged 68; died, February 7, 1928, of nephritis and cerebral hemorrhage.

Dr. Burleigh C. Kellam, Norfolk, Va.; P. & S., class of 1884; aged 65; died, February 4, 1928, of acute cardiac dilatation.

Dr. Jay Tyrrell Hennessy, Baltimore, Md.; class of 1916; aged 36; died, March 17, 1928, of heart disease.

Dr. Thomas Somerset Owen, La Plata, Md.; class of 1892; formerly a druggist; aged 57; died, February 23, 1928, of hepatic cirrhosis.

Dr. James Whann McSherry, Martinsburg, W. Va.; class of 1855; probably the oldest alumnus at the time of his death, both in point of years, viz, 95, and of graduation, 73; also a Confederate veteran and bank president; died, February 28, 1928, of cerebral hemorrhage.

Dr. John Holdeman Fritz, Trenton, N. J.; P. & S., class of 1885; aged 69; died, March 4, 1928, of myocarditis and nephritis.

Dr. Clarence Clark Gentry, Knoxville, Pa.; P. & S., class of 1883; aged 70; died February 29, 1928, of heart disease and paralysis agitans.

Dr. Benjamin Fred Leonard, Plainfield, N. J.; P. & S., class of 1897; also a dentist; aged 58; died May 29, 1928, of uremia and nephritis.

Dr. David Hott, Jr., Morgantown, W. Va.; P. & S., class of 1902; aged 54; died May 20, 1928, of pulmonary tuberculosis.

Dr. Theodore Howard Wertz, Hanover, Pa.; P. & S., class of 1904; aged 53; died June 2, 1928, of pneumonia.

Dr. James B. Smith, Pilot Mountain, N. C.; P. & S., class of 1885; aged 67; died May 31, 1928, of nephritis.

Dr. Caley Geoffrey Upchurch, Apex, N. C.; U. of Md., class of 1906; aged 44; died May 31, 1928, of heart disease.

Dr. E. A. Hall, Dunlop, N. C.; U. of Md., class of 1866; Confederate veteran; aged 91; died June 2, 1928, of senility.

**ADDRESSES WANTED**

Any information about these men will be much appreciated. They are lost to us and with the sources at our command we are unable to locate them.

**ALUMNI OF THE COLLEGE OF PHYSICIANS AND SURGEONS**

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FOCAL INFECTION AND ITS RELATION TO THE GASTRO-INTESTINAL TRACT*

By JULIUS FRIEDENWALD, M. D.
BALTIMORE, MD.

Since Rosenow¹ first published the results of his experiments on the artificial production of peptic ulcer, appendicitis, cholecystitis and other infections in animals by the intravenous injection of special strains of streptococci derived from infective foci of patients, renewed interest has been manifested in the etiology and interrelation of certain lesions observed in the gastro-intestinal tract. Clinical research has confirmed the view of the discovery of a definite etiological relationship between focal infections and many hitherto inexplicable chronic digestive lesions. This has likewise added materially in providing scientific measures for the treatment of such affections. Up to this period the therapy of some of these chronic lesions often presented the greatest difficulties.

The medical treatment of peptic ulcer for instance frequently resulted in recurrences in spite of efficient care while surgical treatment was often associated with recurrences, and not infrequently

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From the Gastro-Enterological Clinic of the Department of Medicine, University of Maryland, Baltimore.
with complications. Notwithstanding the surgical interventions in cases of cholecystitis and appendicitis the results were often discouraging due to the production of other infections, adhesions or complications. It was soon shown, that in many of these cases of chronic gastro-intestinal infections, foci could be demonstrated in the teeth, tonsils or sinuses, and that by removal of the focal infection more rapid healing could frequently be effected in many instances, and that the development of adhesions or of infections in areas of the gastro-intestinal tract not involved at operation could be prevented. It was also interesting to note, that patients affected with peptic ulcer and other lesions who had been entirely free of symptoms over long periods of time, and who frequently had recurrences due to unaccountable causes were finally effectively cured of these disabilities following the removal of the focus of infection. It is a well observed fact, that gastro-intestinal infections rarely occur as single lesions, but are usually multiple and that such conditions as chronic cholecystitis, chronic appendicitis and peptic ulcer are frequently associated. At operation it is likewise not uncommon to observe a hepatitis, pancreatitis and duodenitis in association with a chronic gall bladder infection. It is therefore probable that a chronic gastro-intestinal infection gradually extends throughout the entire digestive tract, the symptoms varying according to the sites most markedly involved in the infection as well as upon their anatomical and physiological characteristics. It is evident that an organ with a small duct like the gall bladder or small outlet like the appendix might produce more marked manifestations as a result of infection than a large organ like the liver. A knowledge of the nature of these infections often involving numerous areas of the digestive tract simultaneously will not infrequently account for the development of new symptoms or the persistence of old ones. It also demonstrates the importance of determining and removing the basic cause of these infections.

The result of removal of focal infections upon the digestive tract will vary according to the completeness with which the infection has been eradicated, the duration of the involvement of the gastro-intestinal infection as well upon its severity and upon the complications.

Following thorough eradication of the primary focus of infection, an exacerbation of symptoms followed by marked relief may occur, or the symptoms may be relieved at once or improvement may set in gradually and complete relief obtained only after several months. If the relief from the gastro-intestinal symptoms is not obtained,
it is probable that all foci of infection have not been removed or that while the original foci may have been eradicated, secondary foci may still remain in the gastro-intestinal tract or finally that there may be some error in diagnosis.

Whether gastro-intestinal infections may in themselves act as foci of infection, causing secondary infection in other sites of the digestive tract or other parts of the body, is a question which thus far has not been entirely, satisfactorily determined. Opinions in this respect vary greatly. There are those who attribute many diseases to gastro-intestinal infection, while others are of the opinion, that none are due to this cause. There is perhaps between the two extremes a middle ground of truth, in the assumption that the gastro-intestinal tract may act at times as a focus of infection in certain systemic disorders. However, it cannot be denied that the proof of this assertion is rather indefinite and far from conclusive.

Within recent years since more careful studies have been directed to the effect of chronic intestinal stasis renewed interest has been taken in the relation of this condition to the infections originating in the gastro-intestinal tract. It must always be borne in mind that while intestinal infection may undoubtedly occur, the infective organisms in the intestine gain their entrance mainly by the swallowing of infectious matter from the oral cavity or through infected food. It is generally maintained that the intestinal canal is so altered in intestinal stasis as to retain the material that should be excreted. On this account there is by far more absorption than can be taken care of by the body, the secretions and poisons are forced into the intestinal tissues, and in consequence so-called toxic symptoms are produced. Among the factors playing a rôle in the etiology of this affection is bacterial invasion, due to the production of various lesions (foci of infection) in the bowels, resulting in toxæmia and systemic disease.

McCarrison's² work is of the greatest interest in this regard. This investigator, from his remarkable observations on the effect of diet on human beings as well as in animals, was able to produce by feeding with faulty food over variable periods of time, various intestinal affections, especially serious types of colitis and of intestinal stasis. He calls attention to the fact that, due to this cause toxemia is produced, as can be demonstrated by the changes in the mesenteric glands. In consequence, impairment of the protective resources of the intestinal mucosa against infective agents takes place, which not only leads to infection of the mucous membrane of the intestine itself,
but also allows the passage into the blood stream of micro-organisms from the bowel. He points to the fact that the health of the gastrointestinal tract is dependent on an adequate provision of vitamins, an absence of which is capable of producing pathologic changes in the tract, the processes resulting being (a) congestive, necrotic and inflammatory changes in the mucous membrane; (b) degenerative changes in the neuromuscular mechanism of the tract; (c) degenerative changes in the secretory elements of the tract; (d) toxic absorption from the diseased bowel as is evidenced by changes in the mesenteric glands; (e) impairment of the protective resources of the gastrointestinal mucosa against infecting agents, due to hemorrhagic infiltration, to atrophy of the lymphoid cells and to imperfect production of gastro-intestinal juices. The impairment not only results in imperfections of the mucous membrane itself, but also permits of the passage into the blood stream of micro-organisms from the bowel.

Adami too points out that in consequence of intestinal stasis there results a low grade subinfection of the bowel. He demonstrated that the lymph nodes of the intestine of animals yield cultures of bacteria which are also present in the liver and kidneys. This is due to the fact that lymphocytes are constantly conveying small numbers of intestinal bacteria by way of the lymphatic system to the blood. In healthy individuals these never accumulate, as they are rapidly destroyed by the liver and spleen. When stasis occurs, however, an excessive number may reach the blood and collect in various parts of the body, and set free toxins where they destroy cells in the neighborhood and cause connective tissue proliferation.

In order that this condition may be brought about according to Hurst, an impaired vitality of the intestinal epithelium must take place and in consequence the symptoms of toxemia appear due to "disturbances of the first line of defense in dealing with poisons."

The wall of the terminal ileum and colon presents actual invasion by bacteria, with more or less marked changes in the epithelial, muscular and peritoneal coats, which can be easily demonstrated according to Smithies, and which thus actually become foci of infection.

According to Norman and Eggston the pathological changes noted in intestinal stasis are hyperplasia of the intestinal chain of lymphatics; diffuse infiltration of the intestinal mucosa with lymphocytes, eosinophiles, plasma cells, and in some instances areas of polymorphonuclear infiltration forming small abscesses. In the more chronic cases, the submucosa is fibrous and reveals hyperplastic lymph folli-
cles and diffuse infiltration of mononuclear cells. The muscular coat becomes next invaded and presents inflammatory infiltration with fibrosis and a partial destruction of smooth musculature. In consequence of the fibrosis a loss of elasticity of the wall of the bowel is produced, resulting in intermittent dilatation of the intestines and finally chronic dilatation with thinning of the colonic wall. The inflammatory process finally extends to the peritoneal coat, where it causes adhesions, and the passage of the infective substances to the spleen and liver. According to these observers pathological proof of these facts is found in the isolation of the bacteria in these cases from the specimens of the mesenteric glands. In the pyogenic infection toxemias, foci of infection form in the lymph follicles, Peyer's patches, intestinal nodes and intestinal mucosa. The protective secretions are so altered as to allow infection to gain lodgment in the ileum and colon.

Draper has called attention to the extensive pathological changes observed in the colon following colectomy for chronic intestinal stasis. The specimens were examined by Ewing, who reports very definite gross lesions. Pigmentation of the mucosa was noted as the most marked and constant lesion. It is recognized as a definite sign of chronic intestinal stasis. The next important change was the pouching of the intestinal walls. These pouches are from one to two centimeters deep with a tortuous entrance which prevents their emptying. The walls of these pouches are thinned and the mucosa eroded and ulcerated and they become foci of infection. Because of the destruction of the musoca absorption of fluids and bacteria occurs. Streptococci and other pathogenic organisms may thus gain entrance into the lymph tissue of the intestine and produce further infection.

As a result of focal infection from the oral cavity appendicitis, cholecystitis or peptic ulcer may be produced. In consequence the bacteria in these tissues may form new foci from which proximal lymph glands become involved. From these the infections may extend still further through the lymph channels or blood stream.

Appendicitis, for instance, may be produced by a special strain of streptococci from the oral cavity. This affection may then become a source of further infection involving the mesenteric glands, and in consequence may infect through the lymph channel and blood stream the liver and gall bladder. At least in a small proportion of instances intestinal stasis is considered by Hurst as a factor in the production of arthritis. It is doubtful, however, whether it is the sole cause.
It probably acts, according to this observer, in most instances, by lowering the resistance of the tissues and thus rendering the joints less resistant to infection from the bowel.

Smith\(^9\) is also convinced that polyarthritis is occasionally caused by the absorption of bacterial toxins or faulty metabolic end products due to an unbalanced ileocecal flora, dependent upon an ileocecal stasis with an occasional shower of bacteria from the same source. This observation is also concurred in by Taylor\(^10\), who found similar changes in the right lower quadrant of the abdomen in patients with chronic arthritis, which were found to be due to intestinal stasis and toxemia, the intestine acting as a focus of infection.

Keating\(^11\) has recently pointed to undoubted cases of chronic arthritis in which the intestinal tract was infected with streptococci viridens or hemolyticus. He suggests that the primary focus is in the oral cavity, and that the intestinal tract becomes infected secondarily. If this secondary focus is present, the removal of the infected teeth or tonsils will not result in cure. According to Keating, an autogenous vaccine has proved of great value as an aid in the treatment of these cases.

Whether the gall bladder may act as a focus of infection in the production of heart affections has been a matter of considerable conjecture as well as of much interest. In an extremely valuable publication, Babcock\(^12\) in 1909 reported a series of cases of myocardial disease due to chronic cholecystitis. Among these were instances of pronounced cardiac incompetence, showing considerable dilatation with arrhythmias and feebleness of heart action with murmurs, as well as cases of angina pectoris with evidences of myocardial disease. In most of these instances marked relief was afforded by gall bladder drainage. Although Babcock was unaware at this period of the importance of focal infections, he attributed the cardiac disease occasioned by the chronic cholecystitis in these cases to the circulation in the blood of bacteria and their toxins from the gall bladder.

Cholecystitis may be caused by a special strain of streptococci as the result of a focus from the oral cavity carried through the blood stream. Necrosis of the local tissue may take place with infection into the gall bladder, which may now and again become a further source of infection into the surrounding mesenteric glands, and may thus serve as a focus of systemic infection. Apparently authentic instances of infectious arthritis and myocarditis secondary to gall bladder infections have been frequently reported; though it cannot
be denied that at least in some instances the gall bladder infection, arthritis as well as the cardiac disease, may have been occasioned by a primary remote focus of infection. It is interesting to note on the other hand that myocardial disease will often only respond favorably to medication following adequate gall bladder surgery.

The question, therefore, as to whether the intestinal tract or gall bladder can be regarded as a source of focal infection in the strict sense of the term is one which has as yet not been fully determined inasmuch as the secondary lesions may possibly be the result of absorption of abnormal metabolic products due to the improper functioning of these organs.

Finally the rectum must be considered from the standpoint of a focus of infection and one which is frequently overlooked. In patients in whom focal infection is suspected as the probable cause of disease, the rectum should be examined quite as carefully as other portions of the body which frequently harbor exciting infections. The result of infection in the rectum upon the organism is similar to that located elsewhere in the body. The common types of infection either alone or in combination in these cases are according to Fansler:

1. A general proctitis frequently associated with colitis.
2. Infected hemorrhoids.
3. Ulcerations of the rectum.
5. Sinuses connected with the rectum.

The fact that the rectum may be a primary focus of infection must be carefully considered in all obscure conditions in which infections may be at hand and a thorough investigation of this region be undertaken. Just a word as to the recognition of gastro-intestinal foci of infection. In order to assume the presence of a gastro-intestinal focus, distant ones, such as oral and respiratory foci, must first be excluded. If this can be accomplished, and the patient presents definite evidence of a gastro-intestinal infection, with exacerbations and remissions of symptoms occurring simultaneously with similar manifestations in infected areas in other parts of the body, such as an arthritic joint, one can, under such conditions, feel fairly positive that the digestive tract is the primary source of infection.

Further evidence in this direction is obtained by means of X-ray studies, which may reveal definite evidences of the presence of gall
stones, chronic appendicitis or intestinal stasis. Some aid may be obtained in diagnosis by means of biliary drainages according to the method of Lyon, through which various organisms can at times be isolated. No reliance, however, should be placed upon a single culture, but if a number of cultures obtained under aseptic precautions reveal the same organism the evidence in favor of the presence of infection in the biliary tract becomes more conclusive.

The treatment resolves itself into first eliminating the primary and possible distant foci of infection. In gall bladder affections of a milder type duodenal drainage according to the Lyon method is useful in certain instances.

Intestinal stasis may be overcome by regulating the diet, the administration of acidophilus milk, the use of colonic irrigations, and duodenal lavage. The last procedure is best accomplished by inserting the Rehfuss tube into the duodenum and practicing lavage with a solution of Magnesium Sulphate 30 grams, Sodium Sulphate 30 grams, in 1000 cc. of water. If such measures prove of no avail, surgery in the form of a cholecystectomy or appendectomy is indicated.

The more mutilating forms of surgery such as removal of large portions of the colon, as has been advised by Lane, appear too drastic and are unwarranted. The use of vaccines in the treatment of these conditions is of extremely doubtful value.

**Conclusions**

(1) The study of the relationship of oral focal infections in the production of digestive affections has added materially to our knowledge of the etiology and therapy of these disorders.

(2) Gastro-intestinal infections rarely occur as single lesions, but are usually multiple and gradually extend throughout the entire digestive tract.

(3) Whether gastro-intestinal infections may in themselves act as foci of infection, causing secondary infections in other sites of the digestive tract or other parts of the body, is a question which thus far has not been satisfactorily determined, though it is probable that this does occur in some instances.

(4) Intestinal stasis plays a certain rôle in intestinal infections, the intestinal canal being so altered that bacterial invasion from foci in the bowel occurs with entrance into the lymph tissue, from which further extension of the infection takes place.
(5) Instances of infectious arthritis and myocarditis, secondary to gall bladder infections, have been recorded, though this relationship has as yet not been altogether satisfactorily determined.

(6) In obscure and doubtful instances of focal infections the rectum should be considered as a possible source of the disease.

(7) In order to be assured of the presence of gastro-intestinal foci of infection remote ones must first be excluded.

(8) The treatment resolves itself in first attempting medical measures whenever this is feasible. If this is impossible, surgery is indicated. However, the more mutilating forms of surgery appear too drastic and are not to be recommended.

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MALARIAL INFECTION THERAPY IN SYPHILIS*

By Harry M. Robinson, M. D.
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The practice of malarial infection therapy has become quite popular, and justly so, because of the marked, beneficial results obtained in the treatment of one of the worst effects of Syphilis, namely: central nervous system involvement. To many, it has given a new lease on life. Two cases are reported as illustrations of the ultimate results in this form of treatment, with an outline and review of fever therapy.

REPORT OF TWO CASES OF SYPHILIS TREATED BY MALARIAL INFECTION

J. L.—Age 38. Chancre and early secondaries in April, 1923. Received from date of admittance in 1923 to January, 1928, fairly regularly about eight series of Arsphenamine, comprising fifty-two doses, averaging 0.35 grm. each; and five series of Tryparsamide numbering forty in all, at 3.0 grm. each. Received in the first several months, Mercury inunctions and during 1926 and 1927 intramuscular injections of Bismuth Salicylate grms. 0.2 between the courses of arsenic.

In September, 1923, a spinal tap was done, and examination of the fluid showed 55 cells, positive globulin, positive Wassermann, and in the colloidal test 5555543210. In November, 1927, his fourth spinal fluid showed practically the same as his first, with the exception of 123 cells. At this time, he lapsed in treatment, failing to return until January 14, 1928. At this visit, his speech was incoherent: he could not pronounce ordinary words of more than one syllable, and was dull, apathetic. It was then decided to give him malarial infection therapy. He was admitted to the hospital on January 19, 1928, and the following day received 6 cc. of equal parts of malarial blood and ½% Sodium Citrate solution. On the 26th, he developed his first chill. No contra-indications arising, he was permitted to go on to twelve paroxysms. Quinine was then given, and after ten days of convalescence, he was permitted to leave the hospital.

*From the Department of Dermatology of the University of Maryland.
We did not see him again until the first part of March, when he returned on receiving a “request card.” There was a marvelous change in the patient. He was bright, had a lively, springy walk, no hesitancy in speech, and could pronounce all the catch words and phrases. His blood, which had remained positive up to November, 1927, was now negative; the spinal fluid was 333210000, 8 cells, positive globulin, positive Wassermann. He is to return some time in October for further laboratory examination.

S. W.—Age 22. S. W. M. First visit to our office June 30, 1923. Could recall no initial sclerosis, although admitted exposure six months previous to office call.

Three weeks prior to visit, noticed that his throat was sore, and had difficulty in eating. Physical examination of the mouth: On the uvula and faucial tonsils there were several moist lesions, slightly raised, the largest about \( \frac{1}{2} \times 1 \) cm. in diameter, irregularly oval in shape. The surface was covered by a grayish membrane. On the posterior pharynx there was marked injection, and a large plug of greenish pus, slightly adherent. Genitalia and lips revealed no perceptible scar of initial sclerosis. General glandular enlargement quite marked, particularly of the anterior and posterior cervicals. Remainder of the physical examination negative. Blood Wassermann showed complete fixation.

From 6-30-23 until 5-28-27 the patient received: Thirty-eight doses Arsphenamine 0.4 grams, thirteen Neo-arsphenamine 0.9 grams, forty-six Flumerin 0.2 grams, twenty-nine Sulpharsphenamine .75 grams, twenty-eight Silverarsphenamine, 0.3 grams, eighty-one Bismuth Salicylate, eight Aolan, nine A63 each gm. 3.0, seven injections of Sodium Iodid 0.6 gm., three Sodium Hyposulphite 1 gm. each. At different times, he received Silver Arsphenamine and Bismuth Salicylate at the same time; Sodium Iodid and Bismuth Salicylate at the same time; and Mercury and Bismuth Salicylate at the same time, hoping in this way to shock the blood negative. On June 30, 1926, he was given a rest of eight months. His blood complement fixation had become negative in water bath February 22, 1924, and remained so, but with the ice box incubation remained completely positive up to and including his last treatment.

On February 22, 1924, the spinal fluid showed negative complement fixation, positive globulin, 5 cells per c.mm. and a mastic colloidal of 3321000000. Spinal fluid taken December 3, 1927, showed negative Wassermann, positive globulin, mastic colloidal 1100000000.
On June 1, 1927, patient received $7\frac{1}{2}$ cc. equal parts malarial blood and $\frac{1}{2}\%$ Sodium Citrate solution. He had 12 paroxysms and left the hospital. His spinal fluid and blood test on June 19, 1928, was completely negative, and have remained so to date.

The discovery of Salvarsan in 1909 and the demonstration a few years later, by Noguchi, of the fact that paresis and tabes dorsalis both resulted from the invasion of the brain by the Spirochaeta Pallida, brought to many the hope that these two dread diseases, being manifestations of Syphilis, would soon be easily cured by the administration of Salvarsan. Unfortunately, this proved to be a vain hope. It has been shown that persistent, consecutive treatment with the Arsenamines, Bismuth, and Mercury in Syphilis lowers the central nervous system involvement from 25% to 4%. With these latter 4%, various other procedures have been advocated, including the intra-spinal administration of arsphenamized serum (Swift-Ellis), drainage of the spinal canal (Durcum's method) and in 1919, the intravenous injection of Tryparsamide. In spite of these adjuncts, there have still been an appreciable number who have resisted treatment, and developed to the final stage of paresis and tabes dorsalis. Physicians interested in these conditions have, therefore, been on a sharp lookout for a more powerful method of treatment, which should further diminish the incidence of brain syphilis. Centuries ago, it was noted by Hypocrates, Galen, and Sydenham that inter-current infection with fever, influenced certain psychoses, but little attempt was made to experiment with this until Wagner von Jauregg, in 1899, inoculated erysipelas into four patients. Fever resulted but practically no good effects. In 1890, this investigator began to use tuberculin, and it was noticed that following the injection of tuberculin the remissions were more frequent and of longer duration.

In 1909, Sodium Nucleinate was used by intravenous injection, and although this brought about hyper-pyrexia, the end results were far from satisfactory.

In the summer of 1917, Wagner von Jauregg inoculated nine cases of general paresis with tertian malaria, and brought the first real ray of hope in the treatment of paresis. It is known, of course, that remissions occur quite frequently in paresis without any treatment being administered, but it is to be pointed out that the malarial remissions differ, in that all types of cases are favorably influenced,
including the simple demented forms. As regards remissions, Gerstmann reports the following comparative table of remissions:

1910-18—875 cases with spontaneous remission in 11.74%.
1919-23—196 cases, of which 184 received malaria and 12 received recurrent fever infection. Of these, there were 52.5% remissions.

In other groups of treated and untreated cases, practically the same percentage resulted. 54% as treated with malaria as opposed to 9% untreated cases, with only eight dead in the treated, and 33 dead in the untreated, with the added factor that in those remissions resulting from malarial infection, the improvement has a tendency to be lasting.

**Indications for Treatment**

It should be recognized that not every patient, with paresis or other central nervous system involvement, is a good subject for malarial treatment, and that there are certain factors that must be taken into consideration in the treatment of every case. So that, aside from the specific contra-indications to the inoculation malaria, it sometimes is a difficult problem to decide which cases will make good subjects for treatment. Complete remission in the syphilis may occur, as evidenced by the blood and spinal fluid, but marked psychosis remain so that though the patient’s life is prolonged, he remains demented and the State is burdened with another insane patient for many years.

The primary consideration is the patient. For this purpose, it is preferable that the patient be young, well-nourished, and of fair strength, and that there be no disease other than central nervous system syphilis. In cases of aortitis and marked obesity, the treatment may be given but only with especial care. Whereas, in cases of aneurysm, severe aortitis, or pulmonary tuberculosis, even in the quiescent stage, infection therapy should not be given. No less should the stage and duration of the disease be considered, in that, the more advanced the disease, the less likely are complete remissions to be expected without residual psychic damage. The question here arises as to the selection of patients in paresis for the administration of malaria, for it has been demonstrated that although syphilis has, apparently, been arrested, or cured, the patient remains to live many years in a psychotic stage. But, of course, as one can never tell which patient will recover without stigmata, and which with psychosis, the physician alone, after consultation with the family, is the final referee. In any case, general paresis is such a hopeless disease, that it is practically always best to take the risk of treatment.
It is wise to test the patient for quinine, and arsenic sensitization, since cases have been reported that have died from the quinine treatment of malaria. In general, the heart must be watched very closely and fever must be interrupted where exhaustion, persistent diarrhoea, or vomiting occurs.

**Choice of Inoculation Material**

It has been found that of the various malaria types, only tertian is a safe medium to use. The others, and particularly tropical malaria, are of too severe a character, and often quinine resistant, and as results are no better than with tertian malaria, the latter is the one of choice. It is, therefore, advised that only known strains be used, and preferably, those in the control of a large clinic in which the tertian nature has been proved by known passages.

Wagner von Jauregg, and Gerstmann have used two strains, one since September, 1919, with over one hundred passages from man to man, and one since 1921, with about eighty-five passages. In spite of the frequent transfers, there were no noteworthy alterations in

1. The incubation period.
2. Height or character of fever.
3. Morphology or pathogenicity of parasites.

**Technic of Malaria Inoculation**

At first, only skin inoculation was tried, and succeeded in two out of four cases. As this gave too long an incubation period, subcutaneous inoculation was tried, and a greater certainty of infection was shown here, but as the incubation period was still too long, and infection not very regular, intra-venous injection was attempted. It was found that this method shortened the incubation period, occasionally to one day (usually from six to eight days) and that, in most of the patients, there was a positive reaction to the infection. In a few, the first inoculation did not take, but in these, the second attempt was usually successful. It is reported from the clinics of Gerstmann and Wagner von Jauregg that only five cases out of one thousand failed to react to infection by repeated injection.

There are two methods of transferring the infection:

1. Austrian method, with the use of injected blood.
2. English method, whereby the infection is direct, from mosquito to man.

In the first method, the two principal ways of transporting blood are
by the Sodium Citrate method, and the defibrinization method, which we use in our work. In our method, the amount injected into the vein is from 5 to 10 cc. of a mixture of equal parts malarial blood and ½% Sodium Citrate solution.

The operator is warned that in this latter method, during transportation, the specimen must be kept warm, either being held in the hand, or carried next to the body. There are certain factors which influence a "take," and control the incubation period, as follows:

1. Number of plasmodia.
2. Their ability to accommodate themselves to a new environment.
3. The individual sensitivity or resistance of the patient.

The Course

Usually the incubation period is uneventful; the temperature rarely arises above 100°F.; an occasional ill-defined chill may occur, or slight nausea and headache. Since one, ordinarily, counts only definite chills, it is essential not to confuse the occasional slight feeling of cold, that occurs before the actual onset of rigor followed by sweating and the temperature ranging from 102 upward. In these peaks, the temperature is rarely below 102°F. and occasionally is as high as 106.6°F.

Minimum Effective Number of Chills

If no untoward symptoms occur, such as sudden lowering of the blood pressure, and weakening of the pulse, it has been found that a course of about twelve paroxysmal chills is the desired goal. Frequently, good results are obtained with but eight chills, but ordinarily, this is not the case, and where possible, the patient should be allowed to have ten or twelve chills. If fever causes alarm, ice caps may be used or the malaria may be temporarily interrupted by a dose or two of quinine sulphate, and should be provoked anew by the intra-venous injection of typhoid vaccine (25 to 50,000,000), or by the intra-muscular injection of 10 cc. of 10% Sodium Nucleinate.

This interrupting of the fever is not advisable, as very frequently the fever cannot be revived.

Question of Isolation

In 1924, work done in Wagner von Jauregg's clinic tended to show that it was impossible to transfer this artificial type of malaria to other patients by mosquitoes. Various experiments were made, allowing malarial infected general paretic patients to be bitten by the
Anopheles mosquito, and then permitting these mosquitoes to bite controls. In all these experiments the findings were negative.

But, in this country, there have been cases recorded in which this type of malaria was carried to other patients, and it is, therefore, advisable that all subjects of malarial infection therapy be isolated, or gauze screened.

**Treatment of the Inoculation Malaria by Quinine**

Inoculation malaria differs most from the mosquito borne infection by its greater reaction to treatment. With from one to three doses of Quinine Sulphate by mouth, or Quinine Hydrochloride, intra-venously, all symptoms and plasmodia disappear at once. In our experience it has never been necessary to resort to the intra-venous therapy, the Quinine by mouth having been sufficiently effective to cause the entire disappearance of the disease.

In the early days of malaria inoculation, provocative measures, such as Sodium Nucleinate, were always used, after treatment, before discharging the patient. It is now agreed by practically all investigators that this is unnecessary.

**Specific Treatment After Malaria**

On this point there are several widely diverse opinions. Some investigators believe that inoculation malaria is sufficient to control, or arrest, the syphilitic involvement of the central nervous system. On the other hand, there are a large number of men who prefer to follow up malaria with courses of one of the arsphenamines. First, for its effect on the inoculation malaria; second, for its effect on the Syphilis.

While there can be some question, as to the necessity for following up inoculation malaria with specific treatment, in the treatment of paresis, or other central nervous system syphilis, it is well to remember that syphilis does not, ordinarily, limit itself to any one organ, and that, therefore, it would not be unwise to give the patient a thorough course of anti-syphilitic treatment, in addition to the inoculation malaria.

**Clinical Results Following Inoculation Malaria Treatment in General Paresis**

There are two kinds of remissions:

1. Where we obtain complete disappearance of all manifestations, or only the slightest, psychic, residual effects, with full ability to resume former occupation.
2. Incomplete remission, with more or less outspoken Psychoses. The reports from the Vienna clinic from July, 1921, to December, 1922, show in 250 cases, remissions in 160 or 66%. Of these, eighty-five cases (chiefly early types) 34% showed complete remissions while 51 cases (chiefly advanced types) or 20% gave good, incomplete remissions, and 24 cases (chiefly advanced) or 9.6% fairly incomplete remissions.

It is to be seen, in this report, that the relation of the results to the duration of the disease is important, but quite difficult to determine. In this country, the reports give about 30% of good remissions following malarial therapy.

**Remissions Following Malarial Infection Therapy**

Improvement in the neurologic symptoms is frequent, especially disturbances of speech and writing. Ataxia is often improved, as is co-ordination. Pupillary changes are least affected, and an Argyll-Robertson pupil shows practically no change. Improvement in the blood and spinal fluid is frequent, but is not to be expected early. After the passing of weeks, and months following the malaria, changes begin in the cerebro-spinal fluid without relation to the clinical change. In fact, one cannot predict clinical remissions from the spinal fluid data; since one may remit clinically with a completely positive spinal fluid, while another, whose spinal fluid shows improvement, may remain clinically unimproved. In long persisting, clinical remissions, the cerebro-spinal fluid gradually becomes, and remains, negative, as does the blood. The experience of the Vienna men has been that the blood Wassermann usually becomes negative, before the cerebro-spinal fluid.

**The Mode of Action**

There have been various theories proposed regarding the manner in which malarial therapy acts.

Straussler and Koskinas report three cases treated with malaria, but who later died of inter-current disease, and in whom a favorable influence on the pathological process was present on examination. In fact, without knowledge of the clinical course, a pathologic diagnosis would have been difficult or impossible, because there were so few inflammatory, or progressive changes present.

In autopsies in twenty cases, Kirschbaum could not find the treponema pallidum in any.
Weichbrodt and Jahnel are certain that the principal factor is high fever, although Potzl and Weil feel that the malaria alters the permeability of the meninges, and permits the passage of unknown substances from the blood.

Weichbrodt and Jahnel were able to show rabbit chancres could be healed, and the treponema pallidum destroyed by the repeated application of heat (hot baths). This has been demonstrated in America, by various investigators, principally from the experimental laboratory of Schamberg.

It is, therefore, reasonably certain that it is the hyper-pyrexia in the treatment which brings about the favorable effect, rather than any other factor, and attempts have been made to produce an effective and persistent high fever, without the debilitating effects of malaria. It is to be mentioned here that although there has been work done on the treatment of early syphilis, by malaria without the adjunct treatment of the arsphenamines, this has been discontinued. It was noted that numerous of the patients with secondary syphilis, who received the malarial inoculation therapy, soon after within a variable time showed different types of relapses, serologically and clinically, sufficient to indicate that fever therapy has no very high place in the treatment of early syphilis, except where complicated by central nervous system involvement.

Results

In addition to the reported results already mentioned, I wish to cite one more group of cases reported by Gerstmann in 1925 of thirty-eight good remissions in seventy treated cases; whereas, in untreated patients, there were but seven spontaneous remissions in seventy-eight cases.

This certainly indicates, with the increased number of remissions, and the more lasting tendency of these remissions, that malarial therapy is a treatment to be tried in practically all of those cases without serious contra-indications. It is not to be expected that these remissions will appear immediately after the cessation of the fever. Most often, results are not seen for from one to three, and even six months, and in some cases have not appeared until a year following treatment.
MEASLES PROPHYLAXIS

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Our present conception of the etiology of measles is that it is a disease caused by a specific filterable virus. The green-producing streptococcus isolated by Tunnicliff and her co-workers, seems, at most, to be an accompanying organism, and the serum from normal goats has been shown to produce as great an effect in local blanching of the rash as that of goats rendered immune to this organism. Work reported by Degkwitz\(^1\) on the manipulation of the virus is by far the most important contribution to etiology to date. In spite of the unsatisfactory state of our knowledge of etiology, immuno-prophylaxis in measles yields very satisfactory results. The blood of measles convalescents is rich in specific antibodies and a small dose of such blood, given to an exposed individual early in the incubation period, will either prevent the development of the disease or cause the disease to develop in a modified and startlingly mild form.

The first use of convalescent serum in the prophylaxis of measles was made in 1916, by two French physicians in Tunis, Nicolle and Corsel, who reported in 1918 that they had protected the fourth child in a family, after the three older children had come down with measles, by injecting him with serum taken from the oldest brother, seven days after the fading of his rash. This experience was repeated by the Americans, Richardson and Connor in 1919, in six children, giving the serum intramuscularly. Later in 1919, Degkwitz of Munich, published his first series of twenty-five cases all successfully protected by the injection of serum two to seven days after exposure. Degkwitz's report of a large series\(^2\) contains the classical exposition of the technique, which with few exceptions has been successfully followed in thousands of cases by scores of investigators.

We have found no difficulty in preparing a satisfactory serum. Under aseptic precautions, blood is withdrawn from a convenient vein of the measles convalescent from the 9th to the 12th day after
defervescence. This blood is allowed to clot and the serum obtained. After a Wassermann test has been made, the serum is pooled with other similar sera and sealed in sterile ampules, a dose to the ampule. We find from 2 to 2½ cc. a satisfactory dose for the average child. After inactivation in the water bath at 56° C. for one hour, random ampules are opened and cultured both aerobically and anaerobically. A small amount of some preservative of the phenol group may be added to the serum without damaging its protective properties. The serum is given intramuscularly, usually into the buttocks. We have never seen either a local or general anaphylactic reaction follow the use of human serum.

A widespread measles epidemic, commencing November, 1925, visited the city of Baltimore. It became evident that numbers of children under three years of age, and other children weakened by previous illness or suffering from general asthenia, who were directly exposed, might easily suffer serious complications and that some of these might well lead to fatal termination. A number of cases of measles developed among the Jewish Children’s Society and blood obtained from these convalescents furnished our initial supply. At this time sixty-eight doses in all were used. In two cases typical measles developed and while these cases were not particularly severe, we counted them as failures. In twenty-one cases, measles failed to develop. At this point, it is well to insist that all of these patients were definitely exposed, and all were beyond the age where a natural immunity exists. Our own critique of our results was severe. We had determined to exclude from a group of modified measles any case in which there was anything but the very mildest involvement of the mucous surfaces, or of the bronchi, or any complications or sequelae, such as otitis media, bronchopneumonia, etc., or in which the temperature and rash persisted longer than forty-eight hours. As a matter of fact, in no case did the temperature exceed 100.5°F. per rectum. The results of immunization were so gratifying that during the epidemic starting in the fall of 1927 we again applied the serum in appropriate cases.

In all, there were seventy-one doses given to the date of this writing without the development of a single case of real measles, or of a single complication. The fact that only eight cases of measles developed is attributed to the rather large dose of immune serum. Our dosage is still smaller than the usual American figures, being
3½ to 4½ cc. as against 5 to 10 cc. recommended by Kareitz and Levin.3

Owing to the difficulty in obtaining immune serum, it was only administered where an urgent need of preventing measles was felt. A brief report of a number of cases where the serum was applied will give an example of the type of individuals immunized and the results obtained.

Series of 1925-26

Female, 4 years of age. An older brother had died of tubercular meningitis, and this child was under suspicion of a tubercular infection. A nurse maid who took care of her had catarrhal symptoms for three days, but did not cease work, and cared for the child during this time. On the fourth day she developed a florid measles. The following day the child received 3 cc. immune serum and ten days thereafter developed a non-descript, discrete, macular rash, without temperature or constitutional symptoms, which disappeared in forty-eight hours.

Male, 8 months. Bottle baby suffering from enlarged thymus and nutritional disorder. The older sister developed measles and this infant had been exposed during her prodromal stage. 3 cc. immune serum was given. Infant showed no indisposition or rash.

Female, 4 years of age, male 5½ years. Both these children had been operated on for infantile cataracts, and were staying with relatives in the city. Two older children in the house at which they were stopping developed measles, and these patients were exposed during the prodromal stage. They were each given 3 cc. of measles immune serum. They returned to their home in the country where they were not under medical observation. If even a modified measles developed, the parents failed to perceive it and their operative convalescence was uneventful.

Series 1927-28

Female, 4½ years of age, convalescing from bronchopneumonia, but still confined to her bed. Her brother, 7 years of age, developed typical measles. This child received 4½ cc. of measles immune serum as soon as the brother’s case was diagnosed, and completely escaped infection.

Three children in one family, female, age 18 months, male, age 3 years, and female, age 8 years, were all directly and almost con-
tinuously exposed during the prodromal and eruptive stage to a brother, age 5 years, who developed measles. The two younger children each received 3 cc. immune serum. The baby showed no indisposition nor did she develop a rash. The boy, 3 years of age, in 14 days developed a discrete, macular rash on face and chest without any indisposition or catarrhal symptoms, and a maximum temperature of 99.5°F. rectal. The older girl, who was not immunized, 12 days after exposure developed prodromal symptoms followed by severe measles and complicated by a double suppurative otitis media which lasted 8 weeks.

Female, 2 years of age, suffering from marked infantile eczema, exposed continuously during prodromal and eruptive stage to older sister who had measles. 3 cc. of immune serum was given. 14 days later, the child developed modified measles with very discrete eruption lasting 36 hours; maximum temperature 101°F., which lasted only a few hours, and no catarrhal symptoms. Within a week after the disappearance of the modified measles, child developed a severe chickenpox.

A case probably unique in medical experience, is that of a woman 32 years of age, who developed typical and severe measles. Neither her husband, age 31, or their child, age 5, had ever had measles. The husband received 10 cc. of serum and the child 3 cc. Following an incubation period of 11 days, the husband developed a case of measles modified in that catarrhal symptoms were absent, nor did the temperature exceed 101°F., but with a severe rash involving the palmar and plantar surfaces and persisting for 5 days. There were no constitutional symptoms, nor was the patient aware that he was sick until the appearance of the rash. The child escaped completely.

The availability of measles immune serum depends upon the cooperation of the physician in securing blood from his convalescent patients. The possession of an adequate supply of immune serum precludes the serious complications, and loss of lives not otherwise avoidable in young or sickly children. It gives the physician a remarkable assurance and relief of anxiety.

Our experience during the last two occurrences of epidemic measles have convinced us of the desirability of this approach to the problem of dealing with the children under our care during the prevalence of this often serious infection, and it is our intention to maintain a supply of the immune serum. Most parents, in our experience, will
take an adult and socially conscientious view of the matter if properly approached. It is the obligation of every physician practicing in a community to assist in securing measles immune blood where no contra-indication exists.

References.

1Degkwitz, The Journal of Infectious Diseases, Volume 41, Page 304, 1927.

WANTED

Mrs. Briscoe, the Librarian, writes our office she is in need of the following journals to complete her files:

Maryland Medical Journal—

Volume 38 (1897) Nos. 1, 7 and 22.
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Volume 41 (1899) Want Nos. 4, 6, 7 and 26.

Old Maryland—

Volume 9 (1913) No. 7.

Bulletin School of Medicine—

Volume 9 (1925) No. 2.

Anyone who has a spare copy to donate for this purpose will be conferring a great favor upon the library.
SOME NOTES ON THE MEASLES EPIDEMIC OF ALEXANDRIA, EGYPT, IN 1925

By N. Kenawy, M. D.,
Deputy Medical Officer of Alexandria, Egypt

Alexandria, during the year 1925, experienced a very severe epidemic of measles. The epidemic reached its height in July, resulting in the loss of thousands of children.

History: Measles is a disease that has been known a long time. The first description of it was made by the Arabian and Persian physicians of the 10th and 11th centuries, such as Ibn Sina, Al Razi and Abbas. Its Arabic name is Hasba. Before this period the disease was confounded with smallpox. Some believed that vaccination against smallpox creates in children a strong susceptibility to measles, and, on the other hand, that a person who had had smallpox first in childhood was immunized by that disease against measles, and that if such a person caught the latter disease at all, the case should be benign. Pruner speaks of the first measles epidemic in Egypt in 1845. It began in February and reached its maximum in May of that year.

Periodicity: Certain authorities on epidemics state that a measles epidemic occurs once every two years, owing to the fact that during this space of time, a goodly number of children reach the age which makes them naturally predisposed to the disease. An examination of the cases that occurred in Alexandria during 12 years (1914 to the end of 1925) proves that the number of cases increased every other year. For instance, in 1914 there were 473 cases, then they decreased to 249 in the following year, and in 1916 increased to 300, and so on (See Table 7).

Definition: Measles is an acute infectious disease characterized by a general catarrh of the upper respiratory tract and a macular eruption over the body.

Etiology: Scientists are not yet agreed on the causative virus of measles, though experimenters have been able to infect monkeys with the disease by inoculating them with the blood of patients. Tunnicliff, in 1917, isolated a green, anaerobic, gram-positive diplococcus
from the blood of measles patients with great regularity, using semi-solid culture mediums. Similar cocci were found in throat smears from early cases, the cocci appearing generally within large epithelial cells and polymorphous leukocytes. Since that time cocci which differ in some respects from the Tunnicliff organism have been described by various workers, i.e.: Caronia\(^1\), Ferry and Fisher\(^2\), and recently by Duval and Hibbard\(^3\).

The Italian Professor Caronia was able, after long and minute researches, to discover in 1923 the following:

1. A round-shaped microbe (diplococcus) isolated from the blood and the filtrate of the naso-pharyngeal and cerebro-spinal fluid of children during the prodromal and eruptive periods of the disease. This microbe was given the name of Caronia's microbe.

2. The possibility of production in rabbits of experimental measles by injecting them with the blood of patients in the eruptive stage or with the filtrate of nasal secretions.

3. The symptoms of the disease where brought about experimentally as above were sometimes severe and, on other occasions lighter and less lasting than those of real measles. Such cases are also seldom fatal and generally without complications.

4. He found that the blood-serum of measles patients in the eruptive period and in convalescence, is rich in agglutinins, amboceptors, which are specific for the organism.

5. A preparation of a vaccine of Caronia's microbe is useful as a prophylactic for measles, and also in the treatment of the disease. (Although this treatment is not certain it is possible there may be developed a vaccine for the future.)

**Immunity:** Only a very small minority of children (not exceeding 3\%) have a natural immunity. The rest are all predisposed to the disease. The greatest susceptibility is between the ages of 2 months and 5 years. I have personally seen it in children one month old.

Immunity before the age of two months is probably acquired from the mother who had measles in her childhood and this immunity diminishes gradually after that age. A person may have the disease a second time, for I have personally seen many children have it twice, and a few who had it the third time. The shortest interval in my experience between the first and second attacks was three months.

**Age:** Most cases of measles occur between the ages of 1 and 6 years. I saw three cases during the epidemic in persons between 20 and 50 years of age. Measles may also occur in new-born infants,
who are either born with the eruption or the eruption may appear on
them a few days after birth.

The infection in such cases is through the mother, who contracted
the disease during the last months of pregnancy. The youngest case
that I have personally seen, with measles, is a child one month old,
as mentioned above.

Time of Spread of the Disease: Most authors say that measles
reaches the highest points in March and the lowest point in Sep-
tember. (See Tables Nos. 1 and 2.)

Transmission of Measles: The virus of measles is contained in
the nasal and buccal secretions and possibly also in other secretions.
It is evident that the disease is usually transmitted by direct contact
from one person to another. Infection through a third person, or
indirectly by fomitories or air, is not accepted at this time. When I
visited the Infectious Disease Hospital of Liverpool in 1925, my
attention was drawn to this fact, and I was shown a ward containing
cases of different kinds of infectious diseases, put together in the
same ward. Droplet infection is quite possible. Carriers are not
yet known in this disease.

Duration of the Infective Period: Infection reaches its height in
the catarrhal stage, i. e., one or two days before the rash appears,
and it continues in complicated cases, during the stage of efflorescence,
and then disappears completely when the temperature drops to nor-
mal. The eruptive period is generally not more than 6 days.

Incubation: The incubation period ranges from 7 to 14 days.

Symptoms: I need not dwell upon the symptoms of measles as
they are outside the scope of this article. I shall only mention them
briefly as follows:

1. The period of invasion which is characterized by fever, catarrhal
   and oral manifestations, usually lasts from 3 to 4 days, but in some
cases I have seen it last 10 days.

2. The period of eruption lasts usually 3 days in mild cases.

3. The period of convalescence lasts 3 to 5 days in uncomplicated
cases.

Variations in the Eruption: The rash comes out usually in 3 or 4
days after the appearance of the fever, and it is noticed first behind
the ears, under the chin and around the mouth and nose. Then it
spreads over the face, the chest and abdomen, the arms, back, thighs
and legs, the palms and soles being the last to be affected. Cases of
measles without eruption have been reported. I have personally seen
in this epidemic two cases in which the rash appeared first in the usual way, then disappeared and then reappeared after a week in one case, and after 12 days in the second case. In both cases the high temperature returned also.

**Complications:** During the epidemic of 1925 many cases developed symptoms of the intestinal tract rather than respiratory tract. The feces of 10 cases were examined bacteriologically and all showed the presence of ameba. This, I think, was due to the fact that many mothers gave their children honey as a cure for the measles. Honey attracts flies and the flies are carriers of ameba.

The prevalence of intestinal complications during this epidemic is given in Table 3, where it is shown that 131 cases of measles were treated in the district of Minet-el-Bassal by Dr. Panayotatou between September 1, 1925, and March 31, 1926. In these cases, dysentery and enteritis constituted a large percentage of the complications, i. e., about 55%.

**Some Statistics:** The number of cases of measles that were declared to the Sanitary Services of Alexandria in 1925, either by way of notification or by medical examination of dead bodies, was 844, of which 410 were deaths. The death rate was 48.5% (as shown in Table 6); which is a very high rate, and far above the normal death rate of measles which is 5 to 6%. This high mortality is undoubtedly due to the virulence of the epidemic, i. e., the many and severe complications; and also to the existence of a large number of unnotified cases. A good many cases were only certified after death. I can say without exaggeration, that about 77% of the real number of cases were not notified at all to the Sanitary Authority. This is often due to the mothers being poor and never calling a doctor to treat their children. Sometimes the doctor is called and does not report the case. We know also that some people are afraid of the sanitary measures which usually follow notification, such as disinfection, supervision of contacts, etc. Some people also rely on remedies whose properties are still a mystery to the doctor, remedies that are said to be invested with divine powers, and thus risk the child's life without calling in medical assistance. The most important of these remedies is honey, which undoubtedly holds an important place, in spite of us doctors, in the treatment of measles. Honey was, however, recommended by El-Razi in ancient times; possibly it served as a laxative only. (I can never forget a mother saying,
when the child was dying, that she had neglected nothing in his treatment, for she gave him the best kind of honey.)

What definitely confirms my statement that most cases were not notified, is the discovery of 334 deaths by measles during the epidemic, which were not declared as cases of measles before death.

*Cases Classified According to Age Period:* Table No. 4 shows the number of cases and deaths that occurred in Alexandria during the epidemic of 1925, classified according to age group. In this table it is shown also that the death rate for the age group 1 to 6 is the highest, and this agrees with our experience concerning measles. It shows as well, that 13 cases occurred between the age of 11 and 20, 8 between 20 and 30, and one between 30 and 40.

*Proportional Distribution of Cases Among Foreigners and Egyptians in This Epidemic:* The number of cases among Egyptians was 739, of whom 405 died, while among foreigners, out of 100 cases 5 deaths occurred. (See Table 4.) Besides this there were also 5 imported cases. This shows that the death rate among Egyptians was 54.8%, while among Europeans it was only 5%. The death rate among Europeans was, therefore, much nearer to the normal death rate for measles than that among Egyptians; and this fact tends to indicate that most of the cases that occurred among Europeans were notified to the Sanitary Authority, and secondly, that they were not left without treatment. Cases which were discovered after death consisted of 332 Egyptians and 2 foreigners. (See Table 4.)

A considerable number of cases, besides the above, were never notified.

Of all the above mentioned cases, amounting to 844, only 32 cases were treated in hospitals.

**Number of Cases and Deaths for the Year 1925, Classified According to the Different Districts of the City per 10,000 Population**

The district that was infected most was Manchieh, where the proportion of cases reached 20 to 10,000 inhabitants. Next came Karmouz, then Moharrem Bey, and then Labban; and the district infected least was Attarine, in which there were 9 cases for every 10,000 inhabitants. As for the death rate from measles, it was highest in Manchieh, next in Karmous, then Labban and then Minet-el-Bassal, and it was lowest in Attarine.
It is, of course, impossible under the circumstances to draw a conclusion on the cause of the above state of things. But I can only say that the infantile mortality resulting from all diseases in general, in these districts where measles spread, was higher than in the other districts, and that most deaths in those districts resulted from the complications of measles. Kism Attarine, in which the death rate and proportion of cases were least, is a district mostly inhabited by Europeans.

_Number of Cases for 10,000 Population:_ The ratio of cases to the population reached 17.34 per 10,000; that of deaths was 8.42 (see Table No. 6). The proof that a severe epidemic occurred in 1925, and that the real number of cases was not notified to the Sanitary Authority, is the rise in the general death rate among children; this was higher than usual, especially in the age group 1 to 5. In this age group the number of deaths reached 6443, while in 1924 it was 3258, (or 3185 less). This great difference is undoubtedly accounted for by the existence of an epidemic.

Moreover, from Table 5 it appears that the average general death rate for the previous 5 years (1920-1924) was 7 in age group 1 to 5, that for the year 1925, was 13.2 per thousand of population. This enormous increase in the death rate of this year is due undoubtedly to measles.

**TABLE 1.**

MONTHLY NUMBER OF CASES AND DEATHS

<table>
<thead>
<tr>
<th>Months</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>1</td>
<td>..</td>
</tr>
<tr>
<td>February</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>March</td>
<td>4</td>
<td>..</td>
</tr>
<tr>
<td>April</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>May</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>June</td>
<td>48</td>
<td>14</td>
</tr>
<tr>
<td>July</td>
<td>157</td>
<td>83</td>
</tr>
<tr>
<td>August</td>
<td>155</td>
<td>97</td>
</tr>
<tr>
<td>September</td>
<td>98</td>
<td>65</td>
</tr>
<tr>
<td>October</td>
<td>103</td>
<td>58</td>
</tr>
<tr>
<td>November</td>
<td>107</td>
<td>42</td>
</tr>
<tr>
<td>December</td>
<td>148</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>844</td>
<td>410</td>
</tr>
</tbody>
</table>
### TABLE II.

**MONTHLY NUMBER OF CASES AND DEATHS OF MEASLES.**

<table>
<thead>
<tr>
<th>Months</th>
<th>1920</th>
<th>1921</th>
<th>1922</th>
<th>1923</th>
<th>1924</th>
<th>1925</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>16</td>
<td>33</td>
<td>1</td>
<td>2</td>
<td>66</td>
<td>10</td>
</tr>
<tr>
<td>February</td>
<td>51</td>
<td>2</td>
<td>201</td>
<td>2</td>
<td>2</td>
<td>92</td>
</tr>
<tr>
<td>March</td>
<td>70</td>
<td>126</td>
<td>7</td>
<td>15</td>
<td>146</td>
<td>37</td>
</tr>
<tr>
<td>April</td>
<td>72</td>
<td>1</td>
<td>41</td>
<td>3</td>
<td>17</td>
<td>32</td>
</tr>
<tr>
<td>May</td>
<td>65</td>
<td>2</td>
<td>47</td>
<td>7</td>
<td>19</td>
<td>81</td>
</tr>
<tr>
<td>June</td>
<td>53</td>
<td>3</td>
<td>13</td>
<td>3</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>July</td>
<td>18</td>
<td>4</td>
<td>3</td>
<td>17</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>August</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>September</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>October</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>November</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>December</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>362</strong></td>
<td><strong>23</strong></td>
<td><strong>474</strong></td>
<td><strong>27</strong></td>
<td><strong>125</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

### TABLE III.

**133 CASES TREATED AT THE DISPENSARY OF DISTRICT V. BY DR. PANAYOTATOU FROM SEPTEMBER 1 TO MARCH 31, 1926.**

<table>
<thead>
<tr>
<th>No. of Cases</th>
<th>Nature of Complication</th>
<th>Development of Complications per 100 Cases.</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Dysentery</td>
<td>41.60</td>
</tr>
<tr>
<td>25</td>
<td>Bronchitis</td>
<td>20.50</td>
</tr>
<tr>
<td>18</td>
<td>Enteritis</td>
<td>13.</td>
</tr>
<tr>
<td>8</td>
<td>General Debility</td>
<td>6.30</td>
</tr>
<tr>
<td>7</td>
<td>Pneumonia</td>
<td>5.40</td>
</tr>
<tr>
<td>4</td>
<td>Bronchitis and Dysentery</td>
<td>2.80</td>
</tr>
<tr>
<td>3</td>
<td>Nephritis</td>
<td>2.20</td>
</tr>
<tr>
<td>1</td>
<td>Atepsia</td>
<td>0.70</td>
</tr>
<tr>
<td>10</td>
<td>No complication</td>
<td>7.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>133</strong></td>
<td></td>
</tr>
</tbody>
</table>

*The epidemic continued until March, 1926.*
### TABLE IV.

CASES AND DEATHS PER AGE GROUP.

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Cases</th>
<th>No. of Deaths</th>
<th>Mortality Per Cent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under one year</td>
<td>4</td>
<td>30</td>
<td>75.</td>
</tr>
<tr>
<td>1 to 2 years</td>
<td>211</td>
<td>117</td>
<td>55.4</td>
</tr>
<tr>
<td>2 to 3 years</td>
<td>209</td>
<td>114</td>
<td>54.5</td>
</tr>
<tr>
<td>3 to 4 years</td>
<td>147</td>
<td>73</td>
<td>50.</td>
</tr>
<tr>
<td>4 to 5 years</td>
<td>72</td>
<td>36</td>
<td>50.</td>
</tr>
<tr>
<td>5 to 6 years</td>
<td>52</td>
<td>21</td>
<td>40.3</td>
</tr>
<tr>
<td>6 to 7 years</td>
<td>32</td>
<td>5</td>
<td>15.6</td>
</tr>
<tr>
<td>7 to 8 years</td>
<td>17</td>
<td>2</td>
<td>11.7</td>
</tr>
<tr>
<td>8 to 9 years</td>
<td>15</td>
<td>5</td>
<td>33.3</td>
</tr>
<tr>
<td>9 to 10 years</td>
<td>10</td>
<td>1</td>
<td>10.</td>
</tr>
<tr>
<td>10 to 11 years</td>
<td>8</td>
<td>2</td>
<td>25.</td>
</tr>
<tr>
<td>11 to 20 years</td>
<td>13</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>20 to 30 years</td>
<td>8</td>
<td>4</td>
<td>50.</td>
</tr>
<tr>
<td>30 to 40 years</td>
<td>1</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>844</strong></td>
<td><strong>410</strong></td>
<td>48.5</td>
</tr>
</tbody>
</table>

CASES AND DEATHS CLASSIFIED INTO EGYPTIANS AND FOREIGNERS.

<table>
<thead>
<tr>
<th></th>
<th>Egyptians</th>
<th></th>
<th></th>
<th>Foreigners</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Cases</td>
<td>Deaths</td>
<td>Mortality Per Cent.</td>
<td>Cases</td>
<td>Deaths</td>
<td>Mortality Per Cent</td>
<td></td>
</tr>
<tr>
<td>Egyptian</td>
<td>739</td>
<td>405</td>
<td>54.8</td>
<td>105</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

NUMBER OF CASES FOUND DEATHS “NOT DECLARED.”

Egyptians, 332; foreigners, 2.

### TABLE V.

MORTALITY FROM ALL DISEASES CLASSIFIED PER AGE GROUP IN ALESSANDRIA (1920-1924) COMPARED WITH 1925.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Population</th>
<th>MORTALITY PER GROUP AGE PER 1000 POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-1 years</td>
<td>1-5 years</td>
</tr>
<tr>
<td>1920.....</td>
<td>445,700</td>
<td>10.1</td>
</tr>
<tr>
<td>1921.....</td>
<td>449,300</td>
<td>10.3</td>
</tr>
<tr>
<td>1922.....</td>
<td>456,300</td>
<td>9.81</td>
</tr>
<tr>
<td>1923.....</td>
<td>466,700</td>
<td>11.8</td>
</tr>
<tr>
<td>1924.....</td>
<td>477,100</td>
<td>10.8</td>
</tr>
<tr>
<td>Av. 5 yrs.</td>
<td>459,000</td>
<td>10.4</td>
</tr>
<tr>
<td>1925.....</td>
<td>486,600</td>
<td>10.9</td>
</tr>
<tr>
<td>Av. 5 yrs.</td>
<td>459,000</td>
<td>7.94</td>
</tr>
<tr>
<td>Average</td>
<td>438,000</td>
<td>10.3</td>
</tr>
</tbody>
</table>

### TABLE VI.

CASES AND DEATHS OF MEASLES IN 1925 PER 10,000 POPULATION

<table>
<thead>
<tr>
<th>No. of Cases</th>
<th>No. of Deaths</th>
<th>Death Rate</th>
<th>Cases per 10,000 pop.</th>
<th>Deaths per 10,000 pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>844</td>
<td>410</td>
<td>48.57</td>
<td>17.34</td>
<td>8.42</td>
</tr>
</tbody>
</table>
TABLE NO. VII
CHART SHOWING THE NUMBER OF CASES AND DEATHS OF MEASLES DURING THE YEARS 1914-1925

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1915</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1916</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1917</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1918</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1919</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1921</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1923</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1924</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1925</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References.

Alexandria Health Reports.
Vaughan, Rosenau, Rolleston, Acute Infectious Diseases, Archives of Pediatrics.

Editor’s Note: Recommend in future epidemics the use of convalescing serum. For prophylactic inoculation from 3 to 6 cc. of the serum is injected intramuscularly not later than the fourth day of the incubation period.
DR. CHARLES LEE SUMMERS

Dr. Charles Lee Summers, Professor of Pediatrics in the University of Maryland, died on July 15, 1928, at the age of sixty-four. His association with the University began in 1918, when he was appointed Clinical Professor of Pediatrics, and he continued his active administration of his clinic almost to the day of his death. During those years, Dr. Summers, who was not in active practice, gave himself untiringly and wholly to the difficult task of organizing, supporting and administering the Babies and Children’s Clinic. Few men of his age have retained the energy and enthusiasm which in his case led him for ten years to subordinate all his interests to the accomplishment of one purpose. These ten years of devoted work were repaid by the growth of the Clinic from the days when Dr. Summers, laboring alone in a small cellar room under the hospital saw five or six children brought in each week, to the present time when the large quarters of the new Clinic frequently are crowded by over a hundred infants and children a day; when the staff of physicians numbers twenty-three; when three social service workers are required for the follow-up work in the homes; and when sixty-six ladies are enrolled as volunteer nurse-aides to assist in the nursing in the clinic.

This busy and beneficent center of child-welfare work is the crowning achievement of a long and varied career. Dr. Summers was born at Statesville, N. C., the son of Charles Lee and Sarah Murdoch Summers. He received his early education in private
schools, at Bingham Military Academy and at Davidson College in North Carolina. In 1886 he matriculated in the University or Maryland and received his degree of Doctor of Medicine in 1887. Following graduation he did post-graduate work in pathology at the Johns Hopkins Medical School. In 1890 he entered practice at Winston-Salem, N. C., and remained there, except for some years abroad, until his return to Baltimore in 1916. During this period in Winston-Salem he served for a number of years as Division Surgeon for the Norfolk and Western Railroad.

In 1895 he married Miss Bessie Carter Hall of Charlotte, N. C. They had two children who died in infancy. It is probably to this loss that may be traced the origin of much of both Dr. and Mrs. Summers’ deep feeling for children.

In 1911 Dr. Summers first turned from general practice to specialization in Pediatrics. He went abroad in that year and entered von Pirquet’s clinic at Vienna where he remained until the following year when he went to Berlin to study under Finkelstein. Dr. Summers’ association with the Children’s Hospital of the University of Vienna resulted in a close friendship with Professor von Pirquet. When the latter visited Baltimore in 1923 he was entertained by Dr. Summers, and spent a morning with him visiting the Babies and Children’s Clinic. That Dr. Summers’ services to the Children’s Hospital in Vienna were noteworthy is shown by the fact that when, in 1920, a tablet was placed in the walls of that institution naming those who had done most for the children of Austria, the only Americans listed were Herbert Hoover and Dr. Summers.

Following his return to America there were a few more years in Winston-Salem, and then in 1916 Dr. and Mrs. Summers came to live in Baltimore. From that time on he devoted himself entirely to Pediatrics, working for several years in the Harriet Lane Hospital and in the Robert Garrett Hospital. Finally in 1918 he was appointed Clinical Professor of Pediatrics in the University of Maryland in the department of Professor Ruhrah.

On coming to the University of Maryland he was given charge of the Children’s Dispensary in the University Hospital: a small bare room in the cellar of the hospital. Such paucity of facilities would have chilled the ardor of most young men, especially if they had previously had the experience of working in some of the largest and best-equipped Children’s Hospitals in the world. But Dr. Summers at fifty-four was only stimulated to a greater activity. Possessed of
sufficient private means to enable him to restrict his private practice, he was able to devote most of his time to his University work. He gave long hours to the growing clinic—he sought out assistants among the younger physicians—he besieged the Medical School authorities for equipment and supplies, and when these could not be provided in the measure he felt necessary, he went about among his friends and raised the money needed.

In 1920 the clinic had grown to the point where it was impossible to house it any longer in its cramped quarters, and it was moved across the street into the old gymnasium under the library. These were especially lean years in the finances of the Medical School and beyond the space, its heating and lighting and janitor service, the University could do little to help the new clinic. Dr. Summers, however, was quite equal to the task, and he was most ably seconded by Mrs. Summers. Together they built up the Babies and Children’s Clinic Aid Society, a corp of devoted ladies who ever since have worked daily in the clinic, weighing, measuring, taking temperatures, and assisting the physicians in examinations. The active financial support of philanthropic individuals, of the North Carolina Society of Baltimore, and of fraternal organizations was obtained so that, as the clinic grew, social service workers, secretaries, supplies and equipment could be provided. The Babies and Children’s Clinic became the favorite charity of many people in Baltimore.

Dr. Summers was especially interested in the nutritional problems of infancy and childhood. Much of the work of the clinic lies along these lines. Situated, as it is, in a congested district, largely inhabited by the foreign born and the colored race, the clinic has served yearly many thousands of mothers in this district, anxious to learn how to bring their children safely through the dangers that beset their first years. It has been an educational agency whose teachings have saved innumerable little lives.

The students of the medical school work in the clinic in groups throughout the term, and there has always been an active and growing staff of graduate physicians. The continued and rapid increase in the number of patients as well as the scarcity of available hospital beds prevented the complete development of many of the opportunities for specialized work afforded by the clinic. Dr. Summers had many ambitions for its future, and those who must carry on the work realize that there is much to be done; yet, as it stands
today, it is a most valuable institution and a living memorial to the
ability and the philanthropic spirit of the man who created it.

Through the difficult and laborious task of organizing and admin-
istering the clinic, Dr. Summers was constantly assisted by his wife.
She worked daily with him; he teaching and examining patients
and she directing the volunteer nursing staff. Her illness and death
in 1927 saddened his last year, but he courageously continued at
work until his own health gave way. Even then in the last few
weeks of his life he was active in directing the policy of the insti-
tution. His death is a great loss to the University and to his many
friends. He has left behind to younger physicians an example of
single-minded devotion and of accomplishment, and to the children
of Baltimore he has left a heritage in the Babies and Children’s
Clinic.

MEETING
SOUTHERN MEDICAL ASSOCIATION
Asheville, N. C.
November 12-15, 1928

A banquet will be held during the Southern Medical Convention
on Tuesday evening, November 13th, at the Battery Park Hotel at
7 P. M., under the supervision of Dr. Paul Foreman Wiest, one of
our field secretaries for North Carolina.

There will also be a registration desk for our graduates in the
lobby of the Battery Park Hotel, which is convention headquarters.
Subscription price of banquet is $3.50, and everyone planning to
attend the convention is invited to be present at the banquet. Send
checks to Dr. Paul Foreman Wiest, New Medical Building, Ashe-
ville, N. C.
THE PRESIDENT'S MESSAGE

The Medical Alumni Association of the University of Maryland is just entering upon another year. It now enjoys an enviable position, and its accomplishments during the past few years has lifted it from its state of lethargy to one of usefulness, and this transformation is due to the ceaseless efforts of its officers during the past decade. These men have spent much time in carefully planning the programmes that have, almost without disappointment, been successfully carried out, and now as we approach the coming year the responsibility of directing the work of the Association has been shifted to the shoulders of a new group of officers, whose duty it will be to carry on the good work already started, and if possible, to project a programme of greater usefulness into the years to
follow. As president of the Association, I realize the importance of
the position, and in full appreciation of the honor bestowed upon
me, pledge whatever ability I may have and as much time as may
be necessary in the fulfillment of my duties.

I need not summarize the work already accomplished by the
Alumni Association, but can simply suggest that you read again, if
you have already read, the report of the secretary submitted at the
annual meeting in June, 1928, and thus familiarize yourself with the
diversified activities of the useful organization to which you belong.

I can safely speak for the newly elected officers, when I say that
it is our keenest desire to render the most valuable service possible
to the Alumni Association and to the University. This, we feel,
can best be accomplished first, by believing that the Alumni Asso-
ciation is a vital part of the University, and second, by endeavoring
to so correlate its various activities that we shall be working to a
very definite end, so that there shall be no lost motion, no over-
lapping of programmes and no selfish motives. The needs of the
University as a whole are many, likewise the requirements of its
various departments. Benefits to the University as a whole should
not be submerged, in what appears to be greater gain in one depart-
ment. We must maintain a disposition to play fairly, then time will
remove the apparent irregularities and eventually we shall move
forward as a solid unit.

Is the Medical Alumni Association doing anything? This is a
question that has often been asked. Its viability has been clearly
proven. Last year we had 1681 active members out of a possible
6,000. When one considers the fact that these active members are
gathered from three distinctly separate alumni associations, and
that its members are scattered to all parts of the United States and
some foreign lands, one must be convinced that there is a definite
tendency for an actual consolidation, and that the Association is not
merely a thing on paper. Furthermore, the activities of the Asso-
ciation include, cataloging and classifying all graduates and all mem-
ers of the Association; circularization of all active members several
times a year; the operation of a Students' Book Store, which has
proven of mutual benefit; a closer contact with the Student Council,
thereby putting the undergraduates in touch with the graduates;
co-operation in editing "The Bulletin," in providing and supervising
a Students' Loan Fund, whereby worthy and needy students may
receive financial aid, and finally, by establishing field secretaries in
all parts of the country, thus re-awakening the interest of the older graduates in their Alma Mater.

The foregoing evidence is sufficient to establish in the minds of all of us that we can belong to a living organization which is striving to assist the University, and it behooves all of us to go along with it. No one wants to stand still. The greatest contribution each can make to the Association is one that lies within our power to make. Each one of us owes something to the institution that made us physicians. It is, therefore, our duty to become active members in a unit where concerted action may lead to well earned victory. A duty once fully appreciated makes the performance of it a pleasant privilege. A realization of our obligations will create a degree of loyalty to a school, or to a cause which will do more to procure for the Medical School what it needs than any other thing.

No one is looking for a magical upheaval which will leave the University well equipped; no one expects it. Work for the Alumni Association; talk for the Hospital; serve the School.

Charles Reid Edwards.

VISITORS

Since the last issue of The Bulletin the following men have registered in the Alumni office while in Baltimore:

Dr. Antonio Balart, Guantanamo, Cuba .........................U. of M., 1914
Dr. Charles L. Parks, Fairmont, W. Va. ......................U. of M., 1904
Dr. Vincentes Navarro, Harding, Mass. .....................U. of M., 1925
Dr. G. R. Seeber King, Lake Butler, Fla. ...................P. and S., 1901
Dr. K. G. Averitt, Fayetteville, N. C. .......................B. M. C., 1893
Dr. William F. Weinkauf, Corunna, Mich. .................U. of M., 1921
Dr. David M. Shack, Newark, N. J. .........................B. M. C., 1910
STUDENTS' ROTATING FUND

For the benefit of those who failed to read the appeal for subscriptions to this fund, published in the July issue of The Bulletin, it may not be amiss to briefly outline its purpose. The Executive Committee of this Association, feeling that some means of lending quick aid to deserving students, in unforeseen emergencies should be available, decided to create a Board of Trustees, empowered to raise and administer a fund for this purpose, to be called the Students' Rotating Fund. This money is to be available to high grade men only, presenting a reason for assistance satisfactory to the Board of Trustees. It will be loaned with a note as security, bearing 6 per cent interest, endorsed by some person of standing.

To aid the trustees, the management of the Book Store of the Alumni Association, donated five hundred dollars and the Executive Committee of this Association one hundred dollars, to form a nucleus around which to build. Needless to say six hundred dollars is not adequate to carry on this work, therefore, we are asking our graduates to subscribe in any amount they may feel able, toward the fruition of this very worthwhile activity.

So far the Rotating Fund has made it possible for four or five very desirable men to continue their studies, two of them seniors, with three years of highly satisfactory work to their credit.

Join the men listed below by sending in your subscription to Dr. Williams S. Love, chairman, Rotating Fund Trustees, Medical Alumni Association, University of Maryland, Lombard and Greene Streets, Baltimore, Maryland.

Subscriptions have been received from the following:

Dr. William S. Love, Baltimore, Md. .................................................. $5.00
Dr. Cyrus F. Horine, Baltimore, Md. .................................................. 5.00
Dr. Howard M. Bubert, Baltimore, Md. .............................................. 5.00
Dr. J. M. H. Rowland, Baltimore, Md. .............................................. 5.00
Dr. Compton Riely, Baltimore, Md. ................................................. 5.00
Dr. C. C. Habliston, Baltimore, Md. .................................................. 5.00
Dr. Louis H. Douglass, Baltimore, Md. .............................................. 5.00
Dr. Frank Lynn, Baltimore, Md. ....................................................... 10.00
Dr. C. Reid Edwards, Baltimore, Md. ................................................ 5.00
UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

Baltimore, Maryland

Report submitted by Dr. N. P. Colwell, Secretary of the Council on Medical Education and Hospitals of the American Medical Association, following an inspection of the Medical School this spring.

Inspected Tuesday and Wednesday, April 10 and 11, 1928, in company with Dr. E. P. Lyon, Dean of the University of Minnesota Medical School.

A careful inquiry was made in regard to this institution and a careful inspection was made of the various teaching departments, including both the laboratory and clinical divisions of the school. The inspectors also conferred with Dr. Raymond A. Pearson, who is the President and Executive Officer of the University of Maryland.

As a result of these investigations a report has been prepared as follows:

This medical school in its present state, is the result of a merger of three different medical schools. In 1913 the Baltimore Medical College, which had been organized in 1881, and which had been in existence for 32 years, was absorbed by the University of Maryland School of Medicine. Two years later, in 1915, the College of Physicians and Surgeons of Baltimore, which had been established in 1872 and which had been in existence for 43 years, combined its resources with those of the University of Maryland School of Medicine. The present institution, therefore, represents the combined resources of three large institutions—the Baltimore Medical College, the College of Physicians and Surgeons of Baltimore and the University of Maryland School of Medicine, very properly retaining the name of the last mentioned, which was originally chartered in 1807, being, in fact, the fifth oldest medical school in the United States.

Buildings and Grounds

1.

The original building of the University of Maryland, which was erected in 1812, is still standing, is in excellent repair and is the oldest structure in America which is still devoted to medical teaching.
Heretofore this medical school has had laboratories in two separate groups of buildings, one at Lombard and Greene Streets, which includes both medical school and hospital buildings, and the other at Calvert and Saratoga Streets, in the buildings of the Mercy Hospital.

During recent years it has appeared better that all laboratory instruction be concentrated in the laboratory buildings at Lombard and Greene Streets, and this has permitted the Mercy Hospital to develop additional wards for patients, whereby the teaching facilities in that hospital have also been materially increased.

**Entrance Requirements**

2.

The medical school is adhering rigidly to the requirement of two years of work in approved colleges of arts and sciences, a requirement which is administered with reasonable rigidity and in a manner beyond criticism. An excellent system of records is being kept, not only in regard to the students' credentials of preliminary qualification, but also in regard to scholastic grades showing the work completed by all students in the medical school. These records also are kept in a routinely excellent manner. In conjunction with well established rules regarding promotion and graduation, it is believed the methods employed give reasonable assurance that before securing medical degrees the students have shown a reasonable degree of scholarship and have duly earned the right of graduation.

**Faculty**

3.

(a) *Laboratory Teachers.* The medical school has been fortunate in bringing together a group of full-time laboratory teachers in each of the several laboratory divisions, and, although not as highly financed as some other medical schools, has provided them to a fair degree with the essential laboratory apparatus and assistants.

In this division of the work the chief need is provision for increased space, whereby more convenient suites of rooms may be provided and more provision of assistants, animals and apparatus, whereby original research may also be carried on. Such an arrangement would be of great advantage, not only because the teachers will be
more satisfied with their opportunities, but also the standing of the medical school will be enhanced as a research center. There is no one thing that redounds more to the credit of a teaching institution than the evidences of efficient and productive research that is going on within its walls.

(b) Hospitals and Dispensaries. The medical school is fortunate in having close at hand the University Hospital, which is not only the property of the University of Maryland, but also is the oldest institution in the State for the care of the sick, having been opened in 1823. This hospital now has approximately 300 beds, devoted to the care of all varieties of sick and injured people, the first purpose of which is to provide opportunities whereby medical students may secure instruction and experience by the actual examination and care of patients at the bedside. The out-patient service of this hospital is also large and elaborate, has well-arranged but crowded quarters, and provides an abundance of clinical material in addition to the hospital patients.

Besides the University Hospital the medical school has an abundance of adjunct teaching material at the Mercy Hospital, located at Calvert and Saratoga Streets, and at the Bay View Hospital, a few miles distant.

Clinical Instruction

4.

In the hospitals named, the students are securing an excellent routine of clinical instruction in connection with the various types of diseases, including medicine, surgery, pediatrics, maternity, work and basic instruction in the various specialties. Such instruction is being furnished in accordance with the latest and best methods, including section wards, clinical pathological conferences, clinical clerkships, etc. At the present time, indeed, the student in his third and fourth year of medicine, under supervision, secures opportunities for the examination and treatment of larger numbers of patients than in former years he could obtain in the first five or ten years of practice.

This training leads naturally to the fifth year of intern training, which immediately follows graduation and in which he is enabled to further round out this experience in the care and examination of patients in connection with which he assumes a larger responsibility.
It is believed, indeed, that this school is in position to furnish its students with a well-rounded and complete course of instruction in the care of sick and injured people.

**Evidences of Recent Progress**

5.

Since the last inspection of this medical school, in 1919, not only has the laboratory space been considerably increased and a better correlation established between the teaching of the various laboratory departments, but also a better supervision over all teaching has been provided. In the hospital particularly, the routine work is not only conducted more systematically, but in the out-patient department as well. It is evident that in the hospital, at present, all students are provided with opportunities for the examination and treatment of patients at the bedside, where in former time only a few students were granted those privileges.

**Improvements in Prospect**

6.

Some relief to the present cramped quarters of the medical school is now assured. A new building for the dental department of the University is to be erected across the street from the building it now occupies and the latter will be released and remodeled for the use of the medical department.

**Present Needs**

7.

Before this medical school will be in position to make further advancements there are several vital needs to be provided which have already been recognized by the Dean and his co-workers. These are:

(a) *A New Residence Hall for Nurses.* The nurses at present are being housed in rather unsatisfactory quarters in one or more old buildings, and a new residence hall is very badly needed. This will not only permit the securing of a larger supply of student nurses, but also to have their health better safeguarded and enable
them to complete their courses of training in a more satisfactory manner.

(b)  *A New Maternity Hospital.* A new maternity hospital also is badly needed, not only to provide for the increasing maternity material that is available, but also to enable the school to develop more satisfactory and efficient instruction in maternity work. Excellent instruction is already being given in spite of the seriously cramped and inadequate quarters.

(c)  *A New Hospital Building.* It is only a matter of a few years, even if the time has not already arrived, when the University should have an enlarged and more modern hospital building, either on the site of the present University Hospital, or another nearby site. The University is already providing to an astonishing degree excellent clinical instruction in spite of numerous handicaps, and richly deserves greatly increased and improved quarters.

**University Developments**

8.

With the increased finances great developments educationally can be made by the University in connection with its several professional departments of medicine, dentistry, pharmacy and law, which at present are being conducted more or less as separate and independent institutions. Through the development of a larger teaching center it appears that instruction could not only be much improved, but could be given more economically if related subjects in all departments could be unified under single departments. Is there any reason, for example, why the anatomy taught in the medical and dental departments should not be reorganized under one staff, and in like manner the work of pathology in medicine and dentistry? The courses in chemistry in the departments of medicine, dentistry and pharmacy, might also be administered under a single department of chemistry. Along the lines of such correlation and construction lies a great opportunity for developments in this institution.
DEATHS

Dr. James H. Wilson, Fowblesburg, Md.; Class of 1868; aged 83; died June 27, 1928, of senility.

Dr. Leander Peter Fernandez, Battle Creek, Mich.; P. & S., Class of 1896; aged 57; died, March 24, 1928, of myocarditis.

Dr. Frank James, Deersville, Ohio; P. & S., Class of 1886; aged 72; died, June 18, 1928, of cerebral hemorrhage.

Dr. Charles Lee Summers, Baltimore, Md., formerly of Winston-Salem, N. C.; professor of pediatrics in the University of Maryland, Class of 1887; aged 64; died, July 15, 1928, of an abdominal malignancy. He received his literary education at Bingham Military Academy and Davidson College of North Carolina. After graduating in medicine he took post-graduate work at Berlin, Vienna and Johns Hopkins. Dr. Neale Summers Stirewalt, of Kannapolis, N. C., Class of 1909, is a nephew.

Dr. Henry Clay Carson, Osaka, Va.; P. & S., Class of 1892; aged 57; was killed by a train, June 18, 1928.

Dr. Luther Barton Wilson, Baltimore, Md.; Class of 1877; aged 71; died, June 4, 1928, of heart disease.

Dr. Maurice James Cross, Grand Rapids, Mich.; B. M. C., Class of 1907; served during the World War; aged 50; died, June 30, 1928, of heart disease.

Dr. Arthur Louis La Ferriere, Chicopee Falls, Mass.; B. M. C., Class of 1902; aged 52; died, February 17, 1928, of acute nephritis.

Dr. H. Young Westbrook, Baltimore, Md.; P. & S., Class of 1890; aged 65; died, August 4, 1928, after a lingering illness.

Dr. William Ervin Sparkman, Georgetown, S. C.; Class of 1892; aged 70; died, June 6, 1928, of myocarditis.

Dr. William Underwood Charlton, Wheeling, W. Va.; Class of 1908; aged 44; died, July 14, 1928, of heart disease.

Dr. Charles C. Christian, Urbanna, Va.; Class of 1886; aged 67; died, June 7, 1928, of nephritis and uremia.

Dr. Samuel W. Welch, Montgomery, Ala.; P. & S., Class of 1893; B. S., Howard College, Marion, Ala.; State Health Officer of Alabama since 1917; born at Alpine, Ala., February 14, 1861; son of Dr. William A. Welch; member House of Delegates, American Medical Association, 1917-1918, 1920-1921, 1923 to death; aged 67; died, August 21, 1928.

Dr. Barnett McMullin, North Devon, New Brunswick; B. M. C., Class of 1892; University of Bishop College, Faculty of Medicine, Montreal, Quebec, Class of 1893; aged 64; died, January 10, 1928, of cerebral hemorrhage.

Dr. Josephus A. Wright, Sharptown, Md.; Class of 1881; aged 73; died, April 15, 1928.

Dr. W. R. Allen, La Grange, Ga.; Class of 1882; aged 67; died, July 9, 1928, of carcinoma of the larynx.

Dr. Gilbert Lawrence Clark, Atlanta, Ga.; P. & S., Class of 1880; aged 71; died, August 14, 1928, of pernicious anemia.

Dr. John H. Moe, Sturgis, Mich.; P. & S., Class of 1881; aged 70; died, August 13, 1928, of angina pectoris.

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DEATHS

Dr. John Turner, Baltimore, Md.; Class of 1892; aged 55; was killed in an automobile accident, August 3, 1928.

Dr. John Clinton Stansbury, Baltimore, Md.; Class of 1912; aged 39; died August 30, 1928, of diabetes mellitus.

Dr. Thomas Somerset Owen—Following an illness of several weeks duration, Dr. Thomas Somerset Owen, Class of 1892, died at his home in La Plata, Md., on Wednesday morning, February 23, 1928. Dr. Owen's health began to fail more than a year ago, and several months ago he underwent an operation for cirrhosis of the liver. After this operation he regained his health sufficiently to resume his practice, but became ill early this winter and underwent several weeks' treatment at Providence Hospital. Since his return to his home here a few weeks ago his condition grew gradually worse and the end was not unexpected.

The deceased was a son of the late Thomas Turner Owen and Mary R. O. Owen, who survives him, and was born at Port Tobacco, March 19, 1870. He received his early education in the public schools of this county and later attended Rock Hill College, Ellicott City, and St. John's College of Washington, D. C. He studied medicine at the University of Maryland, receiving his medical degree from that institution in 1892. He entered upon the practice of his profession at Port Tobacco immediately upon his graduation and thereafter practiced for a year at Mason Springs, this county. Removing to La Plata in the early days of this town, he had practiced successfully in this vicinity continuously up to the time of his fatal illness. Dr. Owen was for several years health officer for this county, and from 1893 to 1898 was proprietor of a drug store in La Plata. He was married in 1892 to Mattie Edith Farrall and is survived by his widow and six children, as follows: Carmen M., Gustav, Somerset A., Mathilda W., John C. and M. Eleanor Owen.

The deceased was a man of exemplary character, and ranked high in the medical profession. His practice was extensive and his attention thereto was characterized by faithful and diligent effort. Possessed of a modest, retiring disposition, Dr. Owen found his greatest solace and enjoyment within the sphere of his home life. He was an ideal husband and father and although ever ready to co-operate in every public spirited movement, it was the companionship of his loved ones and closest friends that commanded his attention during the leisure hours of his busy, active life. His death is a distinct loss to the community and to the medical profession of this section of the State, and to his bereaved family we extend our profound sympathy.

His funeral will take place this morning with solemn requiem mass at Sacred Heart Church at 10 o'clock, the Rev. Father C. J. Hennessey, S. J., celebrant. The pallbearers are Messrs. Brandt Early, Frank Vacchiano, Warren M. Albrightain, A. Jack Clark, Reginald A. Farrall and John F. Mudd, and interment will be in St. Thomas' Cemetery, Chapel Point.—Editorial, Times-Crescent, La Plata, Md.

Dr. Moses Savage, Baltimore, Md.; P. & S., 1895; aged 57; died, June 25, 1928, of carcinoma.
Dr. Peter H. Stultz, Supply, Oklahoma; P. & S., class of 1895; aged 57; died, August 23, 1928, of heart disease.

Dr. Walter Hollis Everhart, Columbia, South Carolina; class of 1903; aged 50; died, August 12, 1928, of angina pectoris.

Dr. John Aubrey Crewitt, Newtown, Pennsylvania; P. & S., class of 1876; aged 74; died, August 27, 1928, of cerebral hemorrhage.

Dr. James Henry Preston, Hampstead, Maryland; Washington University School of Medicine, class of 1880; aged 78; died, August 23, 1928, of myocarditis.

Dr. David C. Coplin, Boothsville, West Virginia; class of 1877 aged 83; died, August 2, 1928.

Dr. George W. Gillespie, Rowlandsville, Maryland, class of 1880; aged 87; died, June 3, 1928.

Dr. Albert C. Thomas, Foxboro, Massachusetts; B. M. C, class of 1898; medical superintendent Foxboro State Hospital; formerly superintendent New Haven Hospital; aged 53; died recently.

Dr. E. J. Buchanan, Lexington, North Carolina; class of 1892; aged 64; died August 31 1928, of cerebral hemorrhage.

Dr. William Prettyman Miller, Wilmington, Delaware; P. & S., class of 1887; aged 61; died, July 28, 1928, of heart disease.

Dr. William L. Burke, Baltimore, Maryland; B. M. C, class of 1902; died, October 1, 1928.

Dr. Maurice Lazenby, Baltimore, Maryland, instructor in Obstetrics at the University of Maryland, a graduate of the Johns Hopkins University Medical School, class of 1903; aged 51; died, September 18, 1928, of heart disease.

DR. JOHN BEALE DAVIDGE,
One of the Founders of the University of Maryland
UNIVERSITY OF MARYLAND, SCHOOL OF MEDICINE
BANQUET

SOUTHERN MEDICAL ASSOCIATION MEETING

Tuesday Evening, November 13, 1928, 7 p. m.
Subscription Price, $3.50 per plate. Send remittance to Dr. Paul F. Wiest, New Medical Bldg., Asheville, N. C.
THE RECOGNITION OF INTERCURRENT DISEASE IN TUBERCULOUS PATIENTS

By Charles C. Habliston, M. D.
Baltimore, Md.

Twice recently I have been called inconsistent because I advised sanatorium treatment in one case of pulmonary tuberculosis and not in another patient with practically identical physical and X-ray findings. It is not my purpose in this paper to defend myself against the charge of inconsistency, but to call attention to the fact that the demonstration of a tuberculous lesion is not, in itself, sufficient indication for treatment. I feel certain that my critics would not institute digitalis therapy for a valvular cardiac disease on the basis of the physical findings alone; yet it would appear that the discovery of a tuberculous process by the clinician is only too generally accepted by him as sufficiently adequate grounds upon which to explain all of the physical problems of his patient. The number of individuals who have been hurried into sanatorium existence on too little evidence, with the consequent economic and social loss, cannot be estimated. The trend of the day is overwhelmingly on the side of early diagnosis. While I am heartily in accord with this teaching, I nevertheless feel that a diagnosis of tuberculosis does not mark the end of the clinician’s responsibility.
Something more than a diagnosis is necessary. The demonstration of a tuberculous lesion is only one phase of the problem, the anatomical side. It is a fact that cannot be disputed. There is another side, the clinical: Are the symptoms complained of by the patient an expression of the tubercular infection? The patient has tuberculosis, but is he suffering from it? This inquiry naturally suggests the question of tuberculous activity. This is the all important side of the investigation, because the verdict is often erroneous regardless of whether it be rendered for or against the presence of active tuberculosis.

Once the diagnosis of tuberculosis is made, there appears a general tendency to ascribe all that the patient complains of at the time, and at all future times, to his tuberculous focus. As will be illustrated later, this is no trivial mistake, in that individuals falsely labelled “actively tuberculous” may suffer much harm from want of proper treatment. On the other hand just as grievous injustice, if not greater, may follow failure to recognize that his symptoms are those of an active tuberculosis. We are all too familiar with the unfortunate patient who has been lured into a sense of false security by a satisfying, if not satisfactory, explanation of his tuberculous symptoms on some trivial grounds, only to present himself for treatment ultimately, with his disease hopelessly far advanced. Owing to these two divergent and harmful possibilities, the tuberculous patient presents problems as difficult of solution as are met with in any field of internal medicine. He therefore deserves a thorough investigation, and in this study the attention should not be directed solely to some particular pulmonary area.

Physical signs reveal only that a tuberculous lesion exists, its extent and its type. The information gained therefrom is of necessity limited by our ability to translate signs into terms of pathology. In this connection, it must be borne in mind, that no tuberculous lesion presents signs which cannot be, and are not, duplicated by some non-tuberculous process. It is the progress of events, and the persistence and the localization of the physical signs which stamp them as being of tuberculous origin. A hard lesson to learn is that physical signs in themselves do not denote activity. Before classifying them as such a progressive change in their extent and character must be determined as evidence of progressive pathological change. A roentgen diagnosis of active tuberculosis is also open
to question, when the radiographer knows no more, and has seen no more of the patient than a single film of the pulmonary fields. However, as a check on the pathological process nothing is more helpful than comparative X-ray examinations made at intervals. This is true whether the clinical result coincides with the X-ray findings or not.

The history is of the utmost aid in our diagnostic efforts. Not merely must the symptoms elicited at the time of the examination be carefully weighed, but particularly the preceding symptomatic events. When we are considering the presence or absence of activity in a tuberculous focus, symptoms are of supreme importance. Apropos of tuberculous activity, I cannot do better than quote the admirable statement of the situation made recently by Krause. This authority says, "All that is necessary is the determination of three factors: These are the anatomical manifestations of tuberculous infection, the presence of symptoms, and the assurance that the symptoms are due to the infection." The italics are mine and are made for the purpose of stressing the origin of symptoms.

In a former article, based upon the study of a series of non-tuberculous cases admitted to the wards of the Baltimore City Hospitals as tuberculous, it was pointed out that it was unwise to make a diagnosis of tuberculosis if demonstrable evidence of a disease, other than tuberculosis, be present, upon which the patient's symptoms and the physical findings could be fully and satisfactorily explained. It would also appear equally as foolish to attribute to a demonstrable anatomical tuberculous focus symptoms which are more fully and more satisfactorily explained by some definitely demonstrable concomitant disease.

Any individual may present the physical findings of more than one pathological process at the same time. A survey of the patients admitted into the tuberculosis wards of the Baltimore City Hospitals with definite anatomical manifestations of tuberculous infection, but actually suffering from some disease of non-tuberculous origin, would prove interesting. The list would include—acute respiratory infections; syphilis; diabetes; chronic nephritis; sporotrichosis; pulmonary abscess; pneumococcic empyema; bronchiectasis; pernicious anemia; gastric ulcer; cerebro-spinal syphilis; typhoid fever; myocardial insufficiency; pyelitis; malignancies; aneurism, etc., with the concomitant tuberculosis serving only to cloud the issue.
The determining of the disease with which the patient actually suffers naturally has an important bearing on the treatment. After the lapse of fourteen years, I can still recall with chagrin the occurrence of a profuse intestinal hemorrhage in a patient whom I had put to bed because of a definitely demonstrable tuberculosis associated with high fever. Immediate culture of the stool revealed typhoid bacilli, and an apparently very active case of tuberculosis became a case of typhoid in a tuberculous individual. I wish to cite two other cases illustrative of the need of determining the source of symptoms, and how a diagnosis of tuberculosis once made influences the opinion regarding the cause of future symptoms.

A. C., white female, age 48 years, has been admitted to the tuberculosis wards of the Baltimore City Hospitals six times. She was admitted first in January, 1916, with a diagnosis of moderately advanced pulmonary tuberculosis. Her five subsequent admissions were apparently because of the first diagnosis, as no evidence of active tuberculosis was found on hospital observation. Her second admission was in December, 1916. She was confined to bed; emaciated and very weak, but with a continuously normal temperature. Her speech was disturbed, and a marked tremor of the fingers was present. Examination of the chest revealed a demonstrable fibrosis of the apices. The remainder of the examination was essentially negative, except for markedly increased reflexes. The sputum was negative for tubercle bacilli. The hospital was not equipped with X-ray apparatus at the time. To attribute her extremely poor physical condition to a tuberculosis of such limited extent and type, in the absence of definite pulmonary complaints seemed beyond reason. Both the blood and the spinal fluid Wassermann were 100 per cent positive. Intensive intravenous treatment with salvarsan followed by immediate lumbar puncture was instituted. Within the next few months, the patient gained forty pounds, was symptomatically much improved, and was employed in the hospital as a scrub woman. Four subsequent admissions have occurred, in 1920, 1921, 1926 and 1928. When admitted July 11, 1921, her neurological symptoms appeared aggravated, and loss of weight had occurred. Intensive treatment with arsenicals was again given with marked improvement. On her last admission, April, 1928, X-ray revealed fibrosis of both upper lobes. The blood-Wassermann was negative.

This patient undoubtedly has an anatomical tuberculosis, but her illness and disability are certainly due to a concomitant cerebro-spinal syphilis. However, the fact that her history reveals that she was once diagnosed as being clinically tuberculous, and that she was treated in an institution for tuberculosis, admission to a sanatorium or hospital for tuberculosis was again advised as soon as symptoms of any type, or an evident disability occurred.
J. W., white male, age 46 years, a painter by occupation, has been admitted to the hospital on seven occasions, apparently because of a diagnosis of “incipient tuberculosis” made in 1913. From March, 1913, to October, 1916, he was admitted six times. On the last admission, October, 1916, he was discharged with a diagnosis of chronic pharyngitis, and no tuberculosis. The effect of this definite statement is reflected in the fact that his frequent admissions to the hospital ceased, and no subsequent admission occurred until after the lapse of twelve years. In September, 1928, he was again admitted, with a statement that he had “advanced tuberculosis, all lobes, active.” He complained of fainting, a productive cough, and recent scant hemoptysis. Dyspnœa and cardiac palpitation had been noted on exertion, and a polyuria had been present for some months. Examination revealed the lungs clear with the exception of the bases posteriorly, where many moist râles were present, unaccompanied by change in percussion note or breath sounds. The heart was definitely enlarged. No murmurs were present. The pulse averaged 100 per minute, blood-pressure, 210/140; abdomen and extremities negative; blood-Wassermann negative. Urinalysis revealed much albumen, and many granular casts. X-ray examination of the chest showed clouding at the left apex. The roentgen diagnosis was “old tuberculosis.” The clinical diagnosis was cardio-vascular-renal disease. He died twelve days later in typical uremia.

Autopsy revealed a small calcified area at the right apex; lungs otherwise clear, with the exception of edema at the bases. The kidneys showed typical changes of chronic nephritis.

This case illustrates the fact that when a diagnosis of tuberculosis is once made, all future complaints are apt to be looked upon as arising from the tuberculous focus. It is possible, considering the calcified area in the right lung, that incipient tuberculosis did exist on the first five admissions. It is significant, however, that as soon as the statement was made that no tuberculosis was present, his admissions, which had averaged two yearly for three years, immediately ceased, and no subsequent admission occurred for a period of twelve years. Yet, as soon as definite illness arises, and moist râles (edema) appear in the lungs the old history of a diagnosis of tuberculosis dominates the situation, and the patient is again sent to a tuberculosis hospital. The question of improper hospitalization of the patient, the wasted effort and cost is further emphasized by the fact that 155 calls were made on this patient by the visiting nurses because of the diagnosis of tuberculosis.

In view of the foregoing, a tremendous responsibility rests upon us to carefully and thoroughly investigate the source of symptoms in every patient coming under our observation with the anatomical evidence of a tuberculous lesion, so that serious and perhaps irre-
parable harm may not come to the patient through lack of adequate study.

References


2 Habliston, Charles C.—Mistakes in Diagnosis, as Seen in a Hospital for Far-Advanced Pulmonary Tuberculosis. American Journal of the Medical Sciences, vol. clxxii; No. 3; September, 1926.
DIET IN ALLERGIC DISEASES*

By Howard M. Bubert, M. D.
Baltimore, Md.

Definition of Allergy

For our purposes, allergy is the state or property possessed by certain tissues, in certain human beings, of reacting to contact with specific substances which are innocuous to normal people.

What Happens

There is a dilatation of the blood vessels in the area affected resulting in an outpouring of fluids with swelling.

Etiological Agents

The substances concerned are not unusual, rare or inherently harmful in the sense that a poison is harmful. To the contrary—most of those giving these reactions are part of our daily environment or dietary such as wheat, milk or eggs, cotton clothing or animal hair.

Clinical States Produced

The diseases or clinical states thought or known to belong to this category are seemingly quite dissimilar. Closer scrutiny however, quickly convinces one that secondary factors account for the multiplicity of ways in which allergy may be manifested and that basically, there is a unity of causation that is quite clear and logical. Dissimilar manifestation of the same underlying pathological state, resulting in doubts upon the part of skeptics as to their singleness of origin, is not new. Before the tubercle bacillus was discovered, there was a tremendous amount of discussion for and against the idea of a common causation for the protean pictures found in the disease, tuberculosis.

*From the Protein Clinic, Department of Medicine, University of Maryland.
†Read before the Baltimore Dietetic Association, November 5th, 1928.

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Naturally, sensitivity upon the part of such unrelated tissues and organs as the upper layers of the skin, intestinal mucosa, the subcutaneous tissues, the conjunctiva, the bronchial muscles and mucosa or the mucous membrane of the nose will give widely varying clinical syndromes because of differences in function, location, structure, innervation and other factors.

To illustrate. The bronchae are constantly narrowing members of a common tree of air carrying tubes, hence, when swelling of their mucosa occurs, together with spasm of the encircling muscles, the effect will be to render more difficult the passage of air through their lumen, with the production of the clinical disease or state, asthma, meaning literally to pant. Because there are no nerves of sensation in these structures, no discomfort is experienced upon the part of the patient, other than that attendant upon difficulty in respiration.

When however, the superficial layers of the skin are involved, as in urticaria or hives, or the mucous membranes of the eyes in hay-fever, both of which tissues are well supplied with sensory nerves resulting in a high degree of susceptibility to irritation of any kind, the patient complains bitterly of exquisite itching and burning upon contact with the offending agents. It is this subjective discomfort which causes them to seek relief, rather than functional disability, as in the previous condition cited.

The diseases commonly thought to be allergic in origin are asthma, hay-fever, certain skin eruptions, angio-neurotic oedema, hives, poison oak, certain cases of migraine, certain cases of epilepsy, infantile convulsions and many other clinical states.

**Contact and General Reactions**

There are two types of reactions, those due to actual contact between the tissues affected and the offending substances, and those due to agents carried to the area involved by the blood stream. Food reactions belong in both classes, but it is the latter type of effect in which we are interested here.

**Requirements of A Normal Diet**

The problem of an adequate, normal diet is one of supplying the several elements required by the body, carbohydrates, fats, proteins, salts, water, vitamins, in such form as to be palatable and digestible, to supply adequate bulk and to furnish sufficient fuel for the bodily needs.
Diet in Certain Disease States

In disease all of the above requirements must be met in the face however, of some handicap which varies with the pathological condition present.

The Handicap in Allergic Conditions

Our problem here is two-fold, in the event skin tests do not reveal the offending food stuffs, namely, diagnosis as well as treatment.

In these conditions, we are not dealing with the inability of the body to metabolize certain constituents of foods such as carbohydrates, nor with a deficiency of certain elements in the diet previously received by the patient such as water soluble vitamin C in scurvy, nor with the need of abnormal amounts of certain elements such as liver extract in pernicious anemia, nor with the intolerance of the patient with a spastic gut to irritating foods as whole grains and greens.

In allergy we have a tissue exquisitely sensitive to certain foods because of the characteristic make-up of that particular food. Change that food ever so little, as by cooking, and it may become innocuous. Give all the elements entering into its composition, but derived from other sources, and it is without deleterious effect.

Superficial consideration of these criteria for satisfactory diet manipulation in allergic states may give the impression that the problem is a simple one. To the contrary. What could be more formidable than attempting to feed an infant about six months of age, presenting the clinical picture of asthma, severe eczema over the entire body with upset stomach and diarrhoea, and having been on a single food since birth, namely cow’s milk. This clinical problem was presented to me and I suggested elimination of milk. This advice is of course difficult, and many times impossible, of achievement in young infants.

Diet in Diagnosis and Treatment

The difficulty of manipulating diet in the diagnosis of allergic states varies with the age of the patient because of several factors. The younger infant is by far the simplest to handle, in so far as making up one’s mind as to the possible offenders, because of the very few items entering into its dietary and because it is unable to obtain forbidden foods surreptitiously. The absolute proof of one’s initial surmises however, is difficult for one of the same reasons, that is,
limited ability for digesting and assimilating substitute foodstuffs, used in obtaining confirmatory information.

As the patient becomes older, the disadvantage mentioned ceases to be a handicap but, simultaneously, the advantage of simple diet disappears as a result of the same factor, namely increased capacity for handling a complex diet.

In treatment this is reversed; the older the patient the easier he is to feed because of the vast number of items at our disposal for substitution purposes.

**Diet in Diagnosis**

My plan is quite simple as follows:

1. Careful questioning as to the time and character of attacks together with the patient's food habits. This may elicit very valuable information. Suppose a patient is sensitive to an item of food which appears upon the family board at regular times; this may answer our entire problem.

2. Perhaps the symptoms are of a seasonal nature; I then use a diet with all seasonal foods eliminated.

3. Do the symptoms appear after meals at any particular house—if so, is there any attempt upon the part of the cook to pander to certain preferences of the patient.

4. Are the symptoms daily in appearance. If so, it is obvious one of a few, constantly eaten foods must be involved. I have a diet from which eggs, milk, wheat and white potatoes are eliminated; the four foods most commonly taken daily, in considerable quantities which are most frequently concerned in allergic reactions. As an example, and to show how adequate for the patient's temporary needs such a diet may be, I am appending it in detail to this article.

The value of this diet has many times been proven to me; just recently, a colored man with severe hives and angioneurotic oedema, was relieved almost entirely of his symptoms by strict adherence to it.

In the event such procedures as those suggested above fail, I then put my patients upon a diet of eight or ten items, eliminating particularly wheat, milk, pork, cereals, berries, citrus fruits and shell fish because they are prone to cause allergic reactions. Twice a week I add one item of food which is eaten in large quantities for three days, and if no symptoms result, it is allowed to enter the patient's diet as desired and another item added. Symptoms, needless to say, incriminate a food immediately, and it must prove its innocence by
repeated tests, before being allowed to permanently enter the patient's list of law abiding foods.

Diet in Treatment

The goal here is simply that of diet in any disease; an adequate, balanced ration in face of the specific handicap present.

Its achievement, however, may be far from simple. Feed and render happy a patient sensitive to wheat, or worse wheat and eggs or wheat and milk, and you have indeed succeeded in no mean undertaking.

Remember one thing. Elimination, in diagnosis of the protein case, means total and complete elimination. No temporizing is possible if results of value are to be obtained.

Prognosis

I am quite aware that everyone, except the unusual individual interested in pure science, is first concerned in prognosis. No matter how logical, no matter how interesting medical facts, to satisfy the average audience must, like money, purchase something we all desire and that, in the last analysis, is alleviation of disagreeable symptoms. In order to show that allergic procedures do this in the truest sense, and quite as well if not better than most of the better known, but no less dramatic medical measures, I shall in conclusion, cite a case in some detail, showing how wrong the conventional methods may be and how worth while a very simple alteration of diet may prove.

The patient, a child five years and 8 months of age, fed from birth upon cow's milk, began almost immediately after delivery with a seemingly causeless, projectile vomiting which was unaccompanied by nausea or other gastrointestinal symptoms. The original pediatrician manipulated the amounts and concentration of the milk, but never attempted to use another form or to omit it from the diet.

After a few months, in which the child failed to gain, another pediatrician was engaged by the parents and upon his supplanting the fresh cow's milk by a well-known brand of evaporated milk, immediate improvement occurred.

At about 13 months, fresh cow's milk, together with several of the common vegetables and cereals were added to the diet with the omission of the evaporated milk. After this, with varying frequency, the child would regurgitate his meals, while being fed the solid constituents of his diet, seemingly without reason. The mother felt it was simply an expression of dislike for certain of his foods.
This condition continued, worse at times and better at others, with episodes of illness common to early childhood, occurring at different times.

From the time he was first able to speak, he would occasionally place his hand upon his abdomen and exclaim "Oh, my stomach." This was especially liable to happen while riding in a machine to which it was erroneously attributed. It was, of course, impossible for so young a child to give an adequate or reliable description of his symptoms.

For the last two years, beginning at intervals of about three or four months, but becoming more frequent as time went on, the child had severe gastro-intestinal upsets with extreme abdominal pain, vomiting and fever. About one year ago, during one of these spells, the pediatrician suggested the possibility of appendicitis.

Early in August, this year, while eating his dinner in the middle of the day, he expressed a dislike for peas, which were included in his meal. Because the mother still felt it was simply his dislike for peas causing his protestations, she insisted upon his eating them. The result was, they simply rolled out of his mouth, together with the entire luncheon.

Immediately he began with symptoms of nausea, abdominal pain and fever, which became more severe for twenty-four to thirty-six hours and then began to fade. A very eminent surgeon, called in consultation, concurred in the diagnosis of appendicitis, suggesting a gastro-intestinal series of x-rays and a blood count, both of which were negative.

Two weeks later, following a meal including ice cream and creamed tomato soup, the child retired readily, but was awakened at eleven o'clock by excruciating, cramp-like abdominal pains, simulating in its severity, the striking picture of intestinal obstruction. This continued for several hours until a hypodermic of morphia was administered.

Upon awakening about 8 A. M., he seemed comfortable.

That day he felt perfectly well and, while playing, came to his father complaining of a mosquito bite that itched him intensely. Upon examination this was seen to be a hive.

His milk consumption, which had always been kept high by pediatricians because of his dislike for other foods, was abruptly and drastically curtailed with an almost magical disappearance of symptoms and with an increase in appetite truly remarkable.

About one week later, upon coming in from play, he was given a whole glass of milk by a new maid. Within a few seconds, severe cramps seized him and it looked as if another attack might supervene. Fortunately, this did not occur. Milk was immediately eliminated from his diet, except for that used in cooking and a few spoonful upon his cereal, and no trouble has since been experienced.

Without any milk as a beverage, six pounds, lost during the last two attacks, have been regained together with a net gain of two more pounds over and above his pre-illness weight.

It might be well to mention before closing the fact that for several years the patient's breath has been almost continuously offensive and the pediatrician suggested tonsillectomy for relief. Also I desire to stress his previous lack
of appetite which was so extreme that never had he asked for a second helping of any food and no meal was eaten without constant urging and threats. The first of these has entirely disappeared. As to the second, his appetite now is veritably ravenous, large meals being consumed and food being requested between meals and before breakfast. This last is the most extraordinary phenomenon of the entire case and is so marked, as to be almost unbelievable.

Conclusion

The symptoms in this case were quite as severe as those of serious, organic intestinal disease, and except for the exceptionally fine surgeon consulted, I feel sure laparotomy would have been performed. By simply eliminating milk as a beverage the child's entire outlook has been changed.

Can any branch of medicine, offer more, to any type of patient, for so slight, and simple, a therapeutic procedure.

POTATO, WHEAT, MILK AND EGG FREE DIET

Cereal—
Puffed Rice,
Cornflakes, may be eaten dry if desired.
Cornmeal Mush, may be eaten with butter.
Oatmeal Mush, may be eaten with butter and sugar.
Hominy or Hominy-grits, may be eaten with butter.
(Cornmeal Mush is made like any other cereal.)

Fruits—
Fresh or Canned. No restrictions.

Meats—
Any desired, cooked plain, cooked with any vegetable except potato.
Cornstarch may be used to thicken gravy.

Fish—
Any desired, use cornmeal instead of flour or cracker dust. Shrimp, Lobster, Crabs and Oysters may be used plain or with cream-sauce made with cornstarch, water and butter or as salads.

Vegetables—
Any desired except potato; cooked plain, seasoned with butter or cream-sauce made with water, butter and cornstarch. Fresh or canned vegetables may be used.

Bread—
Ry-Crisp only.

Desserts—
Fruits and fruit juices.
Fruit Juice Ices and Sherbets. (Use Gelatine or Agar for foundation.)
Rice-Pudding (cooked plain, sweeten, add dates or raisins; bake if desired).
Tapioca, cook plain, sweeten, pour over fruit and bake.
(Apple or Peach.)

Soups—
Vegetable (no potato), with meat broth.
Cream Soups—cornstarch used for flour.
Rice or Barley may be used.

Beverages—
Any desired. May use sugar or lemon.

SAMPLE MENU

Breakfast—
Broiled Steak
Ry-Crisp
Coffee
Grapefruit
Hominy
Butter
Sugar

Dinner—
Broiled Chicken
Ry-Crisp
Soup
Carrots (buttered)
Lettuce Salad
Peas (buttered)
Butter

Supper or Lunch—
Fresh Sliced Tomato
Ry-Crisp
Salmon Salad
Spiced Beets
Baked Apple
Tea or Coffee
Butter

Tea or Coffee
URINARY FISTULAE, WITH REPORT OF A CASE OF THE URETERO-CERVICO-VAGINAL TYPE

By J. Mason Hundley, M. A., M. D.
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The most common urinary fistulae seen in gynecology today are the ureteral and the vesico-vaginal. They are due to two main causes, operative accidents and injuries associated with childbirth. The operative fistulae are far more numerous than those produced by other means. Judd, of the Mayo Clinic, has shown in reviewing these cases over a period of twelve years that 61 per cent were due to some operative accident while 39 per cent result from childbirth.

As one would naturally suppose, ureteral injuries are not uncommon in performing the radical operation for cancer of the cervix; Sampson has reported 19 such injuries occurring in 156 hysterectomies for cancer of the cervix, and he has also shown that there were only 11 instances of ureteral injury in 4,513 other major gynecological operations. Fistulae are also likely to occur in operations for the removal of intraligamentous cysts and fibroids. At this time it is only the early cervical malignancies that come to operation, for the border line and advanced cases are treated with radium. As this plan of treatment continues we will see fewer fistulae due to operation. However, we must bear in mind that these lesions may also be produced by the unintelligent use of radium.

With the advance of obstetrical knowledge vesico-vaginal fistulae are not nearly so frequent as in past years. They occur most frequently in the base of the bladder, midway between the cervix and the urethra. They are produced by the bladder being caught between the symphysis pubis and the slowly advancing head, with resulting necrosis from pressure. A fistula produced in this manner does not immediately allow the urine to dribble from the bladder, for several days must elapse before the necrotic tissue has sloughed out.

Occasionally immediate tears are made in the bladder wall by the improper use of forceps, such as their faulty application, or when excessive traction is employed.
Vesico-vaginal fistulae are quite infrequent in well conducted clinics, as is shown by Douglass and Novey, who report no such lesion in the review of nearly 10,000 consecutive deliveries occurring in the obstetrical department of the University Hospital. In contrast to these figures we have the recent report by Harrimann and Longaker, of the Kensington Hospital for Women in Philadelphia. They find nearly 5 per cent vesico-vaginal fistulae occurring in 85 deliveries for posterior-occiput presentation, the Kielland forceps having been used. From my conversation with several obstetricians I would conclude that the forceps were at fault.

In the treatment of vesico-vaginal fistulae there are three distinct operative procedures that may be used:

First—The original method of Marion Sims, which consists of mobilization of the bladder, diagonal denudation of the tissues surrounding the opening and the use of silver wire sutures. This method is usually used in the small calibre fistulae.

Second—The method of extensive mobilization of the bladder as carried out in the repair of cystocele. The pelvic fascia may or may not be dissected free and used as a separate layer. This procedure is especially adapted to the repair of extensive bladder defects.

Third—The operation dependent on the inversion of the fistulous tract into the bladder. This may be accomplished by the method of Mayo, in which the suture that pulls in the fistulous tract is drawn out through the urethra, or by the method devised by Dr. Hugh Young. He performs a supra-pubic cystotomy and inverts the tract by means of a small barbed instrument; the fistula is then closed with purse-string sutures.

In treating ureteral fistulae there are several plans that may be carried out. The ureter may be tied with resulting atrophy and death of the kidney. If the fistula has been present for some time, with a developing hydro-ureter and hydro-nephrosis, a nephrectomy is indicated. If the function of the kidney is good and the procedure is mechanically possible, an anastomosis should be undertaken. Ureteral anastomoses fall under two main heads, those produced by end-to-end union and those produced by means of invaginating one end into the other. The Kelly and the Van Hook operations, both of the invaginating type, are the most popular. Kramer, working on dogs, has recently shown that ureteral anastomosis and canalization quickly takes place when the ureter is splinted.
with a catheter and not allowed to remain in situ too long. The best results were obtained by removing the catheter about the fifth day. If the removal of the splint was delayed up to the fourteenth day there was a great proliferation of fibrous tissue, with a resulting stenosis. He believes that early dilatation of the ureter is most essential to overcome this stenosis.

The case report which I wish to present is of particular interest from a diagnostic viewpoint. On July 6, 1927, Mrs. M.-Z. was operated upon at the City Hospital in Baltimore. A left intra-ligamentous cyst was found, as well as a cystic degeneration of the right ovary. The tubes had been removed at a previous operation. A supra-vaginal hysterectomy, a right oophorectomy and removal of the intra-ligamentous cyst were done with great difficulty, owing to the many adhesions and the marked obesity of the patient. The convalescence was normal up to the thirteenth day, when she began to dribble urine from the vagina. On careful examination no fistulous opening could be found, nor was there any discoloration of the vagina when methylene blue was instilled into the bladder. It was thus determined that the urine was not escaping from the bladder. In hope that the fistula might close in time, the patient was discharged, with instructions to return in several months.

On January 31, 1928, I was asked to see the patient, as there had been no relief of her symptoms. A cystoscopy was then done, which showed the following: Urethra normal; bladder normal except for moderate hyperaemia about the left orifice. The orifices were normal but no urine could be seen escaping from the left ureter. On ureteral catheterization no obstruction was met with in the right ureter, but in the left ureter an impassable obstruction was encountered at about the level of the brim of the pelvis. A left ureterogram was attempted, but the plate showed that the solution had not ascended the ureter, but had infiltrated the peri-ureteral tissues surrounding the point of obstruction. No urine was obtained from the catheter in the left ureter, whereas there was an active secretion of normal urine from the right kidney. We were under the impression that the urine escaped into the vagina through the cervical stump. This supposition was proved correct by giving the patient methylene blue by mouth and then obtaining a blue stain on the left side of a cotton plug inserted in the cervix. An intra-venous phthalein test showed that 30 per cent of the dye was excreted from the right kidney in 15 minutes. In order to determine the phthalein output
from the left kidney, gauze saturated with an alkali was placed against the cervix. At the end of 30 minutes the gauze remained unchanged in color, indicating that the kidney was functionless and that a nephrectomy was indicated. At operation a large hydro-ureter and hydro-nephrosis were found, with very little normal kidney tissue remaining.

In summary, therefore, the case above described represents the rather rare type of operative urinary fistula, designated as the uretero-cervico-vaginal.
ACUTE APPENDICITIS COMPLICATED BY TWISTED
GANGRENOUS OVARIAN CYST

By Arnold L. Jensen, B. Sc., M. D.
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The association of acute inflammatory changes in the appendix with gangrene of a pre-existing ovarian cyst from torsion of its pedicle is very uncommon, if the literature on the subject is a true index to its rarity. A careful search of the English literature to January, 1928, reveals only eight cases, four of which are reported in detail. The first case report is by Henry Fry, who describes a twisted gangrenous cyst with appendicitis, complicating a four months' pregnancy. He fails to state, however, whether the appendix was acutely or chronically inflamed, saying only that it was "diseased." Ross reports a case of appendicitis with twisted gangrenous cyst in which the inflammatory changes in the appendix were subsiding. He thought that the vomiting occasioned by the appendicitis had probably caused torsion of the cyst. Meredyth-Jones reports a case quite similar to that of Fry, the twisted ovarian cyst being partly gangrenous and the appendix bound down by adhesions to the cyst, but no mention is made as to the kind of inflammation in the appendix.

Doyle reports a case of gangrenous cyst with acutely inflamed appendix. This is the first definite case report about which there is no doubt. He also refers to one other such case which could not be traced, as a bibliography was lacking. Loop reports four cases of his own in detail, and gives an excellent discussion of the subject. Hall, in a review of complications in 500 cases of appendectomy, mentions one case of twisted ovarian cyst. No details are given as to whether the cyst was gangrenous or simply twisted. The last reference to date is from Penn, who reports a case of acute appendicitis complicated by hemorrhage from a Graafian follicle cyst which had ruptured. The ovary was twisted on itself, but not gangrenous. Howard A. Kelly, in his text on appendicitis, mentions the inter-relationship between appendicitis and cysts of the ovary. He does not mention torsion and gangrene of an ovarian
cyst as a complication, nor has he to date encountered such a syndrome. Cullen has never seen a case in his experience.

It is interesting to speculate on the etiology of the two abdominal conditions when they occur at the same time. Is the association coincidental or is there some relationship between the two conditions? A review of the symptoms of the four cases reported by Loop and the two cases to be reported here shows that in five of the cases fairly typical symptoms of appendicitis developed first and the symptoms of twisted gangrenous cyst appeared later. Therefore, it seems that the inflammatory changes in the appendix are primary and the torsion secondary. Acute appendicitis has a definite, well-defined symptomatology which includes constipation, vomiting and gaseous distention of the bowel, producing uncommon movements within a formerly quiet peritoneal cavity. There are many theories advanced as to the cause of torsion of an ovarian cyst. However, torsion is a mechanical process primarily, and any active motion within the peritoneal cavity must be considered as an etiological factor, particularly if the pedicle is small in diameter, of some length, and the cyst free to rotate. Consequently, it seems logical to suppose, if not to conclude, that the mechanical disturbances within the peritoneal cavity due to acute appendicitis are the causative factors of torsion and gangrene of the pre-existing ovarian cyst in a high percentage of the cases in which the two lesions occur together.

The diagnosis is difficult, rather because of the rarity of the coexistence of the two lesions than because of any difficulty in the recognition and analysis of the symptoms per se. A carefully elicited history, followed by a complete physical examination, including a pelvic, will give a fair percentage of diagnoses. Acute appendicitis itself is sometimes rather difficult to diagnose; the same is true of twisted ovarian cyst. Analysis of the few cases reported shows that rather definite symptoms of appendicitis were present at the onset in all cases but one. There is no reason why the diagnosis of the appendicitis should offer much more difficulty than that of uncomplicated acute appendicitis as long as the blood supply of the appendix is not involved in the actual torsion of the cyst, which was not found in a single case so far reported. As the torsion of the cyst is secondary, the ovarian symptoms follow after the appendiceal syndrome is well developed. A twisted cyst, however, does not give as definite a chain of symptoms as appendicitis, which it may simulate very closely if on the right side; but it does have some
definite symptoms and physical findings which, with a routine pelvic examination, will help make the diagnosis. Pain on either side of the lower abdomen, radiating down the inside of the thigh, sudden and sharp in character, but different from the preceding appendiceal pain; continued vomiting; presence of fluid in the abdominal cavity; a tender cystic or tumor mass palpable either abdominally or bimanually; increase in size of this mass as time progresses; symptoms of shock which are uncommon in appendicitis—these should certainly lead one to think of other abdominal pathology in addition to appendicitis. This chain of findings and symptoms, in whole or in part, following a sequence of appendiceal symptoms and findings, should lead to a diagnosis of the two lesions. The error in diagnosis is due to lack of experience with this syndrome and to incomplete routine examination rather than to any great difficulty of detection and analysis of the symptomatology.

The following two cases are reported in brief detail. The first case was operated on by Dr. Hugh Brent of Baltimore. It is through his courtesy that the case report and photograph of the specimen are submitted. The second case is one of my own:

Case 1. Patient, aged 26 years, white, female, married, multipara, was admitted to the University of Maryland Hospital February 13, 1921, with a diagnosis of acute appendicitis. She had been under observation by her family physician for approximately 24 hours prior to admission. Her present complaint started about 30 hours before admission, with pain throughout abdomen. This was followed by nausea, vomiting, localization of pain and tenderness in right lower quadrant of abdomen. Vomiting continued up to time of admission and pain in right lower quadrant increased. Past history was negative, except that she had had a former attack of appendicitis five months previously. Pregnancies had been normal. Menstrual history normal. On admission temperature was 100.5°F, pulse 110, respiration 22. Physical examination was negative except for abdomen. Abdomen moderately distended; rigidity of right lower quadrant; marked tenderness on pressure over McBurney’s point and over entire right lower quadrant; dullness in both flanks on percussion; bimanual examination not performed. Laboratory findings: Urinalysis negative; white blood count 16,200, 81 per cent polymorphonuclears, 19 per cent large and small lymphocytes. Preoperative diagnosis—Acute appendicitis. Laparotomy revealed a peritoneal cavity containing about 200 c.c.ms. of serosanguineous fluid. Right adnexa contained a paraovarian cyst 9 cms. in diameter, which was twisted on its pedicle along with the right tube and ovary. The tube and cyst were black, edematous and gangrenous. The ovary was edematous and showed areas of early gangrene. Right salpingo-oophorectomy was performed. Appendix located and found to be acutely inflamed with fibrinous
exudate around the tip, which was gangrenous. There were no adhesions between the appendix and twisted cyst. Appendectomy performed; abdomen closed without drainage. Uneventful convalescence. **Pathological report:** Gangrenous paraovarian cyst and tube; beginning gangrene of ovary; acute gangrenous appendix. (Fig. 1.) **Remarks:** Typical history of appendicitis, except that vomiting continued after localization of pain. Tenderness in right lower quadrant was diffuse and not over McBurney's point alone. Presence of fluid in flanks on percussion. No bimanual examination made.

**Case 2.** Patient, aged 17 years, white, female, unmarried, admitted to the West Baltimore General Hospital November 27, 1926, with a diagnosis of acute appendicitis. Present complaint started 48 hours prior to admission,
with generalized abdominal pain, nausea, vomiting and localization of pain in right lower quadrant. Shortly after localization in right lower quadrant she was seized with acute pain in the corresponding area on the left side. This pain radiated downward over Poupart's ligament to the groin and inner side of the thigh. Her past history was completely negative, except for the

usual diseases of childhood. On admission temperature was 101° F., pulse 132, respiration 24. Physical examination was negative except for abdomen. Abdomen was distended in lower portion; muscular rigidity on both sides below umbilicus; marked tenderness over McBurney's point and over entire left lower quadrant; no palpable tumor masses. Vaginal examination revealed an intact hymen. Bimanual examination per rectum revealed a tumor mass about 10 cms. in diameter in the pelvis posterior to the uterus. Laboratory

Figure 2: Case 2—Showing acute gangrenous appendix and cross-section of gangrenous dermoid cyst of ovary.
Appendicitis—Twisted Gangrenous Ovarian Cyst

Findings: Urinalysis negative; white blood count 18,400, 87 per cent polymorphonuclears, 13 per cent large and small lymphocytes. Preoperative diagnosis—Acute appendicitis with peritonitis; ovarian cyst. Laparotomy revealed about 300 c.c.m.s. of serosanguineous fluid in the peritoneal cavity. Left ovary was approximately 12 cm. in diameter, black, gangrenous and twisted on its pedicle, along with the left tube. Cyst and tube were removed. Appendix was located, and found to be swollen and gangrenous. A mass of omentum and fibrinous exudate surrounded the appendix. There were no adhesions between the appendix and the cyst. Appendix removed. Abdomen closed without drainage. Convalescence uneventful. Pathological report: Dermoid cyst of ovary containing hair and sebaceous material; acute gangrenous appendix. (Fig. 2.) Remarks: Typical history of appendicitis followed by fairly typical symptoms of twisted cyst. Physical findings of ovarian cyst at bimanual examination.

Summary and Conclusions

Appendicitis complicated by twisted ovarian cyst is very uncommon, if the literature is a true index to its incidence.

The diagnosis is difficult chiefly because of the infrequency with which the two conditions are associated, so that no one individual can have much experience with the clinical picture.

A careful history and routine pelvic examination will permit of diagnosis in a fair percentage of the cases.

Appendicitis complicated by twisted ovarian cyst does not give a serious prognosis, as all the cases reported had an uneventful recovery following laparotomy.

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McClung Hospital.
TRAUMATIC RUPTURE OF THE SPLEEN
REPORT OF A CASE

By Henry C. Fattel
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Traumatic subcutaneous laceration of the spleen, though still relatively rare considering the friability of this organ and the frequent violence inflicted upon the splenic region, is not as uncommon an accident since the introduction of the automobile as formerly. The comparative immunity of the spleen to trauma is readily explained by its sheltered position behind the ribs.

Rupture of the spleen is always a serious accident. Whilst a few of these patients make a spontaneous recovery, the number is inconsiderable in proportion to those who do not. Therefore, when it does occur, its cure is largely dependent upon prompt recognition and the institution of proper remedial measures at the earliest possible moment. Delay in either of these may prove fatal. There will always be a history of violence to the splenic region, such as a fall on a projecting object, compression, a kick or a blow, followed promptly by symptoms of shock due to the injury itself, or to the escape of blood into the peritoneal cavity, or to both. The patient is in collapse. The face is blanched and the forehead is bathed with sweat. The pulse is rapid, weak and easily compressible. The patient may complain of pain in the left shoulder. This is an inconstant symptom which is known as Kehr's sign and is of reflex origin. In nearly every case there is nausea or vomiting. The presence of abdominal rigidity varies. It occurs in more than 50 per cent. of the cases. Local tenderness can usually be elicited over the splenic area. Ballance's sign, when present, is claimed to be pathognomic of a torn spleen, viz., a dull note on percussion in both flanks, which by changing the patient's position can be made to shift on the right side, whereas the manoeuvre has no such effect upon the character of the note in the left side. The persistency of dullness on the left side is attributed to the presence of blood-clots about the spleen. Many believe this sign valueless.
Abdominal distention begins to appear about 3 or 4 hours after the accident. As a result of their more hazardous occupations rupture of the spleen occurs far more frequently in men than in women.

Clinically lacerated spleens may be separated into four groups, i.e.:
1. In which the patient never rallies but rapidly succumbs.
2. In this the patient recovers from the initial shock, only, to develop signs of ruptured spleen later.
3. In this group the signs of intra-abdominal disaster are delayed.
4. Where the patient makes a spontaneous recovery.

These are almost always desperate cases. The patient is generally in extremely poor condition on account of great loss of blood. Cases have even been reported in which the bleeding ceased spontaneously but recurred with improvement in the patient's condition with the coincidental rise in the blood-pressure. Though spontaneous cure may occur, as a rule it does not, and the usual course is progressively downward to exitus.

As matters stand at present operation offers the best chance for effecting a cure. Out of 135 cases cited by Lewerenz, in 1900, 104 died. Splenectomy was done in 25 of these cases, with 13 recoveries; tamponade in 2, with 1 recovery, and suture in 1, with a fatal termination. Laspeyres, in an exhaustive study which covered the literature on splenectomy for the years 1896 to 1904, records 58 splenectomies done for subcutaneous rupture of the spleen; of these 39, or 67.2 per cent., recovered.

The choice of the operation, however, depends largely upon the character of the tear. Three lines of procedure are open to the surgeon, namely:
1. Splenectomy.
2. Splenorrhaphy.
3. Tamponading of the rent.

In a great majority of cases there is no choice, but splenectomy must be done, such as where the tearing is multiple or the organ much damaged. Wounds of the hilus demand splenectomy, but many wounds of the convex border, especially slight lacerations can be treated by more conservative measures, such as by gauze tampons or by suture. Efforts to suture wounds in the spleen have, however, proven largely unsuccessful because of the friability of this organ, but, if the laceration be slight or quite superficial, if hemorrhage has ceased, and if the capsule is capable of holding sutures, a successful
closure of the wound may be possible. If mattress sutures are employed, a good plan to prevent their cutting out, is to tie them over pieces of fat. In those rare instances, where suturing is impracticable and extirpation inadvisable, gaping wounds may be successfully packed with gauze tampons or plugged with omentum.

Either as a pre- or postoperative measure transfusion of blood may be urgently indicated. In the absence of a donor, the blood which has escaped into the peritoneal cavity should be collected, mixed with normal saline solution, filtered and reintroduced into a vein of the patient.

The following example of subcutaneous rupture of the spleen was operated on successfully at the University Hospital in 1927:

Case Report—

The patient, a Gypsy, female, 6 years of age, was struck over the lower ribs of the left side by a baseball, August 7, 1927. At the time the injury was considered trivial. The next day, however, as the child complained of severe abdominal pain, had vomited frequently and was nauseated, the parents called in Dr. Thomas Coonan. He diagnosed the case as a ruptured spleen and advised that the child be taken to the hospital for operative relief.

On admission, August 8, 1927, examination revealed a critically ill child, with hot skin; pulse, 160 per minute, but regular; respiratory rate, 45; leucocytosis; fever; abdominal rigidity, and vomiting a great deal. Claybrook’s sign, the transmission of the cardiac and respiratory sounds to the abdomen in cases of injury to the abdominal viscera, was distinctly positive. Everything else was negative. The diagnosis of ruptured spleen was concurred in and immediate laparotomy recommended as offering the best chance for saving the patient’s life. The advice was accepted and on August 8th, a few hours after her entrance, the patient was taken to the operating room, etherized and her abdomen entered by Dr. C. F. Horine, through a left rectus incision. The peritoneal cavity was filled with blood. The spleen was the seat of a stellate tear which was beyond repair by suturing. A splenectomy was, therefore, done and two cigarette drains introduced down to the site of the splenic pedicle. The postoperative course was uneventful and the patient was discharged from the hospital in excellent condition 13 days after admission.

In speaking of the late results Bailey says, that the majority of the patients splenectomized suffer apparently no ill effects from the removal of such a large and important organ and were restored to perfect health. Two of his patients complained for many months after the operation that they were unable to lie in bed upon the left side without evoking an unpleasant attack of cardiac palpitation. A well-known complication of this operation is fleeting bone pain like
rheumatism.’ He attributes this phenomenon to a change of the yellow into red bone marrow. He had only one instance in which this seriously worried the patient and here the discomfort was relieved by rubbing the limbs. In his series during the first six months attacks of vomiting proved a considerable handicap to the return to normal life of 3 patients. In regard to the opinion expressed by investigators from experiments based on animal experimentation that splenectomy lowers resistance to infection, Bailey maintains that sufficient data have not been produced to settle this important question. Out of four of his patients traced from 3 to 14 years, there was not the slightest evidence that a splenectomized person is more susceptible to infection than the rest of humanity.

In view of the important hematopoietic rôle ascribed to it by physiologists, it is indeed remarkable how comparatively little influence splenectomy has on the blood picture. The subjoined blood-chart obtained by Johnson in a case of splenectomy done for rupture of an otherwise healthy spleen excellently illustrates this point.

<table>
<thead>
<tr>
<th></th>
<th>Red Blood Cells</th>
<th>White Blood Cells</th>
<th>Hemoglobin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Operation</td>
<td>13,000</td>
<td>45 per cent</td>
<td></td>
</tr>
<tr>
<td>After Operation</td>
<td>1,220,000</td>
<td>16,500</td>
<td>55 per cent</td>
</tr>
<tr>
<td>Fourth Day</td>
<td>2,620,000</td>
<td>12,800</td>
<td>62 per cent</td>
</tr>
<tr>
<td>Seventeenth Day</td>
<td>3,700,000</td>
<td>11,600</td>
<td>70 per cent</td>
</tr>
</tbody>
</table>

The experience of the staff of the University Hospital Clinic is in complete harmony with these findings. The frequent presence of accessory splenules in the body and the compensatory activity of other reticulo-endothelial organs, may be the explanation.

The result of this study leads to the conclusion that in this type of catastrophe, it is far better for the victim’s interest to open the abdomen on suspicion, rather than allow the patient to die of exsanguination.

REFERENCES


Wilson, F.—Two Fatal Cases of Unsuspected Rupture of the Spleen. Lancet, Lond., 927, i, 1236.
One of the most interesting of the older specimens in the Medical Museum of the University is the oil painting of a patient together with the skull from a case of osteogenic sarcoma.

The skull (Fig. 1) is excellently preserved, the bones of the orbit, nose and upper jaw on the right show extensive rarefaction, such as may be seen in malignancy of bone.

Fig. 1.—Skull of the man that the painting represents

The portrait was dimmed by the accumulating dust of passing years and in such a state showed very little detail. Careful restoration, however, brought to light the unusual painting seen in Figure 2.
The picture, according to the signature, was painted by one A. C. Smith in 1839. This man is supposed to have been a patient in the University Hospital and during his convalescence to have painted the picture of his unfortunate wardfellow.

The work is typical of the American School of about one hundred years ago, yet far above the average workmanship of that time. The artist had a good working knowledge of color and draftsmanship. The composition is excellent and the balance is faultless. Undoubtedly it is one of the best medical illustrations of that period.
OUR FATHERS OF OLD.

At a recent meeting of the Osler Historical Club of the Medical and Chirurgical Faculty of Maryland some of "our fathers of old" were ably presented by Dr. William Travis Howard (Class of 1889) and Dr. John R. Oliver, Professor of History of Medicine, University of Maryland. The former gave an exposition of the life and work of Dr. David Meredith Reese, the elder, who graduated at the age of 19 from the College of Medicine of Maryland, the ancestor of the University. Dr. Howard illustrated his talk with a collection of old letters and publications by Dr. Reese.

Judging from the records of his life and professional thoughts, this student under the first faculty of the ancient University of Maryland, set an example worthy of emulation at the present time. In a letter to a cousin, young Reese confessed to having "a constitutional weakness for dogmatic religion." As shown by his paper on the epidemic of yellow fever at Fell's Point in 1819, Reese exhibited a dogged loyalty to the dictum of Davidge that the disease was not contagious. His treatment of the patients was heroic: calomel to the point of ptyalism, blisters everywhere, withdrawal of all food until after convalescence, no fluids allowed, but cold "molasses in water." In 1832 Reese noted the fact that the areas most severely affected during the extant cholera epidemic in New York City were the areas of the "greatest amount of drunken filth and poverty." Reese continued in general practice until 1839, when he accepted his first teaching position at Albany Medical College. Next, in 1841, he was a professor at Castleton Medical College of Vermont; in 1842 he taught at Washington University of Baltimore. As early as 1850 he was using as an anesthetic a mixture of 1 part chloroform and 2 parts of ether. From this time until 1860 he was resident physician at Bellevue Hospital, New York. In 1857 in a "Report on Infant Mortality" he assigned the degeneracy of the rich and the weakness of the poor as the causes of the increasing death
rate in the United States. He condemned the use of soothing syrups; advised breast feeding and advocated medical certification before marriage. Throughout his practice he steadily followed Rush's doctrine of completely banning alcohol. Throughout his teaching career he insisted on keeping his clinics and lectures open to both the "laity" and "the empirics." He laid great stress on theories, but only when they could be combined with facts to establish definite working principles. As Dr. Howard said, "While not a man of genius, he was a man of parts."

Dr. Oliver gave his usual charming discussion of what is really known concerning Hippocrates; he also exhibited many valuable editions (Greek, Latin, English and German) of books written by or about "The Father of Medicine."

Dr. Oliver introduced the subject of his biographic sketch by quoting him as "omnium medicinae facile princeps." This friendly lecturer reminded his hearers that historic facts exist only in the contemporary literature. Three such authentic references to Hippocrates may be found: Aristotle writes, "the great Hippocrates," Plato has one of his characters say "you ought to go about life as Hippocrates goes about medicine," and Protagoras mentions, "Hippocrates, who teaches medicine for a fee." As Dr. Oliver says this is "all that we know about the god of medicine. The lecturer explained that he believed certain of the books of the Corpus Hippocrates were written by a single personality that may have been Hippocrates. "The author of these particular books had a peculiar habit of making "digs" at his colleagues, and of being unusually careful of the comfort of his patients. The Corpus itself probably represents the remains of the library of the medical school of Kos; the rival school of Knidus on the mainland maintained that the most important part of medical study was careful, but theoretical classification of diseases. Dr. Oliver demonstrated a photostat of the original Greek manuscript of one of the books of the Corpus, and in conclusion showed a number of illustrative lantern slides.

At the end of the meeting Dr. Harry Friedenwald, the president of the club, announced the date of the next meeting as March the 5th. He announced that all interested in medical biography and bibliography were cordially invited to attend. Dr. Garrison, the famous medical historian, will be the next lecturer.

C. V. Taylor.
Dr. William Fairfield Lockwood
Dr. William Fairfield Lockwood, while attending the funeral of his friend and former colleague, Dr. George Dobbin, died suddenly on October the 16th. This tragic occurrence took place in the presence of many of his most devoted friends.

Dr. Lockwood was born in Culpeper County, Virginia. He was educated at the University of Virginia, graduating in 1875. On coming to Baltimore he was made Resident Physician at St. Joseph's Hospital, 1875-76. From that time to the end of his life he was actively associated with hospitals and with teaching. He was Demonstrator of Anatomy at Washington University and the College of Physicians and Surgeons; Attending Physician at the Dispensary for Children; Visiting Physician to St. Joseph's, St. Agnes', Mercy, and Union Memorial Hospitals. For many years he was a member of the Board of Medical Examiners of Maryland and, from 1899 Professor of Materia Medica, Therapeutics, and Clinical Medicine at the College of Physicians and Surgeons. When the University of Maryland with the College of Physicians and Surgeons were amalgamated he became Dean of the new school. His active association with medical students started in 1899 when he became professor at the College of Physicians and Surgeons. This contact was of great advantage to the men taught. His honesty and his thoroughness as regards his work, combined with kindliness and a high order of diagnostic ability, made him an ideal teacher. His example
taught them that the basis of our great profession is the love of humanity and his influence in every way was of great good to a very large number of students. As in his teaching so he was in his private work and all the years of his labor were marked by his conscientiousness and his industry. Thus, on the morning of his death he made careful notes on the patients he had seen that day.

In addition to these qualifications as a teacher there was an intangible something which is hard to describe, but which at the same time was valuable and important. It is certain that the numerous students he has had in the past, in addition to his medical friends, knew that he had the great gift of companionship. No human being ever went to him without knowing from the first that he had a sincere and honest friend who would help him in every way. This was especially true among his medical friends. It is not possible for a man to have come closer in contact with the personal equation of more men than did Dr. Lockwood. To each and every one he gave the best he had. So tremendous was this quality that no man who knew him could fail to respect him for his generosity, ability, kindliness, and sympathy. Any one's problem to him was a personal affair and he gave accordingly.

During his long medical life he saw the development of the specialists and with their coming recognized that the wide field of work which a general practitioner covered was being more and more curtailed. Still, by his life he showed that there is no specialist who can take the place of the family physician. In himself he showed the qualities that make the trained family advisor and the trained diagnostician. He personified in himself a member of the family with whom he dealt, taking their point of view with his trained medical skill and knowledge; talking to them and acting with them as one of the family with the great advantage of his tremendous experience. Such men must always exist. They are absolutely important in modern life. They are the check on thoughtless acts in mental, spiritual and physical things; and it is on them that the protection of the community largely lies.

The family physician must be of the type of which Dr. Lockwood was an example: learned, broadminded, with a profound knowledge of medicine and its kindred branch—surgery; and, at the same time, having the human heart that takes all the troubles and anxieties and dangers of his people to himself and acts with the cool judgment which is so necessary when such things are involved.
He has left behind in the hearts of his friends a sacred memory that will last as long as their lives; and his influence will surely be passed on through them to many of our followers. He taught by example that the greatest satisfaction was the work done for the love of one's fellow-man. He was the perfect example of the good physician.

C. B. Gamble.

DR. JOHN MASON HUNDELEY

With utmost regret we announce the death of Dr. John Mason Hundley, aged 70, on November 3, 1928. Dr. Hundley was one of the leading gynecologists of Maryland and of the South. He was born in Essex County, Virginia, and came to Baltimore to attend the Maryland College of Pharmacy from which he graduated in 1878. He then entered the medical school of the University of Maryland, whence he received the degree of M. D., in 1882, being the first honor man and gold-medallist of his class. After his graduation he went back to Virginia to engage in the practice of his profession, but returned again to Baltimore permanently in 1884. His chief interest being in those affections peculiar to woman, he immediately formed a connection with the department of gynecology at the University of Maryland as an associate of the late Dr. William T. Howard, then occupying that chair. In 1900, he was promoted to the position of professor of clinical gynecology, and in 1927 retired voluntarily with the rank of emeritus professor of clinical gynecology. He is survived by his wife, formerly Miss Helen Murdoch Sweet, sons, James Winslow Hundley, Dr. John Mason Hundley, Jr., Arthur Hundley and daughters, Mrs. Ethel de Pena, wife of the first secretary of the Uruguayan Legation at Washington, and Miss Mason Hundley.

There will never be another Dr. Hundley. With him the pattern is lost. He was a peculiar institution unto himself, colorful, singularly free from guile, full of trite sayings, lovable, loyal to friends and full of sympathy for the downtrodden. It was in the operating room, however, that he was at his best and his light shone the brightest. He was an expert diagnostician and a careful and skillful operator. When the task before him was completed, it was done. No detail was too insignificant to escape his attention in carrying the operation before him to a successful ending. As a plastic surgeon upon the perineum he had no peer and but few, if any equals. He was a
simple minded, unostentatious, dignified man, with his feet always planted solidly upon the ground, a soft-spoken, affable, home-loving soul, beloved by everybody who had the privilege of knowing him, a straight-shooter, a perfect man in every sense of the word, a staunch Christian and a lover of man. By his demise a void is left in the ranks of the University of Maryland which will be hard, if not impossible, to fill. He was an honor to the University of Maryland, a skillful surgeon, an excellent teacher and a credit to the medical profession. Those of us left to mourn him, will ever hold his memory close to our hearts. Though gone, his influence for good will continue to be exerted upon those left behind to be in turn handed on to the next generation. With charity to all and malice to none, he passed through life's fitful course, beloved, honored and respected and in his eventide still continued by his sweetness of disposition to hold the affectionate regards of his medical colleagues, patients and friends. He was one of God's chosen noblemen. The Maker in his infinite wisdom has chosen to take him away from us. With saddened hearts we submit to the decree, but rejoice in the knowledge, that our late friend, confrere and colleague was fully prepared to meet the summons of his Father without fear of being found wanting.

PUBLISH YOUR PAPERS IN THE BULLETIN

Of the thousands of alumni in all parts of the country it is certain that every year a large number are called upon to prepare papers for county, state and other medical societies. The Editors of the Bulletin feel that a considerable proportion of these should appear in this, the alumni organ. The circulation of the latter is a very large one, much larger than that of a great many of the medical journals. A writer could scarcely ask for a more interested or more sympathetic audience than one composed almost entirely of fellow alumni. Furthermore—and this is not as generally known as it should be—every paper published in the Bulletin is indexed in the Quarterly Cumulative Index Medicus, the successor of the old Index Medicus. It thus at once takes it place in the great stream of medical literature, available to workers throughout the world.

It may not be amiss to call the attention of our readers once more to the fact that the editorial management of the Bulletin is vested in a Board of five men, whose names appear at the head of this paper.
No paper submitted for publication can be passed upon arbitrarily by any one individual, but each is given sympathetic consideration by the entire Board. It goes without saying that no journal can undertake to publish every paper submitted to it, but, in the case of the Bulletin, prospective contributors can rest assured that no meritorious paper will be rejected, if it be one which the Editorial Board feels will be of general interest to the readers of the Bulletin.

Every effort is being made to improve the Bulletin from one issue to the next. There is abundant reason to believe that it is no longer looked upon as merely a sort of "house organ," but that the scientific papers which it contains are carefully read by our alumni everywhere. The alumnus who has just written, or who is just about to write a paper for his county or state society, should therefore think first of the Bulletin when he is trying to decide where to publish it. If accepted for publication, the paper will have a good setting, it will be read widely, it will find its way into the medical literature of the world, and it will help the Bulletin, the University, and, it may be permitted to add, the author as well.
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PRACTICAL MEMORIALS

The University Hospital is endeavoring to improve and modernize its private accommodations. The surroundings of the hospital are anything but attractive, consequently it is necessary to have our private rooms not only as clean and wholesome as possible but a little more than ordinary in the way of attractiveness. This is an expensive enterprise and one the hospital is not quite able to accomplish without the help of its friends, both lay and professional, as well as the Alumni.

Combined with this measure the management of the hospital is making the fullest use of the modern idea of introducing color schemes in the decorations and furnishings of these rooms. The
walls are being panelled and stippled in varying tones. New, all-metal furniture is being purchased where possible. This furniture is finished in six different shades to match the different rooms. The hospital feels it can stand the expense of the decorations if our friends and Alumni will come forward and help with the purchasing of this furniture. A complete set of furniture will cost $200.00. There are one or two extras which the hospital will probably be able to afford.

This provides a splendid opportunity for the Alumni to help the hospital and at the same time to do something to perpetuate the name of a relative or friend as a memorial, or as a class undertaking to visibly establish a memory, or as a straight personal bequest. We are planning to put a small bronze plate on each door bearing the name of the donor, and stating the object of the memorial.

Perhaps others will feel that they would prefer to help the free work of the hospital. There is probably no better way to help the free work than to help the hospital keep up its private accommodations, thereby aiding the hospital to make extra money, which means greater freedom for extending the free service. Their bequest, therefore, bears compound interest.

Graduates and friends, you are asked to consider this request and if you are able, individually, as a family, or as a community enterprise, or as a class, to furnish a room at a cost of $200.00, and thereby do something that is visible, practical, and particularly helpful.

[Note: For further details, communicate with the Secretary of the Medical Alumni Association.]

LETTER FROM WASHINGTON

November 17th, 1928.

Dr. Howard M. Bubert, Sec’y.,
Medical Alumni Association,
University of Maryland,
Baltimore, Maryland.

My dear Doctor:

I am very glad to report that the Washington branch of the alumni held a successful dinner on last Saturday night, November 10th, at the University Club, Washington, and would be glad to have you publish this notice in the next issue of the Journal.
It is our intention to hold meetings four times yearly, the next dinner being scheduled for the second Saturday in February.

It was decided to have the future meetings addressed by a speaker and Dr. Cafritz of this city has consented to make an address at the next meeting. It is our hope to arouse interest in the Association and gather all of the alumni into the fold for mutual benefit and glory of the old school.

Yours very truly,

A. W. Valentine, Secretary.

This is the sort of thing that is going to make our Association a real success.

MEETING

SOUTHERN MEDICAL ASSOCIATION

During the meeting of the Southern Medical Association held in Asheville, N. C., November 12-16, a very delightful banquet was given by the Medical Alumni of the University of Maryland. There were seventy-five graduates present, one of whom is still in active practice after fifty-two years. There were representatives from practically all the Southeastern states. During the dinner some very delightful entertainment was furnished by a few of the citizens of Asheville.

Following were some very instructive talks by Dr. Reid Edwards, president of the Medical Alumni Association, who spoke of the various activities of the Association; Dr. Maurice C. Pincoffs, head of the Medical Department; Dr. Frank Kirby and Dr. Joseph Holland delivered interesting discussions.

THE ALUMNI BANQUET AT THE SOUTHERN HOTEL

The football team of the University of Maryland was given a dinner-dance after the Hopkins game, which was attended by two hundred and fifty friends and alumni in the Southern Hotel ballroom.

The University won six games, lost three and tied one game of a ten-game schedule. The Hopkins game was won by a score of 26-6. The outstanding feature of the season was the playing of Snyder who almost single handed, defeated Yale University, 6-0.
The dinner-dance was sponsored by the Alumni Council and it is hoped that this event will become an annual affair. The committee:

Dr. Edgar Friedenwald, Department of Medicine, *Chairman*.
Mr. Austin Diggs, School of Arts and Science.
Mr. George Blone, School of Law.
Miss Mary Fisher, School of Nursing.
Dr. C. F. Horine, School of Medicine.
Dr. Max Baklor, School of Dentistry.
Dr. L. S. Williams, School of Pharmacy.

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Little Falls, N. Y., Nov. 6, 1928.

W. S. Love, M. D.,
Baltimore, Md.

Dear Doctor:

Every little bit helps, as the old lady said when she contributed her little bit to the ocean. I am enclosing my check for $10 toward the Rotating Fund for Students. I can appreciate such a project as I needed help during my last year, which was not too far ancient.

Yours for success,

Fred C. Sabin.

Might add that I enjoy reading The Bulletin as it arrives. It has made rapid strides in the past few years.

VISITORS

Since the last issue of The Bulletin the following men have registered in the Alumni office while in Baltimore:

Dr. G. F. Boucsein..........................Baltimore, Md.
Dr. S. B. Forbes..........................Tampa, Fla.
Dr. J. A. Girouard.......................Williamantic, Conn.
Dr. Geo. E. Halley.......................Twin Falls, Ida.
Dr. W. R. McCain.........................High Point, N. C.
Dr. Edwin J. Ward........................Crisfield, Md.
HONORED

Dr. A. S. Rothberg of New York City, class of 1926, writes this office that Dr. David Sashin, class of 1926, has been honored by the bestowal of the Dr. Henry W. Frauenthal Scholarship which provides a period of study in leading European orthopedic institutions.

Dr. Sashin has been doing special orthopedic work in the Hospital of Joint Diseases of New York City and in addition, work in the pathology of this branch of medicine.

This department takes great pleasure in making this announcement and desires to congratulate Dr. Sashin.

SPRING ACTIVITIES, 1929

Because of the great success of the spring activities last year, just prior to commencement, it is the intention of the Executive Committee of the Association to make this an annual affair. Complete details for this year will appear in the next issue of The Bulletin. We desire to take this opportunity, however, to call it to the attention of everyone so that they may begin to make arrangements to be present.

A very delightful phase of this series of functions was the numerous, large and enthusiastic class reunions and we, particularly, desire that those of our graduates, wanting to be with their classmates again at such a reunion, communicate with the secretary's office. They will be given every possible help and co-operation in arranging such a reunion.
ALUMNI ASSOCIATION SECTION

Addresses Wanted

(Lost since July and October)

Dr. Samuel Theobald .............................................. U. of M. 1867
Dr. Arthur W. Rusmiselle ........................................ P. & S. 1877
Dr. David A. Hutchinson .......................................... P. & S. 1880
Dr. George D. White ............................................. P. & S. 1881
Dr. Thomas O'Dell ............................................... P. & S. 1881
Dr. Alex C. Angus ................................................ P. & S. 1882
Dr. Peter H. Mullins ............................................. P. & S. 1882
Dr. R. C. McCurdy ............................................... P. & S. 1882
Dr. John Horatio Dorsey ......................................... U. of M. 1885
Dr. John R. Flanigan ............................................. P. & S. 1885
Dr. J. William Patton ........................................... U. of M. 1886
Dr. John S. Offutt ................................................. U. of M. 1887
Dr. Jacob L. Bowers .............................................. U. of M. 1888
Dr. Richard C. Creech ........................................... B. M. C. 1888
Dr. Claude Joyner ................................................ P. & S. 1888
Dr. Eli W. Rose .................................................. P. & S. 1888
Dr. Chas. Wyche ................................................ U. of M. 1888
Dr. William E. Fitch ............................................. P. & S. 1891
Dr. M. H. Bowman ................................................. B. M. C. 1892
Dr. R. F. Graham ................................................ P. & S. 1892
Dr. Morton Byron Fishbaugh .................................... P. & S. 1893
Dr. Henry Austin Shurtleff ..................................... B. M. C. 1893
Dr. Milton Raphael Walter ....................................... U. of M. 1893
Dr. G. Franklin Smith ........................................... B. M. C. 1894
Dr. O. H. Kenan .................................................. P. & S. 1895
Dr. Owen Stephen O'Neil ........................................ B. M. C. 1897
Dr. Dinsmore D. Delaney ......................................... B. M. C. 1898
Dr. Perry L. Boyer ............................................... U. of M. 1899
Dr. Harry Ward Newell .......................................... B. M. C. 1900
Dr. Carlyle Kayson Yates ......................................... B. M. C. 1900
Dr. W. B. T. Smith ............................................... P. & S. 1901
Dr. W. J. Steward ............................................... U. of M. 1904
Dr. John Wm. Spillman .......................................... B. M. C. 1905
Dr. Chas. Wm. Johnstone ......................................... P. & S. 1906
Dr. Frank Hasson Ikirt .......................................... B. M. C. 1907
Dr. Oscar Wentworth King ....................................... U. of M. 1907
Dr. Francis Matulaitis .......................................... B. M. C. 1907
Dr. Henry Oscar Sloane .......................................... B. M. C. 1908
Dr. Edwin M. Jones .............................................. B. M. C. 1910
Dr. Harold H. Longwell ......................................... B. M. C. 1910
Dr. Jos. L. Desrosiers ........................................... B. M. C. 1911
Dr. Harold Homer Webb ........................................... U. of M. 1912
DEATHS

Dr. George W. Dobbin, Baltimore, Md.; Class of 1894; emeritus professor of obstetrics at his alma mater and at one time professor of obstetrics and gynecology at the College of Physicians and Surgeons, Baltimore; aged 57; died, October 16, 1928 of arteriosclerosis, following an illness of two years. He was a son of the late Robert A. Dobbin and Elizabeth Swan Key, of Baltimore, and was born in Baltimore, December 17, 1870. He was a grandson of the late Judge George W. Dobbin, of the Supreme Bench of Baltimore, and a great-grandson of Francis Scott Key, who wrote "The Star-Spangled Banner." He received his early education at Marston's University School for Boys whence he entered the academic department of the Johns Hopkins University where he was graduated in 1891, with the degree of B. A. He received his medical degree at the University of Maryland, in 1894. From that year until 1900 he was the resident obstetrician at the Johns Hopkins Hospital. In October, 1900, he married Miss Beatrice Dunderdale, of Perth Amboy, New Jersey. Besides his widow he is survived by the following children: Mrs. William Gilmore Hoffman, 3rd, Miss Beatrice Dunderdale Dobbin, Miss Anne Parker Dobbin, Miss Rebecca Pugh Dobbin and George W. Dobbin, Jr.

Dr. Dobbin was gold-medallist of his class at the University of Maryland. He was a skillful obstetrician, an excellent teacher and a man of great charm of manner. He enjoyed the confidence of his medical colleagues as well as the community at large.

Dr. Theodore Blanchard Warner, New York, N. Y.; Class of 1915; served during the World War in the United States Navy; aged 40; died, November 12, 1928, of injuries received in an automobile accident. His wife was Miss Marguerite Walter, a graduate of the University Hospital Training School for Nurses, class of 1916.
Dr. John C. Frazier, Buffalo, W. Va.; P. & S., Class of 1899; aged 50; died, September 20, 1928, of paralysis.

Dr. Wilfrid Francois Milot, Attleboro, Mass.; B. M. C., Class of 1900; served during World War; aged 58; died, October 19, 1928, of angina pectoris.

Dr. Jeptha Ellsworth Pitsnogle, Hagerstown, Md.; Class of 1889; aged 65; died, September, 1928.

Dr. Arthur Fredolf Peterson, Brockton, Mass.; Class of 1916; aged 40; was drowned, May 17, 1928, at Mooshead Lake, Maine, when his motor boat sank.


Dr. Dennis Lang Thomas, Lula, Ga.; P. & S., Class of 1892; aged about 58; died, October 14, 1928.

Dr. Frederick W. Tyler, Norman Park, Ga.; B. M. C., Class of 1889; aged 72; died, July 28, 1928, of senility.

Dr. Ross Bowman, Huntingdon Park, Cal.; B. M. C., Class of 1903; aged 58; died, July 14, 1928, of uremia.

Dr. Samuel Ellington, Winston-Salem, N. C.; Washington University School of Medicine, Class of 1872; aged 76; died, August 3, 1928, of cerebral hemorrhage.

Dr. John Mason Hundley, Baltimore, Md.; Class of 1882; first honor graduate and gold-medallist, from 1900 until 1927 professor of clinical gynecology at his alma mater, and since his retirement emeritus professor of clinical gynecology; father of Dr. John Mason Hundley, Jr., associate in gynecology at the University of Maryland; aged 70; died, November 3, 1928, of uremia.

Dr. William F. Lockwood, Baltimore, Md.; P. & S., Class of 1875; professor of medicine in the College of Physicians and Surgeons and after its amalgamation professor of medicine in the University of Maryland. He succeeded Dr. Charles F. Bevan as dean of the College of Physicians and Surgeons and after the death of Dr. R. Dorsey Coale, was elected dean of the medical school of the University of Maryland; he was active in fostering the expansion of the University of Maryland and was responsible for many of its policies; aged 76; died, suddenly, October 15, 1928, of heart disease, while attending the funeral of Dr. George W. Dobbin. The following editorial notice was taken from the Baltimore Evening Sun of October 17, 1928:

Dr. Lockwood

The modern specialist, often more interested in the disease than in the patient, feels and frequently shows a certain condescension toward the general practitioner. But none of the moderns, however scientific, however up-to-date, could condescend to a man like William F. Lockwood, the beloved physician who died yesterday at the funeral of his friend Dr. Dobbin. For Dr. Lockwood, though not a specialist, had a quality which even the most single-minded of scientists could not but appreciate. He knew medicine, and he knew men and women. But he had something beyond these.
A man of great vitality, of profound human sympathy, he entered into a relationship with his patients which transcended the merely professional. It is small praise to say of him that he was a family physician of the old school. He was that, of course, and in the best sense, but he was a whole lot more. He was an adept in the art which he practiced and he often reached, by some subtle sense, conclusions as profound and as true as could be reached after the most searching scientific examination by the modern "group" doctors. But the thing which set him apart from his fellows and made him beloved of his patients and of his colleagues was that other side of him, the side which would have made him great in any profession, in any calling.

We shall not attempt to define that quality. It is probably beyond definition. But whatever it was, Dr. Lockwood had it and it will be that quality, more than his high professional ability, which will make his death a loss to everyone who had the gift of his friendship.

Dr. George Henry Packard, Meredith, N. H.; P. & S., Class of 1898; aged 63; died, September 10, 1928, of heart disease and pneumonia.

Dr. Charles Stough Rebuck, Harrisburg, Pa.; P. & S., Class of 1896; aged 54; died, September 7, 1928, of acute nephritis and pelvic peritonitis with abscess.

Dr. Clarence C. Jones, Staunton, Va.; B. M. C., Class of 1903; aged 53; died, June 10, 1928, of myocarditis and nephritis.

Dr. John D. Shull, Baltimore, Md.; P. & S., Class of 1877; aged 77; died, October 23, 1928, of carcinoma of the urinary bladder.

Dr. George G. Perry, Richmond, Ky.; P. & S., Class of 1890; aged 72; died, suddenly, September 28, 1928.

Dr. William Eugene Delaney, Williamsport, Pa.; P. & S., Class of 1891; aged 67; died, August 25, 1928, of myocarditis.

Dr. Robert J. Smith, Whittemore, Mich.; P. & S., Class of 1884; aged 75; died, November 10, 1928, of senility.

Dr. Samuel William May, Brantley, Ala.; P. & S., Class of 1882; aged 70; died, October 29, 1928.

Dr. Walter Talmage Long, Roxboro, N. C.; B. M. C., Class of 1905; aged 46; died, October 4, 1928, of hepatic cirrhosis.

Dr. Thomas Pugh McCormick, Napoleonville, La.; Class of 1877; died, October 3, 1928, of angina pectoris. Up to 1929, Dr. McCormick practised his profession in Baltimore. The Baltimore Morning Sun of October 17, 1928, contained the following editorial reference concerning his demise:

A Dear Friend Departs

Hundreds of Baltimoreans will learn with deepest regret of the passing at his home in Louisiana on October 3 of a very dear friend—a friend closer than are many brothers—in the person of Dr. Thomas P. McCormick, for many years and until 1920 one of the most prominent physicians of this city. Graduating from the University of Maryland in 1877, he fought a singularly good fight against disease and death, and varied phases of physical and moral frailty, for forty-three years, and kept his faith in human nature through it all and the serene courage of the good soldier who has never lowered the flag of fine idealism with which the nobility of youth sets out.
To say that Dr. McCormick "practiced" medicine through more than two-score years in Baltimore successfully does not state the case at all. He "practiced" a medicine far higher and more healing than the formulas of the pharmacopeia; wrote prescriptions that no drug stores could fill—tonics and elixirs made only in the laboratories of noble and sympathetic souls. Those who knew Dr. McCormick will see no exaggeration in these words; they will see in them only an under statement, an inadequate description of the part he played in many homes in dark hours of bodily weakness and mental distress.

His going leaves a vacant place in many households besides his own. He was a spiritual member of all the homes which his kindly, manly presence brightened. Baltimore has been blessed by many physicians of his type—such, in olden days, as Dr. Chew, Dr. Miles, Dr. Williams, Dr. Atkinson—and not the least of this unforgettable class of the beloved family physician was Dr. McCormick. Medicine has made many scientific advances in recent years, but it has not yet surpassed, and never can, the moral qualities which such men represented. Nature or Providence makes them. No university can give such degrees.

BOOK REVIEW


This is a well known book of many years standing, and is entirely satisfactory for all practical purposes. The type is clear, the definitions are concise and yet complete, and it is attractively arranged. The many pictures of physicians, important in the history of medicine, are interesting and pleasing.

It seems to the reviewer, however, that the volume is somewhat bulky, a fault that could be avoided by using a thinner paper. Certain compound terms, as "bleeding-time" and "clotting-time" are not defined, at least, in this instance, a definition could not be found by searching under any of the words, clotting, bleeding, coagulation or time.

Also, some of the definitions are given under the one of several possible terms, least familiar to the average American physician, causing a second search that is at times, slightly annoying. More pictures and plates could be given with advantage.

Although noting these minor faults, we feel quite willing to recommend this work highly as a valuable addition to one's medical library.
DUES

MANY OF OUR MEMBERS ARE IN ARREARS. IF YOU ARE ONE OF THEM, WILL YOU NOT SEND US YOUR CHECK IMMEDIATELY? IT TAKES MONEY TO KEEP THINGS GOING. THANK YOU.

MEDICAL ALUMNI ASSOCIATION
UNIVERSITY OF MARYLAND.
THE FUNCTION OF THE ANTERIOR PITUITARY LOBE AS ASCERTAINED BY FEEDING EXPERIMENTS ON MAN*

By Harvey G. Beck, M. D.
Baltimore, Md.

The most interesting field for research in medicine and biology is that of endocrinology. It is a field which should engage equally the attention of the laboratory worker and clinician. In the past the clinic and the research laboratory were not closely enough allied. The early advances made in endocrinology were almost entirely due to clinical studies. There is no more illustrious group of physicians than those whose names have become immortalized by their association with the early clinical recognition of disease syndromes of the glands of internal secretions. In support of this statement one need only mention the names of Addison, Graves, Gull, Marie, von Meering, Kocher, Murray, Fröhlich, Cushing, etc.

The mass of current literature on the subject is replete with reports on experimental and laboratory research, most of which is confusing and contradictory whereas there are comparatively few reports dealing with the clinical aspect.

*Read before the Biologic Society of the University of Maryland, November, 1928.
The subject of endocrinology is peculiarly complex and comprehensive, and concerns all the departments of academic medicine as well as the more practical clinical branches. The former group includes the biologist, geneticist, morphologist, physiologist, pharmacologist, and biologic chemist. The latter group includes the gynecologist, surgeon, internist, pediatrician, neurologist and psychiatrist. Progress in the study of the diseases of the glands of internal secretion naturally depends upon the degree of co-operation existing between the laboratory and clinical groups. The Biologic Society of the University of Maryland wisely selected as members, representatives from both groups. It is, therefore, in a better position to do effective work in the study of endocrinology.

Our knowledge concerning the functions of the glands of internal secretions began with the thyroid. Today the hypophysis seems to be the center of attack from the research standpoint. This is no doubt owing to the fact that the hypophysis plays an important role in its relation to other endocrine glands which appear to be within the realms of its functional activities and which are influenced either directly through its hormonic stimulation or indirectly through the nervous system. Notably among these glands are the thyroid, gonads and adrenals. Thus the hypophysis, in a sense, may be regarded as the hub of the hormonopoietic system. In this respect, it is not unlike the spleen in its relation to the hematopoietic system.

By means of animal experimentation, laboratory research, substitution gland feeding and clinical investigation, certain well established functions have been ascribed to the pituitary gland. Since it has become possible by improved surgical technique to remove portions of the gland in animals without causing the death of the animal, the effect upon the body of the loss or diminution of function of the two lobes could be studied separately. While there is still much controversy as to its action on the bodily function under these conditions, the following conclusions have been pretty generally accepted.

A. The removal of the whole gland is followed by tremor, muscular fibrillation, diminution of respiratory and pulse rate, subnormal temperature, stupor, coma and death.

B. Removal of the posterior lobe does not cause death, although a deficiency causes hypotension, increased sugar tolerance, decreased basal metabolic rate and asthenia.

C. Complete removal of the anterior lobe causes a cachexia which terminates in death.
D. Partial removal of the anterior lobe causes obesity, genital hypoplasia, skeletal undergrowth and hypothermia.

Thus it appears logical that in man there may occur a quantitative disturbance of secretion. This manifests itself in acromegaly and gigantism, in states of hyperfunction of the anterior lobe and in dystrophia adiposogenitalis, with its associated syndromes of skeletal defect, genital hypoplasia and fat dystrophy in states of hypofunction of the anterior lobe, while posterior lobe deficiency leads to hypotension, increased sugar tolerance, diminution of basal metabolic rate and asthenia.

Obesity is the one feature which is still open to speculation. Cushing and his coworkers at first thought it was due to anterior lobe deficiency. Later they attributed it to posterior lobe deficiency as the result of the increased sugar tolerance occurring in the latter. Others ascribe it to both lobes. Because obesity enters into the clinical triad of faulty skeletal growth, genital hypoplasia and fat dystrophy, which characterizes Fröhlich's syndrome, the writer was led to the assumption that they had a common origin. This supposition formed the basis for the adoption of anterior lobe feeding in the treatment of dystrophia adiposogenitalis and allied conditions. To successfully counteract the clinical phenomena in man, which have been experimentally produced in animals, would be the final step in establishing their functional relations with anterior pituitary deficiency. While some of the most valuable contributions to the study of this subject can be attributed to laboratory research, yet on the other hand the results have often been misleading. Many feeding experiments have been conducted on normal and hypophysectomized amphibia and mammals with markedly conflicting results. Each investigator seemed to add his share to the general confusion so that one can sympathize with Timme when he states that "if we wait to help our patients until the physiologist tells us what to do, another glacial period will be upon us."

Uhlenhuth summed up the situation in Endocrinology and Metabolism (Vol. 1, p. 184) where he states that the morphogenetic effects of thyroid feeding are far more conspicuous in amphibians than mammals; that the results of numerous research studies on anterior pituitary lobe feeding showed that the effect on amphibians is to stimulate growth, but that the effect varies according to their developmental stage. During the early stages, feeding has actually resulted in a retardation of growth. He further states the feeding experiments on
mammals are often contradictory and unreliable on account of the lack of proper controls and insufficient number of experiments.

Smith found that the rate of growth in tadpoles depends upon whether they are possessed with a normal functioning hypophysis or whether the function has been impaired, for example, after hypophysectomy. The latter surpassed the former in growth on anterior pituitary feeding. Cushing found that injection of an extract of the anterior lobe had no effect upon the temperature in normal animals, whereas it caused a rise from 2° to 4° C, in hypophysectomized animals.

Similar discrepancies of the effect of posterior lobe secretion (pituitrin) upon normal functioning hypophyses in man and upon abnormal functioning associated with hypophyseal syndromes and hypertension, have been observed by Engelbach. In fifty percent of the latter the blood pressure immediately dropped from 10 to 30 mm. of Hg. after injection of 15 minims of pituitrin, contrary to the results obtained by animal experimentation or on normal individuals.

The conclusions to be drawn from these observations are as follows, viz.;

1. The response to feeding experiments vary according as to whether they are conducted on amphibians, mammals or man.
2. The results depend largely upon the stage of development.
3. In animals with experimentally induced arrest or diminution of function of the anterior lobe, the effect of anterior lobe feeding upon growth is more striking than in those with normal functioning glands.
4. Cushing's thermic reaction obtained by an injection of an extract of the anterior lobe upon hypophysectomized animals does not occur in normal healthy animals.
5. Posterior lobe extracts may exhibit a depressor effect upon the blood pressure in hypophyseal disease in man.

It is consequently fair to assume that the maximal response to anterior pituitary feeding occurs in amphibians which mature in a few weeks or months; the medial response in mammals which mature in several months to a year, and the minimal response in man who does not fully mature until the age of 18 to 20 years. Thus one may expect a wide variation on anterior pituitary feeding in man as compared to the lower animals, especially in regards to the effect upon the rate of growth, both skeletal and genital. The slow and delayed results in man are undoubtedly responsible for the view held by cer-
tain clinicians that the gland substance is not assimilated through the gastro-intestinal tract. In view of these facts, it would appear that successful feeding experiments in man depend upon the correctness of the diagnosis, potency of the gland extract, persistency in treatment and careful observation systematically recorded. Although improvement may be rapid, it is usually slow and almost imperceptible, so that a period of from three to six months should elapse before feeding is condemned as a failure.

My first experience with gland feeding in hypophyseal syndromes was in 1915. At that time two patients exhibiting pronounced symptoms of glandular insufficiency consulted me for diagnosis and treatment. These cases were embodied in a report of a series of cases which was published in The American Journal of Medical Sciences, 1918, No. 5, Vol. clvi, p. 711, under the title of "Fat Redistribution in the Hypophyseal Type of Dystrophia Adiposogenitalis." The following case reports are quoted from this article:

Case I was that of a woman, aged forty-one years, five feet three inches tall, weighing 125 pounds. She was married, but never pregnant. Her health had been good until eighteen months previous, when menstruation became irregular and the flow diminished until there was finally complete cessation.

During the ten months preceding the examination she had gained about twenty pounds in weight. With this gain in weight she noticed an enormous increase in the circumference of the hips, upper thighs and abdomen, but there was no perceptible increase in the circumference of the thorax, neck, and upper arms, or any increase in the size of the face, forearms and hands, or legs and feet. In fact, these parts had the appearance of one undernourished, and emaciated features, when contrasted with the extraordinarily large hips and abdomen for a woman of her size, presenting a striking abnormality in the configuration of her body.

In addition, she suffered with apathy, stupor and dullness, impairment of memory, sluggish bodily movements and trophic disturbances of the skin and hair. She was a confirmed invalid and unable to attend to ordinary household duties. Three fairly well-defined symptom groups were recognized in this case, namely, those referable to ovarian insufficiency—sterility and amenorrhea; those referable to pituitary insufficiency—abnormal character and distribution of fat; those referable to thyroid insufficiency—mental, neuromuscular and trophic skin disturbances.
FUNCTION OF THE ANTERIOR PITUITARY LOBE

On the basis of a pluriglandular syndrome, hormotone, which contains the substance of the three glands involved, was prescribed. Four tablets, with the addition of two grains of thyroid, were given daily. The results were very striking. The patient was speedily restored to normal mental and bodily vigor and was able to perform her usual domestic duties without the least fatigue; but the most remarkable effect of treatment was upon the fat dystrophy, the so-called dystrophia adiposogenitalis, as evidenced by a rapid diminution in the circumference of the hips and abdomen.

This rapid diminution necessitated her to resort to the free use of safety-pins to keep her clothes adjusted, and in the course of two months she had to have her clothing entirely refitted, although she had just purchased new apparel before she undertook treatment. At my request she procured the measurements as recorded by her seamstress; which were as follows:

March 1. Two weeks before treatment was begun: waist 30 inches, hips 43 inches.

May 8. After eight weeks' treatment: waist 26 inches, hips 36½ inches.

May 31. After eleven weeks' treatment: waist 25 inches, hips 35½ inches, a decrease of 5 inches in circumference at the waist and 7½ inches at the hips, with the loss of only one pound in weight.

Thyroid was discontinued on June 14, but she continued to take four hormotone tablets daily until July 15, after which glandular therapy was discontinued. Since then she has had no return of symptoms and retained her normal figure.

Case II, a very similar one in type, was a woman, aged forty-nine years, married, and weighing 148 pounds. Her general health was good until one year previous to examination, when she began to suffer with pain in the back, painful and frequent micturition, polyuria, headaches, emotional disturbances and mental depression. Her menstrual history was normal, although she was never pregnant. The most striking feature was her abnormal figure, in which the body from the waist down was relatively twice as large as from the waist up.

After one month's treatment with hormotone and anterior pituitary lobe she lost two and a half pounds in weight. Although no measurements were taken the patient stated that the circumference of her hips diminished so rapidly that she had to have her skirts reduced
around the hips three times since the beginning of treatment and that her general condition had much improved.

The result of organotherapy in these two cases was as pronounced as it was mysterious. Although, according to both patients' statements, their busts had markedly developed, as well as the necks, arms, and faces, yet there was no means of ascertaining, with any degree of accuracy, the extent of these alterations or the correctness of their statements. What actually became of the dystrophic fat was a matter of conjecture and had to be determined by further study and observation. This was accomplished by the simple method of mensuration systematically employed in a series of similar cases while under treatment. The results clearly demonstrated that in a certain group, possibly 50 per cent., there occurs a redistribution of fat rather than a loss of fat.

In a large series of cases treated since, it has been clinically demonstrated that the redistribution of fat in the girdle type of hypophysial obesity is due to the feeding of thyroid and anterior pituitary lobe. Although similar results have been obtained by anterior lobe alone, it appears that thyroid in some way augments the action of anterior pituitary lobe. Feeding of sex glands, in these cases, has little or no effect, and consequently has been abandoned.

The opinion that thyroid has an accelerating influence when combined with pituitary feeding has recently been confirmed by other clinicians. (Tierney, Engelbach and McMahon, McGraw, Timme, Osborne.)

Tierney states that the optimum response in many of his cases was secured by a combination of thyroid and pituitary substances (whole gland). In some cases the thyroid would produce response only to a certain degree. When thyroid was discontinued and pituitary substituted response might again be noted.

Timme found that a small dose of thyroid, gr. 1/100 to gr. 1/10 every day or on alternate days will frequently enhance the effect of pituitary administration. Engelbach and McMahon observed that the cases of true pituitary or pituitary-thyroid deficiency respond rapidly to the combined pituitary and thyroid therapy, whereas these cases react only partially to thyroid and pituitary treatment when these substances are given alone or one at a time. They cite a case of a man aged 35 who lost 30 pounds, and somnolence, fatigability, loss of libido and potentiæ disappeared on 3 months' combined treatment. While in some cases they got a response to a treatment con-
sisting of anterior and posterior lobe by mouth and antuitrin and pituitrin hypodermically, in other cases thyroid had to be added.

In his book on Principles of Therapeutics, Osborne states that the administration of anterior pituitary lobe has its greatest value in dystrophia adiposogenitalis, but such treatment is more successful if combined with appropriate thyroid treatment.

My experience with glandular therapy in states of hypopituitarism is confined largely to the combined feeding of thyroid and pituitary substance—chiefly anterior lobe. The interpretations of the results obtained are based on the studies of a series of more than one hundred cases extending over a period of thirteen years.

In a recent paper on the diagnosis and treatment of pituitary syndromes, published in the April number of the Bulletin of the School of Medicine (University of Maryland), I mentioned the following conditions occurring in hypopituitarism, which should reasonably be expected to yield to substitution feeding. These conditions are:

1—Obesity.
2—Skeletal undergrowth.
3—Genital hypoplasia.
4—Delayed puberty.
5—Amenorrhoea, sterility and frigidity in the female.
6—Impotence and loss of libido in the male.
7—Pituitary type of headaches.
8—Uncinate seizures.
9—Nervous and mental symptoms.

The results of pituitary or combined pituitary and thyroid feeding were not uniformly satisfactory. In fact, there were many complete failures. On the other hand, the degree of success obtained in many of these cases was sufficiently encouraging to warrant the continuance of the method employed in carefully selected cases.

Obesity

Reference has already been made to the effect of anterior lobe feeding, either alone or when combined with the administration of thyroid, upon the distribution of fat in the hypophyseal type of girdle adiposity, a form which occurs most frequently in women between the ages of 18 and 35.

The more generalized obesity, which usually accompanies Fröhlich’s Syndrome, and occurs most frequently at or shortly before the age
of puberty, is also favorably influenced in many instances. In these cases there occurs a general loss of fat with a corresponding diminution in weight. In patients very much overweight, the loss frequently amounts to as much as 30 or 40 pounds. In one of my cases it actually amounted to 80 pounds.

**Skeletal Undergrowth**

Skeletal dwarfism resulting from hypopituitarism in early life may manifest itself as (a) infantilism, somatic and sexual, without adiposity (Lorain type), and (b) stunted growth with sexual infantilism and adiposity (Brissaud type). There is a third form of hypopituitarism in early life characterized by (c) overgrowth with adiposity and genital inactivity (Neurath-Cushing type).

That skeletal growth in certain cases of pituitary dwarfism has been stimulated by experimental feeding of anterior lobe in individuals with ununited epiphyses, is a well recognized clinical fact. McGraw reported a case of a boy aged 13 years in whom growth was arrested at the age of seven, who grew 1½ inches in a year on anterior pituitary lobe combined with thyroid feeding.

Gardiner-Hill and Smith (Lancet, 1926) state that cases showing infantilism of the pituitary type, were found to gain in both height and weight at a rate greatly exceeding the normal on anterior lobe alone. Berkely observed a growth of 10 inches in one year in a boy 14 years of age on pituitary feeding. This boy had failed to grow during the preceding 4 years.

Crofton reports a boy aged 17 years who grew 5 inches in less than a year on anterior pituitary lobe. The effect upon growth was also observed by Lisser in several instances. Similar effects have repeatedly been noted in my personal experience. The most striking example is that of a boy 17 years old who weighed 51½ pounds—and measured 130 cm. in height, which is the standard weight and measurement of the average boy 8 years of age. His growth and development was normal until it suddenly became completely arrested. In addition to the arrest of growth he exhibited certain other definite signs of anterior lobe deficiency—namely; maxillary prognathism, failure of the development of the secondary sex characteristics, absence of beard, hirci and crines pubis—juvenile voice, genital hypoplasia, delayed epiphyseal union and sellar deformation. Mentally he was well developed. As he was subject to attacks of asthma, he
was fed on whole pituitary gland, 6 grains daily. No thyroid was administered. On this treatment he grew 7 cm. (almost 3 inches) in 11 months and his asthma subsided. The renewal of growth was attributed to anterior lobe. The relief from asthma may be attributed to posterior lobe. Experimental studies on animals indicate that the posterior lobe has an inhibiting effect upon growth—according to Stefanescu, by reducing proliferation in cartilage and precocious ossification.

In organic lesions involving the anterior lobe, rapid spontaneous growth may suddenly develop. Beverly Tucker reports a boy with a pituitary tumor who grew nine inches in his sixteenth year and another boy with congenital syphilis who grew 13 inches in as many months.

**Genital Syndromes**

Despite the fact that Smith (P. E.) in some recent experiments (Am. J. Physiol, 1927, 81. 20-26) failed to restore the atrophied genital system in hypophysectomized rats by anterior pituitary feeding, clinical evidence definitely shows that in the genital hypoplasias associated with hypopituitarism in pre-adolescent boys, it has a stimulat- ing effect upon genital growth. This opinion is based on the experience of such authorities as Engelbach, Tierney, Lisser and others. Similar results have been repeatedly noted in my studies. The greatest benefit has been derived in boys between the ages of 11 and 16 years, who were stunted in their growth and had abnormally small genitals. On anterior pituitary feeding alone, almost invariably decided improvement could be noted in these cases in the course of a few months. Puberty, which might have been delayed, was no doubt established more nearly at the normal period.

Likewise, good results have been obtained in girls who develop obesity at about the age of 12 to 15 and in whom menstruation fails to appear at the usual age of puberty.

In adult males with hypoplastic genitalia secondary to hypopituitarism, there was a failure of response to anterior pituitary feeding. This is in accord with Smith's experimental results obtained by feeding hypophysectomized rats.

Hoffstätter reports good results from pituitary preparations in cases of amenorrhoea accompanied with uterine hypoplasia.

Tierney found amenorrhoea with genital hypoplasia rather constantly associated with deficiency of the anterior lobe. Some of his
cases definitely responded to anterior lobe alone while in others no results were obtained.

Concerning the psychological phases, such as frigidity, decreased libido, and impotency associated with pituitary disorders, his experience has shown numerous responses to pituitary feeding and hypodermic administrations, especially of the anterior lobe preparations.

Lisser states that the effect produced by anterior lobe feeding is especially gratifying and convincing in that type of hypopituitarism in women between the ages of 18 and 35, which is characterized by rather sudden accumulation of girdle adiposity with gradually increasing intervals between menstrual periods and diminution of flow. He cites a case of a woman, who, at the age of 32 years had an attack of influenza. She rapidly gained 75 pounds in weight and ceased to menstruate for 5 years. After feeding 15 grains of anterior pituitary lobe for one month, menstruation returned. She then discontinued the feeding for 3 months and missed three periods. Upon resuming the treatment for 6 months, menstruation, which was re-established, was regular and copious. Similar results were obtained in one of my own cases in which obesity and amenorrhoea likewise developed following influenza. Menstruation was re-established on anterior pituitary lobe and thyroid, and she lost 50 pounds in weight.

**Pituitary Epilepsy**

As early as 1705 Vieussens reported a case of tumor of the hypophysis with amaurosis and epileptiform seizures, and in 1781 Greding noted changes in the hypophysis in epilepsy. Wentzel in 1810 attributed epilepsy to changes in the gland. He also referred to an enlargement of the sella turcica.

The relation of epileptiform or so-called uncinate seizures with disease of the pituitary gland was especially emphasized by Cushing. He reported several cases in which attacks were ameliorated by pituitary feeding. Since then occasional reports have appeared in literature in which the attacks were either diminished in frequency or entirely relieved by this treatment. Some of the cases were fed on anterior lobe, others on whole gland. Among those who reported favorable results may be mentioned Beverly Tucker, Lowenstein, Engelbach, Tierney, Kern, Pedercini, and Morgagni. Definite results have been obtained in a few cases in which epileptoid episodes occurred in conjunction with hypopituitary syndromes, in my personal experience. Two cases were followed by complete cessation of
attacks. In others, the attacks markedly decreased in frequency and severity. No benefit was noted in cases not associated with pituitary disturbances.

A very interesting case was that of a boy 13 years of age. As a child, he was nervous and emotional. He entered school at six, but was unable to pass his grades owing to mental delinquency. At the age of eleven after an attack of influenza, he developed epileptiform seizures. Some of these attacks were severe with loss of consciousness and tonic and clonic spasms. Others were milder in character with slight convulsive movements. The seizures increased in frequency until they occurred almost daily; sometimes he had four or five in one day. The attacks promptly subsided on anterior pituitary lobe with the addition of small doses of thyroid, and he has not had a return of the symptoms for 8 years. Moreover, he became mentally alert and successfully passed his grades through High School.

Another remarkable case is that of a woman 32 years of age who began to suffer with epileptic attacks, grand mal alternating with petit mal at the age of thirteen. Despite the usual treatment the attacks persisted and actually increased in frequency until the age of 26 when she consulted me. At that time she exhibited well marked symptoms of advanced hypopituitarism. She was extremely dull and drowsy and slept soundly on an average of 18 hours out of 24 hours. When she was aroused she appeared to be dazed, or in a semi-stupor and complained of headaches. She had marked exophthalmos with drooping of upper lids and a paralysis of the facial muscles on the left side which had existed for several years. The tongue deviated to the right. Speech was slow, drawling and monosyllabic due to paralysis of the muscles of phonation, and the gait was unsteady. She frequently voided urine involuntarily. Both visual fields were contracted. Wassermann was negative.

This patient responded rapidly to anterior pituitary lobe both in regards to its effect upon the epileptiform attacks and the general condition. The most decided improvement was the relief of headache, drowsiness, and stupor. She became mentally more alert. Her expression was much brighter and she began to take an interest in things generally. Later one grain of thyroid daily was added to anterior pituitary lobe. This treatment was continued intermittently for several years. Although she was free from attacks she was afraid to discontinue it for fear of having a recurrence. During
the past four years she has had only one attack and her health is practically normal.

Nervous and Mental Manifestations

Reference has already been made to the effect of anterior pituitary lobe upon the psychic functions.

Tierney states that the nervous and mental symptoms frequently respond early to proper substitution therapy—long before there are definite responses in the objective sphere.

Timme traced many symptoms in mongolism to faulty development of the anterior lobe and states, "as a result of 10 years' experience I have brought many of my mongoloid patients to much higher levels than we have heretofore been able to do." One of his patients attained an intelligent quotient of 90. He administered anterior lobe by mouth in addition to small doses of thyroid. Tucker concludes that the psychoses of pituitary origin in many cases respond promptly and satisfactorily to pituitary feeding.

In my clinical investigations, the psychic responses to pituitary feeding in hypopituitary states exceeded in most instances the physical responses. The results obtained have at times been surprising.

Unlike cretinism, in which the mental symptoms become manifest during the first year of life, the mental retardation associated with hypopituitarism is more pronounced during the school period from the age of six to puberty. These children comprise a considerable group and are usually found in the classes for backward or delinquent children. Their mentality is frequently restored to normal by the administration of anterior pituitary lobe either alone, or in combination with thyroid—observations which have been repeatedly confirmed by their teachers. To illustrate—a boy with anterior lobe insufficiency and hypogenitalism had difficulty in passing his grade in school. After two years' treatment he stood first in a class of forty-two. Another schoolboy with hypopituitary symptoms requested more tablets, stating that while he was taking them he had less difficulty with his studies and made the best averages at his examinations in his school career. Numerous instances of this character could be cited from our reports. The most striking results have been obtained in two mentally defective children, a brother, Adolph, and sister, Isabella, aged 11 and 10 respectively, who suffered with dystrophia adiposogenitalis, atypical retinitis pigmentosa, polydactylism, and mental deficiency—Laurence-Biedl Syndrome.
These patients were referred by Dr. Fleck, who found visual defects. His examination revealed some optic atrophy and abnormal pigmentation of the retina in both children.

On examination, October 1, 1927, both children presented typical pictures of Fröhlich's syndrome plus supernumerary fingers, and the boy had extra toes. Both were extremely obese. The boy had marked genital hypoplasia. They had two brothers who were normally developed and in good health. Although the boy was in his sixth year and girl in her fourth year in school, they had only passed through the first grade.

Treatment was begun on October 8. On the 15th the mother noticed that both children were livelier and on the 22nd they began to take an interest in play and were less drowsy. The girl made an average of 89 in her studies. On November 5th the mother states that they were livelier than they had ever been before and that Adolph made 100 in arithmetic and received three gold stars for correct papers. Isabella made 95 in arithmetic and 91 in spelling. November 19th Adolph made 100 in four of his spelling tests and received two gold stars and Isabella made 100 in some of her tests. They were much more active, walked better and began to tease each other. They continued to improve both mentally and physically until their last visit, February 18, 1928. At that time the boy had lost 18 pounds and the girl 17 pounds. They continued to make perfect marks in school.

Before treatment the mother had to put on their shoes and clothes, wash their faces and comb their hair. Now they displayed a keen interest in their personal appearance, dressed themselves, took their own bath, and manifested a desire for new clothes. Their mood had changed from a dull, apathetic state to a bright, happy, cheerful disposition. They began to sing and whistle about the house and engage in the usual games for children of their own age. The last report showed that Adolph made three—100 marks in his studies and Isabella four—100 marks in her studies during the week. The boy's genitals had increased to twice the size in this short time. His circumference about the waist had decreased 3 inches.

The treatment consisted of the oral administration of thyroid according to tolerace and anterior pituitary lobe. Both children are now in high third grade and progressing satisfactorily, although they abandoned treatment after their last visit in February, 1928. Naturally, one should like to know the effect of anterior pituitary alone.
My personal feeling is that it was largely responsible for the results obtained. However, there is very little doubt that thyroid in some manner augments the effect of the pituitary substance. Just how, no one can be certain from our present knowledge.

Conclusions

From these clinical data some fairly definite conclusions may be drawn—

1. Anterior pituitary lobe feeding is of distinct therapeutic value in certain cases of hypopituitarism.

2. Its effect is apparently enhanced by the addition of small doses of thyroid, especially in the reduction and redistribution of fat.

3. It stimulates genital growth in sexual infantilism of the pituitary type in early life, but fails to restore the atrophied organs in the adult types.

4. It stimulates skeletal growth in pituitary dwarfs if the epiphyses are still united.

5. It restores the menstrual function in amenorrhoea of pituitary origin and prevents delayed puberty in many instances.

6. In a few cases it apparently controls uncinate seizures in the pituitary form of epilepsy.

7. It has the effect especially when combined with thyroid, of restoring normal mental function in mentally defective children in cases of dystrophia adiposogenitalis.

8. Its indications are definitely limited to disease conditions dependent upon impairment of function of the pituitary glands.

9. Failures are frequently due to incorrect diagnosis, inferior quality of the gland substance employed and insufficient time allotted to the treatment.
RADIATION IN THE TREATMENT OF BLADDER TUMORS*

By Charles A. Waters, M. D.
Baltimore, Md.

To successfully treat bladder tumors, it is of paramount importance that a correct diagnosis be made. Time will not permit a lengthy discussion of bladder tumors but experience has shown that in order to treat these tumors successfully certain facts concerning each particular type of tumor must be known. We have adhered rather closely to Guyon's classification of bladder tumors which is based on their mode of implantation. In papillomata it must be known whether the tumor is benign or malignant. In papillary carcinomata it must be decided whether it is infiltrating or non-infiltrating, operable, or inoperable and whether or not metastases are present. Only after these facts have been ascertained can the proper method of treatment be intelligently applied. Epithelial tumors of the bladder wall are divided into the pedunculated, implanted and infiltrating groups. The pedunculated tumors are, as a rule, papillomata; the implanted tumors are those which spring from the mucous membrane and project into the bladder cavity; while the infiltrating tumors are regarded as neoplasms which involve the bladder wall deeply and extensively but which project only slightly into the cavity of the viscus. For our purpose, it has seemed that Guyon's classification of epithelial tumors of the bladder offers the selection of the most appropriate method of treatment for any particular type of tumor. The above classification and the diagnosis is usually founded on the gross and cystoscopic characteristics of the tumor rather than on the histological structures, but, when possible, tissue is also removed for histological study. Experience has shown that a form of treatment may be effective in one type of tumor but useless in another. For instance, in papillomata fulguration has proven the method of choice. It yields results which cannot be even approximated by the most radical surgery, yet on the other hand, it has been found practically useless in the treatment of carcinomata. The location of the tumor

*Read before the Baltimore City Medical Society. December 21st, 1928.
plays an important role in their successful treatment. In papillary carcinomata, especially the non-infiltrating or superficial infiltrating ones, a combination of fulguration and radium, using a cystoscopic radium applicator has proved satisfactory but in a large majority of these cases it is extremely difficult to determine whether a tumor is superficially infiltrating or not. If it is, it has been our experience, to supplement fulguration and radium with deep x-ray therapy. In the infiltrating carcinomata with ulcerations in the bladder this has been the method of choice. When the tumor is situated in the part of the bladder where it can be resected radically, that is the method of choice. In tumors situated in the vertex of the bladder radical removal is the method of choice, even though part of the peritoneum must be removed. In growths on the anterior, posterior and lateral walls, radical removal may often be carried out successfully even though the carcinoma is of considerable size. When the carcinoma involves the neck of the bladder, the trigone, ureteral orifice or prostate, radical surgery, in our hands, has not proved successful and when it has been necessary to transplant the ureter we have found that the tumor had penetrated so deeply that metastases were either present or occurred promptly. In such cases, instead of extensive resections with ureteral transplantation a better method of attack is to expose the tumor through a suprapubic opening, remove the vesical portion with the cautery and implant thoroughly screened radium needles in the base. In our experience, thoroughly screened radium needles (from 0.5 mgm. to 1 mgm.) are preferable to emanations and should be introduced sufficiently close to each other to supply 1 mgm. of radium element per cubic centimeter of tissue. When the ureter has been invaded this method has made it possible to avoid transplantation of the ureter and thus prevent the ascending infections and strictures which have usually followed the latter procedure and which lead to more or less complete destruction of the kidneys. When the carcinoma of the bladder involves the prostatic orifice or deeper portions of the prostate, providing the trigone and remainder of the bladder are free, Young's radical removal of the prostate and seminal vesicles with anastomosis of the membranous urethra to the anterior wall of the bladder may be successfully carried out, and is preferable to radium and deep x-ray therapy. When, however, the carcinomatous process has surrounded the neck of the bladder, intensive palliative procedures—such as radium, fulguration and deep x-ray therapy—are of value.
The amount of radium given should vary with the individual case. In small tumors 600 to 1200 mgm. may be sufficient after the pedunculated portion of the tumor has been destroyed. The application of 600 mgm. of radium to the pedicle or base of the tumor generally suffices. In large tumors much more may be necessary and, we have found that it is well to alternate radium with deep x-ray therapy. We make it a rule to have these patients return frequently for cystoscopic examination, every six weeks at first and then at intervals of two, three, four and finally six months. Without alarming them we try to impress upon them the importance of early recognition of any recurrences and their probable successful treatment. As a rule, they are eager to return to obtain the assurance that all is well. Besides numerous cases in which, up to the present time, the cure has seemed permanent, in many hopeless cases, palliative results, especially the cessation of hemorrhage or a diminution of obstruction or irritation, have been obtained.

We are convinced that these methods are far superior to suprapubic operative attack in such cases. There is no mortality as a result of the treatment whereas the death rate following bladder resection, especially when the base, trigone or ureteral orifice is involved, is often very high.
ACTINOMYCOSIS.*
By Arthur Marriott Shipley, M. D.
Baltimore, Md.

This disease falls in a group of infections, where the rate of invasion is relatively slow, so that the reaction in the tissues produces an inflammation that is usually chronic. The infections that fall in this group are sometimes spoken of as the granulomata and include tuberculosis, syphilis, glanders, leprosy and actinomycosis. The major pathological changes are proliferation of tissues followed by degeneration, and the clinical picture in all of these diseases is, in many respects, alike.

Actinomycosis is not very common and there are a number of things about it that are not clearly understood. The attention of physicians is fixed on cervico-facial actinomycosis and they often fail to recognize it in other parts of the body.

In 1845, Langenbeck discovered that the disease, “lumpy jaw,” in cattle could be communicated to man. This was not published until many years later, however. Bollinger discovered the organism in 1877. His observations were made on animals suffering from the disease. Quartz named the organism. Israel in 1877, and a year later Boström, wrote excellent descriptions of the disease in humans.

There is a lot of confusion and uncertainty, even among experts, as to the proper classification of the organism causing the disease. These branched mycelia have been called streptothrix, cladothrix, nocardia as well as actinomyces. There are some who believe that the disease in man and in animals is not due to the same organism.

Wright believes that the Actinomyces Bovis is a normal habitat of the mouth and intestinal tract in man and animals. Boström taught that the mycelia that can be recovered from grasses and grain are identical with the cause of actinomycosis.

“Sanford discards the nomenclature and cultural differentiation of Wright, which he had previously adopted and following the recom-

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mendation of the Committee on Nomenclature of the American Society of Bacteriologists, he classes the so-called nocardia and streptothrix as actinomyces and recognizes as actinomycosis, a disease produced by these various strains, whether acid fast and aerobic or not.” (Brickner.)

There is a fair unanimity, therefore, in calling this branched organism the Actinomyces Bovis, and it is placed somewhat higher in the biological scale than bacteria. Colonies of it may be easily seen and identified when abundantly present in the lesion, but it may have to be sought for rather carefully, especially in early actinomycosis or where there is extensive secondary infection.

Little colonies of the organism clumped together can be seen by the unaided eye and these little bodies are called ray fungi. They are found in the discharge from infected areas and vary in color from light sulphur yellow, through ground glass, to rather dark, opaque bodies. If such a body be put on a slide, stained and crushed under a cover slip, it presents a characteristic appearance.

The colony appears in three zones. A central, more or less homogenous mass containing, at times, small cocci-like bodies. Just outside of this central zone is an area of branching intertwined mycelia and outside of this at the peripherity, some of the radiating mycelia may be flattened out and present a club-shaped appearance. It is rare that a clump of organisms, when examined, presents a complete circle of all three zones.

Actinomyces Bovis grows readily upon most culture media. Its successful inoculation into the bodies of animals is not so easily done. It can be inoculated, however, and recovered in pure culture. While the sources of infection other than animals and humans suffering from the disease are not clearly understood, there is some belief that kernels and husks of grain and pieces of straw may be the mechanical carriers of the disease. This assumption rests on rather insufficient evidence, however. These substances have been recovered from areas infected by this organism, but their presence may be incidental only.

There is great uncertainty as to the natural habitat of this organism and its sources of infection are correspondingly obscure. Around these uncertainties considerable controversy and speculation are taking place. The avenues of infection are definite, however. In
humans the disease occurs in four clinical groups, depending upon these different avenues:

1. **Inoculation:** Primary actinomycosis of the skin or subcutaneous tissues as the result of an invasion through a break in the skin. This is the least common of the four.

2. **Cervico-facial:** This is the type usually described and is generally considered most common. Here the avenue of infection is through some break in the defenses within the mouth, either the teeth, gums or tonsils. The disease develops commonly in the tissues of the anterior superior triangles of the neck or in the cheek. The bone and periosteum of the jaw are often involved.

3. **Gastro-intestinal:** As the disease is more and more recognized, this type of infection is more frequently reported. Here the infection may show itself in a number of ways; in the gut, liver, pelvis or abdominal wall. There is evidence that the organism may pass through the gut wall and the damage here repair itself and the infection continue as an extensive one of the pelvis, abdominal wall or female generative organs.

4. **Pulmonary actinomycosis:** The lung is occasionally the site of infection. There are a number of branched organisms that may be found here, either as the direct cause of the infection or as a secondary contamination and because pulmonary tuberculosis is so common, these rarer types of chronic infection often go unrecognized. Spirochaetes are found in chronic suppurations of the lung and occasionally a streptothrix. In actinomycosis of the lung there is a likelihood that the infection will spread from the lung through the pleura and involve the chest wall. While this may occur in other types of infection of the lung, the presence of sinuses of the chest wall associated with an underlying infection of the lung or mediastinum is suspicious of actinomycosis.

There has been a great deal of discussion regarding the way in which actinomycosis spreads. The evidence is conclusive that in the majority of instances, infection spreads by continuity of tissues. It rarely spreads by way of the lymph channels, but lymph nodes although rarely involved, may be infected. There are instances where blood stream conveyance of the organism seems proven, but in the cases of actinomycosis of the brain without involvement of the skull, it is likely that the organisms reach the brain in emboli from some unfound area elsewhere in the body.
ACTINOMYCOSIS

There was admitted recently into the service of Dr. C. C. Hablis-ton at the City Hospitals a young colored girl with the diagnosis of pulmonary tuberculosis and Pott's disease. She was in the last stages of chronic infection; low blood pressure, clubbing of the fingers, emaciation, rapid pulse and amyloid infiltration. The lung involvement was of the right lower lobe. The liver was enlarged and there were a number of sinuses through the skin over the lumbar vertebrae. The resident noticed a number of small opaque bodies in the pus from the sinuses and when some of these were prepared and examined, typical branching mycelial thread were found, closely packed, with areas of degeneration and some clubbing of the threads. She lived only a few days and at post-mortem a very extensive actinomycosis of the liver was found with a moderate amount of involvement of the intestine.

The infection in the liver had spread by continuity of tissue through the diaphragm to the right lower lobe of the lung and also through the muscles and skin of the lumbar region, causing the sinuses in the back, which had been mistaken for tuberculous spondylitis.

There is a belief that bone and periosteum are not attacked. This is not correct. It does not produce extensive osteitis with sequestration as does tuberculosis, but it does erode and destroy bone. Actinomycosis of the spine, ribs, lower jaw, skull and bony pelvis have been reported. In one case admitted to the University Hospital in the service of Dr. Spruill a number of years ago, a young colored man had been employed as hostler by a physician in the country. While working about the stable he thrust a tine of a fork into his foot and there slowly developed around this area a chronic swelling which spread gradually until it involved the entire foot. When he came to the hospital his foot was very much enlarged. The swelling was hard and doughy and penetrated in a number of places by sinuses which led down to the bone. It was not difficult to recover the ray fungus from these discharging sinuses. The foot was so extensively destroyed that amputation was done and examination of the foot afterwards showed extensive surface erosion of bone. "Probably no tissue is immune to actinomycosis." (Brickner.)

Brickner has reported five cases of extensive actinomycosis of the pelvis treated by means of radical operative methods with recovery in all five. Actinomycosis of the kidney, bone, meninges, cranial
bones and female generative organs has been reported, and there is one report of actinomycosis of the male urethra. There is a large recent literature.

The pathology of this disease is produced by the reaction of tissues to a chronic irritant and for this reason it is often mistaken for tuberculosis, malignancy or syphilis. The prognosis of this disease taken in all its aspects, while grave, is not as hopeless as is generally supposed.

The most hopeful clinical variety is the cervico-facial and the least hopeful, extensive actinomycosis of the abdomen or chest. Actinomycosis of the liver gives a very bad prognosis and actinomycosis of the large gut is equally as grave.

Treatment: Like all chronic and stubborn infections a very great number of therapeutic agents have been tried. If the infection can be reached surgically, probably the most useful of all agents is radical operative removal.

There have been many conflicting reports as to the value of vaccine, but there is enough evidence in favor of vaccine to make its trial worth while. Various forms of radiation have been repeatedly tried, but the evidence would indicate that almost any type of radiation is of benefit in surface actinomycosis and that all types of radiation are relatively useless in deep-seated infections.

Neosalvarsan has been repeatedly tried with very conflicting reports. Probably the most used therapeutic agent is potassium iodide. This drug, while uncertain in its effects on humans, is considered almost a specific by veterinarians. Here again, however, the reports are very confusing, varying all the way from brilliantly complete cures to absolute failure, even when the most massive doses are given. Copper sulphate has been widely used in one of three ways. Either for irrigation of the sinuses with a 2 per cent solution (Bevan), or by mouth medication or by parenchymatous injection of 1 per cent copper solution (Von Baracz).

Recently a group of us were in Portland, Oregon, as guests of Dr. Thomas M. Joyce, who arranged a series of demonstrations in the laboratories of the Medical Department of the University of Oregon. Among these demonstrations was one by Dr. Herman B. Meyers, Professor of Pharmacology, and his paper discussed the use of volatile oils in the treatment of infections and reported very
excellent results obtained by the use of thymol in certain chronic skin infections seen in fruit packers.

After returning to Baltimore, Dr. W. A. Bridges was kind enough to send in a patient from Eudowood for a surgical clinic given in the University Extension series of clinics by Dr. J. M. T. Finney. This patient had been diagnosed and treated as pulmonary tuberculosis, but on admission to Eudowood Sanitorium his condition was recognized as actinomycosis of the lung with multiple sinuses of the chest wall. It was suggested that thymol be used in the treatment of the patient and Dr. A. H. Finkelstein of the Eudowood Sanitorium staff reports as follows:

The patient was given 15 grains of powdered thymol in 5-grain capsules, one three times a day, with a glass of milk before meals. In addition, the sinuses were irrigated with a 10 per cent solution of thymol in olive oil once a day. This treatment was begun November 22, 1928, and continued until January 7, of this year. The local condition improved and some of the sinuses closed, but treatment with thymol was discontinued, because he developed attacks of syncope, which might have been caused by thymol poisoning.

Ashton Alexander, M. D.
Provost
1839-1850
PNEUMOCOCCIC SEPTICEMIA
With Particular Reference To Endocarditis

By Eduard Novak, M. D.,
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BACTEREMIA IN LOBAR PNEUMONIA

The fact is well known that in the early stages of lobar pneumonia it frequently is possible to cultivate the causative organism from the blood. Some authors state that this can be done in practically all cases; but actual statistics based on considerable series indicate that positive blood cultures were obtained only in 20 to 50 per cent of all instances of the disease. This finding of the pneumococcus in the circulating blood during the active period of the infection is not surprising and is analogous to the demonstrable presence of the typhoid bacillus in the blood stream in the first week or more of typhoid fever. In fact, it usually is taught that both of these diseases are generalized infections with special localization and most marked pathology in certain organs—the lungs in one case and the intestines in the other. But the presence of diplococci in the blood, under these conditions, is regarded as a bacteremia rather than a septicemia; that is, although the organisms are thrown into the circulation they do not multiply there, in fact, they do not even survive very long.

The abundance of the pneumococci in cultures appears to have a direct relation to the prognosis. At the Rockefeller Institute in a series of 448 cases, positive blood cultures were obtained in about 30 per cent. The mortality among those that gave a positive culture was 55 per cent; among those with no growth from the blood the deaths were 8 per cent. In those cases where 1 to 15 colonies grew from one cubic centimeter of blood the mortality was approximately 40 per cent; the patients whose blood contained more than 15 diplococci in a cubic centimeter all died.

SEPTICEMIA IN LOBAR PNEUMONIA

In a certain number of patients with pneumonia, however, the organisms persist in the blood; or, if they disappear, they reap-
pear and multiply. When this happens the condition manifests itself usually after the pneumonitis has run its course. The crisis may have been passed several days before, or a normal temperature may have been reached by lysis, when a definite type of pyretic curve begins to make its appearance on the chart. This fever is irregular as in most septicemias. At the same time chills and sweating may develop. Careful physical examination and roentgenograms may not show empyema, abscess or other commonly expected complications. An active blood infection should then be suspected and blood cultures made repeatedly. The outlook is bad, only a few instances of recovery have been reported. The course ordinarily is one or two weeks but may be four or five weeks.

Frequency: The frequency of septicemia in pneumonia is rather difficult to determine, as there is a lack of data bearing directly on this point. Indirectly, however, some idea of the incidence may be obtained from the following collected statements. Lenhartz found that ulcerative endocarditis occurred in 50 per cent of the cases of all pneumococcic septicemia. Preble says that endocarditis occurs in one per cent of all pneumonias and in 5 per cent of fatal cases. Locke, in a series of 835 fatal cases of pneumonia at the Boston City Hospital, found 30 cases or 3.6 per cent with acute endocarditis. Assuming these observations to have at least a significant degree of accuracy, and assuming, of course, that there cannot be endocarditis without septicemia, we can combine the figures quoted. The deductions are that septicemia occurs in 2 per cent of all cases and is present in 7.2 to 10 per cent of fatal cases.

Endocarditis in Pneumonia

Frequency: On this point the authors quoted in the last paragraph give some evidence. To repeat, endocarditis complicates one per cent of all pneumonia cases, from 3.6 to 5 per cent of fatal cases and 50 per cent of all instances of pneumococcic septicemia.

Comparing the pneumococcus with other organisms causing acute endocarditis, Osler found in 209 cases of acute endocarditis that 54 were due to the pneumococcus. Weichselbaum in 1888 reported the same organism in 6 of 29 cases of acute endocarditis. These two authors therefore agree that the organism of pneumonia is responsible for approximately 25 per cent of all acute bacterial valvular inflammations. In 71 cases of acute and subacute endocarditis
Clawson obtained positive findings, as to etiology, in forty-six. Of the 46 cases, 5 were caused by the pneumococcus. In this series, however, there were a number of cases of the so-called rheumatic type. Locke states that the pneumococcus is the cause of 14 to 30 per cent of acute endocarditis.

Pathology: Two things are remarkable about pneumococccic endocarditis: the character of the vegetations and their location. Typically the vegetations are very large, sometimes forming huge masses, 2 cm. or more in height and a centimeter in diameter at the base. They are grey or slightly yellow, rather tough and dense. The valves which are the seat of the infection frequently are so extensively ulcerated as to be almost completely destroyed.

Location: Like the gonococcus, the pneumococcus has a relatively great affinity for the right side of the heart. In other kinds of endocarditis, as is well known, the preponderance of left side involvement is considerable. Osler, in 200 cases, found the left side attacked 176 times. Analyzing 22 cases, Jochmann showed that the left side of the heart was involved in 19, the right side in
2 and both sides in one. By Lenhartz the statement is made that the left side is attacked in 86 per cent of cases, the right side in 12 per cent and both sides in 2 per cent.

The pneumococcus, however, causes endocarditis on the right side four times as often, relatively, as do other organisms, according to Locke. Furthermore, it shows an increased predilection for the aortic valve. By way of striking comparison, below is given a summary of Jochmann's findings in a small series of unselected cases, together with Locke's figures on the frequency, in pneumococcic cases, of involvement of mitral, aortic and tricuspid valves.

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<tr>
<th>Valve</th>
<th>Mitral</th>
<th>Aortic</th>
<th>Tricuspid</th>
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<tr>
<td>All acute</td>
<td>11</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Pneumococcic</td>
<td>9</td>
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The reason for the relatively greater affinity of the pneumococcus for the right side of the heart is difficult to see. Two explanations suggest themselves. First, the blood returning from the general circulation may contain more numerous and more viable organisms than the blood which has just passed through the lungs, perhaps because the lungs have developed a heightened hostility toward the pneumococcus. Second, most cases of pneumococcic septicemia follow in the wake of pneumonitis, in which the right side of the heart is subjected to severe strain; it may be that as a result of this strain the valves on that side of the heart become more susceptible to the circulating organisms.

Tricuspid valve: Although the right side of the heart is involved so frequently, relatively speaking, the instances in which the vegetations are confined to the tricuspid valve remain uncommon. Thomas and O'Hara in 1920, stated that their case was the eighteenth of this kind to be reported, as far as they could discover; Lutembacher cited a case in 1921, Locke another in 1924, and these are the only additions I have been able to make to Thomas and O'Hara's list. Therefore, the case reported below seems to be the twenty-first in the literature.

Type of pneumococcus: Thomas and O'Hara state, as does Locke, that Type 1 pneumococcus is concerned in the majority of cases. However, only a few of the reports in the literature specify the type. Clough has had two cases, one caused by Type 3 and the other by Type 4.
Report of Case

(Lobar pneumonia, not typed; septicemia, blood culture negative; autopsy; pneumococci vegetations on tricuspid valve, other valves normal.)

H. J., age 21, colored laborer, was admitted to the hospital on March 16, 1925, complaining of pains in the chest. Six days earlier he had been seized with chills, vomiting and headache. Next day he had sharp pain in the chest on breathing, also he began coughing and expectorating a great deal of pinkish sputum. Since then he had been more and more prostrated.

The previous history and the family history were of no importance in the present connection.

On physical examination signs of incomplete consolidation were found in both lower lobes of the lungs. There was a soft systolic murmur over the mitral and pulmonic valves, with no enlargement of the heart to be made out. The temperature was 101, pulse 120, respirations 50. Marked jaundice was noted. The leucocytes were 16,800 per cu. mm.

The patient was in the hospital six days. The temperature became normal on the second day but went up again on the third day and thereafter remained irregularly elevated. Signs of pleuritis were detected but thoracentesis was unproductive and roentgenogram showed no abscess, only consolidation of the middle third of the right lung. Blood cultures were attempted on two occasions because the possibility of septicemia was definitely suspected; but both cultures remained sterile. The patient died on March 22.

At autopsy fresh pleuritis was found on both sides. The lungs were lumpy with nodules of bronchopneumonia in the stage of red hepatization. The heart was small, pale, flabby. Some dilation of the right ventricle was apparent. The mitral, aortic and pulmonic valves were all normal but the whole of the auricular aspect of the tricuspid valve was covered by fresh vegetations. These were grayish-yellow and very large. Some were a centimeter in diameter at the base and 3 cm. in height. The valve was ulcerated and damaged to such an extent that it practically was replaced by a mass of vegetations hanging in the auriculo-ventricular opening. Smears made from these vegetations showed typical pneumococci, morphologically at least. The organisms were found in sections also.

Literature

URETHRAL CALCULI
Report Of An Unusual Case

By L. K. Fargo, M. D.
Baltimore, Md.

Comparatively little space in modern urological text-books is devoted to the subject of urethral calculi, probably because they so seldom originate in the urethra.

Most urethral calculi have their origin in the kidney or bladder and are merely arrested at some point in the urethra during the process of expulsion from the urinary tract. Occasionally, however, as a result of inflammation or trauma, calculi may form, primarily in the urethra. Thus, stricture, false passage, diverticula, and exceptionally foreign bodies may prove to be causative factors.

Age—Urethral calculi may be encountered at any age, though an arrest in the passage of a stone, as pointed out by Young (I), is more apt to happen in children, because the disparity in size between the caliber of the urethra and ureter is not so great.

Location—Most calculi are found in the membranous urethra, probably due to the natural barrier formed by the external sphincter or the external layer of the triangular ligament, and the fact that this portion of the urethra is the narrowest with the exception of the meatus. They may, however, be found in any location, including the penile urethra. A fair number are arrested in the fossa navicularis. Young mentions the case of a man 65 years of age, who had submitted to treatment for gonorrhoea, when in fact his symptoms had been due entirely to a stone arrested at the meatus.

Size, Shape and Number—Urethral calculi usually occur singly, though spontaneous fracture may occur, giving the impression of multiple calculi. Urethral calculi may reach enormous proportions. Thus, N. P. Rathbun (II), in the American Journal Urology 14: 59-61, July, 1925, reports a urethral calculus, measuring 3 cm. by 10 cm, and Britneff (III) in a survey of Russian publications, mentions three calculi, weighing 427, 420, and 402 gms. respectively. Calculi grow in the direction of least resistance. Thus, many conform in shape to that part of the urethra in which they are situated.
Occasionally, a calculus rests partly in the bladder and partly in the urethra, in which case it is likely to be dumb-bell in outline with a narrow connecting bar, due to the resistance of the bladder sphincter.

Symptoms—When a calculus is arrested in transit through the urethra, the symptoms may vary from a simple dysuria and frequency to a sudden, partial or complete stoppage of the urinary flow, with sharp pain and the sensation of the presence of a foreign body. When the calculus develops in situ, the symptoms appear gradually, usually beginning with a slight, urethral discharge, frequency, and dysuria, and finally producing marked irritation, peri-urethral abscess, and fistula formation.

Diagnosis—This can frequently be made by a definite history of a sudden stoppage of urinary flow, sensation of foreign body, and pain. The calculus may be felt along the course of the urethra or by rectal examination. Sometimes merely a point of tenderness is elicited by palpation. A metal sound and the urethroscope are frequently found useful in diagnosis, the sound producing a grating sensation when it touches the stone, and the latter giving a clear view of the foreign body. It is only exceptionally that the use of the X-ray becomes absolutely necessary for diagnosis.

Treatment—Small stones may be removed by the aid of urethral forceps and meatotomy. Occasionally, a stone may be pushed back into the bladder and removed by supra-pubic cystotomy, or lithopaxy. If the calculus has escaped into the periurethral tissues, excision is indicated. With larger calculi, especially those in the posterior urethra, external urethrotomy is required.

The following report of a case of urethral calculus is presented, because of several unusual and interesting features:

M. G. K., age 63, admitted to hospital January 29th, 1924, complaining of "abscess between legs, and passing urine from abscess and penis."

F. H.—Father died, age 72, cause unknown. Mother died from smallpox, age unknown. Sisters: One, age 70, living and well.

P. H.—Never remembers being ill while young, except that at the age of 9 years he had a calculus wedged in the end of his penis, which was extracted with the aid of forceps. This attack he remembers clearly, because he was unable to pass his water, until the family physician removed the stone. The stone presented a facet on one surface, and the attending physician stated that another was present.
However, a search at the time failed to reveal its presence. Patient does not recall whether or not the attack was preceded by kidney colic. Since that time, except for an occasional cold, he states he has been in perfect health. Has never been operated on.

**Past Venereal History**—Negative.

**Present Complaint**—Began three weeks ago, with pain and swelling between legs; so severe in character that patient was hardly able to sit down. Hot applications and poultices were applied and in two days the abscess opened, discharging "blood and corruption." He then noticed that he was passing urine from both the urethra and the opening between his legs, and that all pain had disappeared. The dripping of urine from the fistulous opening was very annoying. Patient had some diuria and for the past two years nocturia, causing him to get up four or five times each night. Has always had some dribbling and urgency, but no hesitancy. Has never passed any blood, to the best of his recollection. He believes his sexual powers to be normal, though he has not had intercourse for five or six years.

**Examination**—Obese, white man, age 63; height, 5 feet 7 inches; weight, 240 lbs.

**Head**—Good growth of hair, gray; no scars, etc.

**Eyes**—Pupils equal in size, regular, react to light and accommodation normally; conjunctiva normal.

**Ears**—No tophi or discharge.

**Nose**—No obstruction to free nasal breathing.

**Throat**—No abnormalities.

**Mouth**—Teeth: four upper and four lower in need of repair. Nasopharynx somewhat congested.

**Chest**—Inspection: broad, deep. No abnormalities noted. Respiratory excursion: free and equal on both sides.

**Lungs**—No rales or adventitious sounds heard. No evidence of pleural rub; percussion note; normal.

**Heart**—Inspection: no areas of abnormal pulsation, etc. Palpation: no thrills. Percussion: Shows heart to be within normal bounds. **Auscultation**—No murmurs. P. M. I.: 5th interspace, nipple line. Blood pressure: Systolic—125, Diastolic—80.

**Abdomen**—Inspection: Large amount of adipose tissue noted.

**Palpation**—No areas of tenderness or rigidity; no masses felt.
Percussion—Tympanitic note elicited over abdomen. No abnormal areas of dullness.

Auscultation—Negative.

Extremities—Negative.

Cutaneous—Numerous fatty tumors on arms and thighs, and one on abdomen.

Reflexes—Normal.

Genito-Urinary—External genitals normal in appearance. No urethral discharge. No urine voided.

Scrotal Contents—Normal, except for a slight thickening of both epididymis. A small fistulous opening is noted on the right side of the perineum, from which pus exudes on pressure. Surrounding this is an inflammatory area.

Rectal Examination—No hemorrhoids, anal sphincter—good tone. Upon introduction of finger, a mass of stony hardness is felt, with the apex pointing upward (See Fig. 1.). When the finger is inserted further, the prostate is felt separate and distinct from the mass and normal in size, shape, and consistency. The seminal vesicles were not palpable. When an attempt was made to pass a sound, a grating was elicited at the point of arrest in passage.


Phenolsulphonephthalein Test—Forty per cent (40%) in one hour and ten minutes intravenously.

Blood Urea—49.10 milligrams per 100 c.c.

Wassermann—Negative.


X-ray—Large, dense shadow in mid-line between tuberosities of ischi.


Treatment—On February 5th, an external urethrotomy was performed with spinal anesthesia. A median perineal incision was made, after passing a metal sound to the point of obstruction. The stone was so firmly imbedded that a periosteal elevator was employed to free it from the urethral wall. Then, using the elevator as a fulcrum,
the stone was easily delivered. A tube was now introduced into the bladder, and the urethra and fascias sewed around the tube. A cigarette drain was placed in the depth of the perineum. Fascias and muscles were sewed with interrupted chromic catgut, and the skin with silkworm gut, interrupted sutures. Patient left the table in excellent condition.

The stone was about the size of a hen’s egg (See Fig. II.), measuring approximately 6 by 4 cm., and weighing 125.67 gms., irregular in shape, very dense and heavy, and rough in places. Probably a combination of phosphates and oxalates.
The patient made an uneventful recovery. All drains were removed on the 6th day, and on the 13th day patient voided normally. On the 18th day the wound was entirely healed, and a 28 F. sound could be passed with ease. Subsequent examinations have shown no abnormalities.

Remarks—Of interest in this case was the comparative absence of symptoms; unusual with a stone of such proportions, and the length of time that the stone had been present in the urethra. Dr. Charles S. Hirsch in the Journal of the American Medical Association, 1922 (IV), reported a case of multiple urethral calculi of 53 years’ duration, and the definite history in this case shows conclusively that the stone had been in process of formation fifty-four years. 1800 N. Charles St.

Bibliography

I—Young's Practice of Urology—Volume 1, Chapter VI, page 382—Urolithiasis.
SOME REMINISCENCES OF GEORGE W. DOBBIN, M. D.*

By Wm. Royal Stokes, M. D.

Baltimore, Md.

In writing the memoir of our late friend and member, George W. Dobbin. I thought it worth while to mention a few facts concerning his own personal history as well as some concerning his ancestors, which may be of some interest to his friends. In setting forth these latter facts I would state that I am narrating them on account of their historical interest to the Club and to those who in the future may consult our records.

George Dobbin was born in Baltimore on the 17th of December, 1870. The maiden name of his mother was Miss Key, and she was the granddaughter of Francis Scott Key, the author of our national anthem. Robert Dobbin, his father, was the son of Judge Dobbin, an eminent jurist of the city, and for many years the President of the Board of Trustees of Johns Hopkins University. His mother was the first cousin of Dr. Charles Frick, and this fact, I think, should be of special interest to us, owing to the distinguished career of Dr. Frick and his association with the library of the Medical and Chirurgical Society, which has resulted in the Frick Memorial which has donated many useful and interesting books to our library.

The subject of this memoir was educated at Marston's School in Baltimore, and later secured an A. B. from Johns Hopkins University in 1891. In 1894 he graduated at the head of his class in the medical department of the University of Maryland, and secured several other medals in addition to that which was awarded as the medallist of the class. From 1896 to 1899 he was resident obstetrician at the Johns Hopkins Hospital, and while serving in this position he published several interesting pieces of research relating to the infection of the female genital tract during childbirth with the so-called gas bacillus, now known as the Clostridium welchii. In 1899 he was elected professor of obstetrics in the College of Physicians and Surgeons of Baltimore, and he served in this capacity until this college united with the University of Maryland in 1915, and continued his association with the amalgamated schools either as active teacher

* Read at the Meeting of the Research Club, December 13, 1928.

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or professor emeritus until his death, which occurred on October 15, 1928.

He was a particularly popular teacher with the students, and many of them have told me that he gave a very clear exposition of his subject without overburdening their minds with perfectly unnecessary details, statistics, and nebulous theories. He was a skillful operator, and secured a very large practice by his meticulous attention to his duties. His output as a writer during his career as a teacher was limited, but we have the records of several interesting clinical studies which he read before our Club. After all, the rôle of a good teacher and a skillful practitioner is often just as useful to the community as that of the more retiring investigator.

I first met George Dobbin when we were boys, and remember him even at this time especially for his sunny and affable disposition and inexhaustible fund of wit and humor. His brother Robert, to whom I am indebted for some of the facts mentioned in this article, has told me that even as a young boy he had always maintained that he would study medicine.

"This budding Aesculapian even at this time was very much interested in many phases of the natural history of animals, and endeavored to prepare himself for his future profession by even dissecting some small animals such as dead birds which came into his possession."

I remember spending a very pleasant vacation on Dobbin Island in the Magothy in a party with him, and which also included Judge Dobbin, the owner of the island. At that time he was taking violin lessons, but was more or less surreptitiously also practicing on the banjo, an instrument which acquired for him later quite a local fame amongst college and certain other social groups. I remember even at that time Judge Dobbin seemed quite disappointed that his grandson would not devote all of his spare time for music to the nobler instrument, but this was not to be, and after all George gave much pleasure to many of his friends and audiences with the banjo.

While I was taking a special course at the Johns Hopkins University he persuaded me to join the banjo club, having heard that I had strummed somewhat upon this raucous instrument. Unfortunately Dobbin did not know that I played entirely by ear, and although I was able for a time to conceal my horrid secret, yet this was revealed at last, and it became evident that I did not quite fit in with the scheme
of things from the standpoint of pure musical art. I shall never for-
get the occasion upon which George intimated to me that it would be
ter better if I severed my connection with the club. It has been said of
Pope Leo XIII that it was a greater pleasure to receive a refusal of a
request from him than to have it granted by any other man, owing to
his wonderful diplomacy and affability. I think that this was so to a
large extent with Dobbin, and he left me with the thought that I had
performed a wonderful task in keeping my secret for such a long time
and that if I chose to develop musical ability on the banjo he held
himself absolutely unable to prophesy the result.

He was a most interesting entertainer himself both in monologue,
comic songs, and instrumental music, and as leader of the Hopkins
Banjo Club he contributed greatly towards college entertainment,
even keeping up his interest in such things after he entered Johns
Hopkins Hospital, contributing largely to the Christmas entertain-
ments. I have mentioned these perhaps trivial facts merely as an
indication of his genial character.

He married Beatrice Dunderdale, an unusually pretty and intel-
lectual woman, on October 10, 1900, and four daughters and one son
have been the result of this union. Again it may be of some interest
to inform you that Mrs. Dobbin’s grandfather was the organist in
St. Paul’s Church at Richmond where Robert E. Lee and Jefferson
Davis worshipped, and I myself have seen the pew which Jefferson
Davis so hastily left when he was informed that his capture in Rich-
mond was imminent. This old church attended by many prominent
citizens at Richmond both then and now, stands at the corner of
Grace Street and Capitol Square, its war-time pastor being the Rev.
Charles Minnegerode, whose grandson, Mr. Charles Minnegerode,
now lives in Baltimore. Mrs. Dobbin’s uncle, Capt. James Parker,
was one of the three lawyers who defended Admiral Schley when
charges were brought against him by President Roosevelt.

As you know, Dobbin became a very busy practitioner of his pro-
fession, but when he could cast aside the cares of practice, especially
at his country home on Lawyers’ Hill, I have never known one to be
more thoroughly happy not only within the circle of his own family
but whilst entertaining his innumerable friends.

I would like to emphasize this wonderful capacity which he pos-
sessed for making friends. In fact, I never knew of his having an
enemy, whilst I think he had more devoted friends than any other
man whom I have known. I have never heard him speak ill of any-one, and he would always make the best of any act of one of his friends or acquaintances. His professional skill and general character endeared him to a large professional clientele, and the qualifications which I have perhaps inadequately outlined also secured for him many lasting and sincere friendships. It is, I think, a difficult thing to go through an ordinary lifetime with such a complete record for personal love and friendship as Dobbin so richly secured. As I remember his genial disposition and his sunny smile, and without attempting any further to perform a psychological inquest upon our dear friend, I have endeavored in closing to express one of the most salient features of his character in a short poem.

A SMILE

At first I sought in vain to apprehend
   That subtle influence
   Which freely you dispense
Unconsciously to each devoted friend.

Their name is legion, owning you the light
   That clears the darkened sky
   And mitigates the sigh,
Putting "the whips and scorns of time" to flight.

Like some magician, still your secret hid,
   Your presence brings a joy
   That time can never cloy.
Reveal your secret to us all, I bid.

What is this wonder of our captious age
   That mends our sorry plight,
Brings pleasure and delight,
And spreads a joy o'er living's every page?

I ponder for an answer yet a while,
   And clear, oracular,
Comes light as from a star—
It was the magic of your sunny smile.
The Division of Medical Extension of the University of Maryland will offer this year the same general review course as was given in June 1928. This is a single, intensive, general course, which will last only three weeks. It is designed primarily to give to the physician in general practice the opportunity of studying those methods of diagnosis and of treatment which are in current use in the University Clinics. By careful use of the short period of time available a wide range of subjects is briefly presented. The greater part of the course is devoted to general medicine, but surgery and the various specialties are also included.

Information:
Questions concerning the course may be addressed to the dean of the Medical School, University of Maryland, Baltimore.

Requirements for Admission:
The applicant must be a registered physician in good standing. Preference will be given to physicians registered in Maryland.

Enrollment:
The course this year will be limited to twenty men. It is suggested that applications be made promptly as the course will be filled up in the order that applications are received. Address: Dean of the Medical School, University of Maryland, Baltimore.

Fees and Tuition:
A matriculation fee of $25.00 will be charged to all registrants from Maryland. For those coming from other States a charge of $50.00 will be made.

Registration and Matriculation:
Monday, June 3, 1929, 8.30 A.M., northeast corner Lombard and Greene Streets, Baltimore.

Daily Schedule:
8.00-10.00—Lectures.
10.00-11.30—Ward Rounds.
11.30-12.30—Clinic.
12.30-1.30—Lunch.
1.30-2.30—Dispensary Clinic.
3.00-4.30—Laboratory and Therapeutic Procedures, X-ray and Electrocardiography.
Lectures:
The morning lectures will deal with modern advances in diagnosis and treatment. The subjects will be chiefly from the field of general medicine and surgery with a few lectures devoted to the specialties.

Ward Rounds:
The class will be divided into groups for ward rounds and will visit the ward patients on the medical, surgical, and special services, in the University, Mercy and City Hospitals.

Clinics:
There will be a daily clinic in the Amphitheatre of the University Hospital. These clinics will be given by different departments.

Dispensary Clinics:
The class will be assigned in groups in rotation to the Dispensary Clinics for pediatrics, genito-urinary diseases, syphilis, and gastrointestinal diseases.

Laboratory, Therapeutic Procedures, Roentgen Diagnosis, Electrocardiography.

In these afternoon periods instruction will be given in the laboratory methods of diagnosis. Modern functional tests such as those employed in diseases of the kidneys and of the liver will be demonstrated. The technique of, and the indications for the use of such procedures as transfusion, venesection, infusion, and spinal puncture will be taken up, and demonstrated when possible. There will be a number of periods devoted to X-ray diagnosis. Electrocardiography and the interpretation of electrocardiograms will be briefly presented.
ROBERT TUNSTALL TAYLOR

Dr. Robert Tunstall Taylor was born at Norfolk, Virginia, on January 16, 1867. He came of a distinguished Virginia ancestry and was a descendant of Governor Yardley, the first Governor of Virginia. Dr. Taylor’s parents were Robertson and Baynham (Tunstall) Taylor and his maternal grandfather was Dr. Robert Tunstall of Norfolk, Va.

General Richard Lucien Page, first cousin to General Robert E. Lee, was a great uncle of Dr. Taylor’s on the paternal side. General Page was midshipman in the Navy and accompanied General Lafayette on his return to France. He served also with Commodore Perry on his famous trip to Japan. When the Civil War broke out, he resigned from the United States Navy and joined the Confederacy. Dr. Jonathan Cowdray was a relative of Dr. Taylor’s paternal grandmother. His career was a very romantic one. He was attached as surgeon to the “Philadelphia” in the first engagement between Tripoli and the United States about 1803. The officers and crew of this vessel were captured by the Tripolitans. The daughter of the reigning sovereign was very ill at the time and Dr. Cowdray saved her life and for this reason was given his freedom.

Dr. Sally Tompkins, a very distinguished figure in Richmond during the days of the Confederacy, was a relative of Dr. Taylor’s mother. She was known as the Heroine of the Confederacy, in that she was the only woman commissioned a captain during the Civil War. The story is as follows:—In July, 1861, this young lady left her
home of luxury and went to Richmond, opening a hospital for the care of wounded soldiers, beginning her work immediately after the Battle of Manassas. Her own funds provided comfortable beds for the sick and dying and for four years Dr. Sally Tompkins, as she was called, with unusual system, conducted a most efficient hospital. The Confederate Government found it necessary to close the majority of public hospitals in Richmond, and place these institutions under the supervision of the Government. President Davis specifically announced that Captain Tompkins, an efficient government representative, should have entire management of this unique hospital, which, so wisely superintended, was sending men back to the Army restored by care, medical attention and good food.

Dr. Taylor attended the Johns Hopkins University, from which institution he received the Baccalaureate Degree in 1899. He graduated in medicine two years later at the University of Virginia. He was married to Miss Florence Templeman of Baltimore, on October 6, 1891, and began the practice of medicine in Baltimore that same year, working during that time in the Dispensary of the Johns Hopkins Hospital. He was advised by Dr. Osler to do post-graduate work in Orthopaedic Surgery. Accordingly, he worked in the Children's and the Massachusetts General Hospitals in Boston, in the New York Orthopedic Hospitals and in the Jefferson and the University of Pennsylvania Hospitals in Philadelphia. He also spent some time in Rochester, N. Y., studying roentgenology and bringing back with him one of the first X-ray machines in this city.

In 1900, he came back to Baltimore. In 1901, he was appointed Associate Professor of Orthopaedic Surgery and Head of the Department at the University of Maryland. He had, however, in the meanwhile been advanced to a full professorship, in which positions he continued until his death. He was a pioneer in Orthopaedic Surgery in the South. He was the founder and organizer of the first hospital for crippled children south of Philadelphia. It was then called the Hospital for the Relief of Crippled and Deformed Children and was located at Charles and Twentieth Streets. Through Dr. Taylor, Mr. Kernan became interested in this hospital and through him gave it its present location at Hillsdale, Md., the name being changed to the James Lawrence Kernan Hospital and Industrial School for Crippled Children. Dr. Taylor served as Surgeon-in-Chief from the beginning of the hospital to the time of his death.

He was Orthopaedic Surgeon to the University, Woman's, St.
Agnes and St. Joseph’s Hospitals and was Consultant in Orthopaedic Surgery to the West Baltimore General and Mercy Hospitals. He was also Consultant to the State Industrial Accident Commission of Maryland and to a number of community hospitals outside of Baltimore.

During the War he was commissioned Major in the Medical Corps and saw duty at Fort Meyer and in the Surgeon General’s Office in Washington. He was promoted Lieutenant Colonel and did a great deal of work in connection with the Medical Museum of the War Department in developing the use of the cinema in the teaching of Orthopaedic Surgery. During the reconstruction period, Dr. Taylor was Chief of the Orthopaedic Service at Fort McHenry. After the War he continued his interest in the injured soldier as Consultant to the United States Public Health Service and to the United States Veterans Bureau.

He was fellow of the American College of Surgeons, member of the American Orthopaedic Association and took a keen interest in the affairs of the Medical and Chirurgical Faculty of Maryland.

He was always ready to give freely of his time to the solution of medical problems that concerned the general public. He interested himself in the inauguration of the inspection of children in the public schools and was an active member of the Committee that was appointed by the State Faculty to cooperate with the City in organizing a City ambulance service. More than twenty years ago, he organized special classes in the public schools for the teaching of crippled children. He was instrumental in the establishment of the Walker-Gordon Laboratory in Baltimore.

Dr. Taylor was an enthusiastic and successful teacher of Orthopaedic Surgery and was especially skillful in the use of the blackboard in illustrating his lectures. Although he was not an alumnus of the University of Maryland, he was loyal and energetic in his devotion to the interests of his adopted Alma Mater. He interested Mr. Isaac E. Emerson in the problems of professional education in Maryland, to such an extent that Mr. Emerson gave very generously to the Departments of Medicine and Pharmacy.

He was interested in almost every phase of life and his enthusiasm was easily aroused. He was devoted to children, loyal to his friends and was a gracious host. He was fond of his clubs and was very active in the social life of Baltimore. He was a member of the Episcopal Church.
The following is a partial list of his publications:


"Surgical Tuberculosis, with Especial Reference to the Use of Tuberculin in Diagnosis and Treatment."

"The Preservation and Restoration of Function in Fractures and Dislocations."

"Our Present Knowledge in Regard to Infantile Paralysis."

"Newer Methods of Treatment in Non Union of Fractures."

"Foot Drop: A New Operation for its Relief."

"Fracture Dislocation of the Shoulder."

"Restoring Mobility After Bony Ankylosis of the Joints."

"Stereo-Arthrolysis. A Preliminary Report and Experimental Study in Arthroplasty."


"Reminiscences in Bone Surgery with Special Reference to Pott’s Disease."

THE ENDOWMENT FUND

The Board of Trustees of the Endowment Fund reports for the fiscal year terminating December 31, 1928, as follows:

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Increase for 1928.......................... $4,488.46

Appraised (market value) of bonds in the Endowment Fund of the University of Maryland on December 13th, 1928.................. $116,140.75
Cash on hand.................................. 6,605.73

Total (actual value) December 13th, 1928.......................... $122,746.48
Those interested in the material progress of the University of Maryland should study the above report with the utmost care. It offers much food for thought. The first gift was received in 1897, and now after 31 years of constant effort, the money in hand for administration by the Board of Trustees amounts in round figures to $121,000, an increment of slightly over $4,000 per annum. In view of the signal service rendered by the University of Maryland during its 122 years of existence to the citizens of Baltimore as well as to those of Maryland, of the South, and to a lesser degree to those of the country at large, this lack of support on the part of the philanthropically inclined is truly hard to understand. The cost of medical education is far greater than the returns received from students' fees. Heretofore the difference has been met by grants from the Maryland Legislature. But these have merely been sufficient to enable the School barely to carry on. Even this aid would have been totally inadequate to keep the School alive had it not been for the loyal support of the greater portion of the teaching forces who have given their services without recompense.

It may not be amiss here to call attention again to the fact that the Board of Trustees of the Endowment Fund of the University of Maryland is an independent body, working under a charter granted by the State of Maryland. None of the principal entrusted to its care can be touched. The interest alone is available for use and this only on the consent of the Board of Trustees. This proviso insures the perpetuity and inviolability of the fund. Moreover, any unused increment at the end of the fiscal year automatically becomes an integral part of the fund. These safeguards absolutely prevent the dissipation of the corpus of the fund and assure donors that their bequests will be utilized strictly in accordance with their wishes.

In no way can our alumni serve the University better than by speaking to their friends, patrons and clients, when opportunity presents, a good word for the Endowment Fund.

Contributions, donations and bequests, if intended for the School of Medicine, may be given to the general medical fund, or to some special purpose, as building, research, library, hospital, pathology, publication, scholarship, etc.

* You yourselves can help the movement along materially with a remembrance in your wills. Bequests of any size will prove most welcome. It is the spirit behind the gift, not the amount, that counts.
A NEW VENTURE FOR THE ALUMNI ASSOCIATION
AND ITS SIGNIFICANCE

The Medical Alumni House

No longer is it the sole function of an alumni association to offer its members a means of maintaining a sentimental bond with the Alma Mater and of perpetuating the pleasant associations of student days. The newer concept of function is well exemplified in the development of our own Alumni Association. Springing from three different sources, its membership has been gradually welded into an organization of great solidarity and ever-increasing influence, with no lessening of the finer sentimental ideals responsible for its inception. For this broadening scope the credit belongs chiefly to the succession of energetic and far-sighted officers with which the Association has been blessed in its more recent history. To their motivating power we owe the powerful and stimulating influence which the Association now exerts in the every-day life of the University and its student body.

No better illustration of this need be adduced than in the project recently undertaken by the Association of purchasing a valuable property, in the immediate neighborhood of the School, for the purpose of providing a centre of alumni and student activities. The property is located at 519 West Lombard Street, directly opposite the medical school. To acquire this large building it was necessary to float a bond issue of $30,000, and the willingness with which the first portion of these bonds offered was purchased by our alumni, speaks volumes for their loyalty, as well as for their business acumen, for the investment is sure to be a good one.

Plans for the remodeling of the building include provision for dining-room and cafeteria service for students, faculty and public, as well as dormitory accommodations for a considerable number of the students. Other student activities, like the Y. M. C. A. and the Book Store which the Association has been so successfully conducting for the benefit of the students, will likewise be housed in the building. On the other hand, the Alumni Association will realize a long-felt want in having comfortable offices in the building, which it is hoped that visiting alumni will visit and utilize when in Baltimore.
From this centre it is certain that the Association can radiate a larger sphere of activity in the life of the medical school. Each year new lines of work suggest themselves. To mention only a few examples, within the past few years the Association has cooperated both financially and editorially, in the improvement of the Bulletin; it has inaugurated a Students' Loan Fund, for the financial assistance of students who need and deserve such help; it has spent thousands of dollars in compiling and keeping up to date an accurate directory of graduates; and so on.

The new Alumni Centre means a realization of the dreams of those who have in recent years guided the destinies of the Association. Their enthusiasm and driving power, communicated to an ever-increasing body of their fellow members, has produced this material expression of what the Alumni Association should stand for. But, after all, the material advantages flowing from a project of this sort are of far less significance than the ideal and the spirit which they typify. Of its honorable past the University can not be robbed. The Alumni Association can help greatly in assuring its future.

BOOK REVIEW


A practical, common-sense, brief exposition of the subject of Pediatrics. Presented in a very readable form, with many good illustrations. This book is intended, "To present a modern picture of diagnosis, treatment, and management of the diseases of infants and children under conditions encountered by the family physician."

It is eminently adapted for this purpose and should be well received.
ALUMNI ASSOCIATION SECTION

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SPRING ACTIVITIES

Last year, at the completion of the school year, this Association attempted a rather pretentious programme for the purpose of bringing back and welcoming graduates of the Medical School of this University. Because of the scale of our plans, the most confident had some misgivings as to the result of this venture.

Events proved these fears of failure unfounded. Our success exceeded the hopes of the most optimistic. Over 375 men from all over the country registered at the Alumni Office and participated in the luncheon, clinics, banquet and outing. The visiting ladies were splendidly entertained by the ladies’ committee formed for

Attend Spring Activities June 6-7-8

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this purpose, at cards, tea, theatre and a luncheon at one of the country clubs.

The banquet, of which these activities are an outgrowth and which has been held by this Association for many years, was certainly one of the most successful in the history of our school.

This year, as a result of the splendid support accorded our maiden effort last spring, we intend to repeat and improve, if possible, the programme. The details of these activities and order, forms for tickets will be found upon the inside front cover. The time will be just before Commencement on June 6th, 7th, and 8th, and every man is requested to participate in a really worthwhile vacation at his Alma Mater.

CLASS REUNIONS

Because of the importance of these reunions in making our 1928 affair the great step forward it was, it seemed advisable to emphasize this phase by mentioning it separately. There were 13 enthusiastic class reunions, all well attended and all completely successful. Graduates with a desire to meet again the members of their graduating class are invited to communicate with the Secretary, Medical Alumni Association, 519 W. Lombard Street, Baltimore, Maryland. (This is the new Medical Alumni House immediately opposite the Administration Building of the Medical School.)

We wish particularly to call the attention of members of the classes of

1904—University of Maryland,
1904—College of Physicians & Surgeons,
1904—Baltimore Medical College,
1909—University of Maryland,
1914—University of Maryland,
1919—University of Maryland,
1921—University of Maryland,

as committees of these classes are planning reunions and joint reunions and are anxious that you communicate with the chairman of the committee of your class so that arrangements can be made to insure each reunion a large number and a great success.

ATTEND SPRING ACTIVITIES JUNE 6-7-8
Class Reunion Committees:

"Twenty-fifth Year Joint Reunion"—Class of 1904.
University of Maryland:
Dr. Charles Bagley, Jr., Latrobe Apts., Baltimore.
College of Physicians and Surgeons:
Dr. Andrew C. Gillis, 1033 N. Calvert St., Baltimore.
Baltimore Medical College:
Dr. Emil Novak, 26 E. Preston St., Baltimore.

"Twentieth Year Reunion"—Class of 1909.
University of Maryland:
Dr. Harry M. Robinson, 405 N. Charles St., Baltimore.

"Fifteenth Year Reunion"—Class of 1912.
Dr. C. C. Habliston, 104 W. Madison St., Baltimore.

"Tenth Year Reunion"—Class of 1919.
University of Maryland:
Dr. Cyrus F. Horine, 817 Park Ave., Baltimore.

"Eighth Year Reunion"—Class of 1921.
University of Maryland:
Dr. James Herbert Wilkerson, 1800 N. Charles St., Baltimore.

This office will cooperate in every way in arranging these affairs. Write in for information.

BOND PROSPECTUS

The Alumni Association of the School of Medicine of the University of Maryland, Incorporated.
Incorporated in Maryland, 1929.

$30,000.00 Secured 6% Bonds maturing January 1st, 1940
These bonds are obtainable from the treasurer of the corporation in any amount from five dollars ($5.00) upwards. Interest at the rate of six per cent (6%) per annum will be payable by check in semi-annual instalments on January and July 1st in each year until maturity or retirement accounting from January 1st, 1930.

These bonds will be secured by a deed of trust of the property No. 519 West Lombard Street, Baltimore, Maryland. The property is to be acquired for a total of twenty-two thousand five hundred dollars ($22,500) and between eight and ten thousand dollars will be spent in altering and equipping the premises with a

Attend Spring Activities June 6-7-8
modern heating plant and sanitary and other facilities for offices and about twenty-two student roomers. Initially the property will be subject to a first mortgage of ten thousand dollars ($10,000) and a second mortgage of eight thousand dollars ($8,000) but by the terms of the issue and the deed of trust these mortgages are to be reduced by the proceeds of all bonds of this issue in excess of twelve thousand dollars ($12,000) so that when the whole of this issue is outstanding the property will be free of all encumbrance except the deed of trust securing the holders of these bonds. In the opinion of counsel these bonds will be a first lien upon the above described property after the disposition of the above mentioned mortgages.

These bonds will be non-negotiable but may be transferred without restriction upon the books of the corporation by surrender of the bond duly endorsed by the named owner thereof.

The payment of interest and retirement at maturity of these bonds, in addition to the security of the deed of trust giving each bond holder a direct lien upon the property, is further assured by the income from the operation of the property which, based on present experience of the operation of a smaller and less advantageously situated property, is conservatively estimated to be in excess of four thousand dollars ($4,000) per annum or more than twice interest requirements on this issue and leaving a substantial surplus for the retirement of these bonds before maturity. In addition, the profits from the other projects of the corporation and the annual dues to the members, which amount to more than three thousand dollars ($3,000) per annum, are obligated to the payment of the principal and interest of these bonds.

Title to the property will be guaranteed by the Maryland Title Guarantee Company and all legal matters in connection with this issue and the deed of trust will be approved by Richard C. Bernard, Esq., Attorney, of Baltimore.

These bonds are now for sale, subject to allotment. Make all checks payable to either Howard M. Bubert, M. D., Secretary, or M. LeRoy Lumpkin, Treasurer, addressed to the corporation.

(This statement has been prepared under the supervision of counsel; its accuracy is not guaranteed, but the sources of information used are deemed reliable.)

Buy a Bond
DEATHS

Dr. Robert Tunstall Taylor, Baltimore, Md.; University of Virginia, class of 1891, Professor of Orthopedic Surgery in the University of Maryland, and Chief Surgeon, Kernan Hospital for Crippled Children; aged 65; served as Lieutenant Colonel, M. C., U. S. Army, during the World War. B.A., Johns Hopkins University, 1889; died, February 21, 1929, of angina pectoris. After taking his medical degree Dr. Taylor spent some years in preparing himself for the specialty of orthopedic surgery in the clinics of Boston and New York. After the completion of this apprenticeship, he located permanently in Baltimore where he organized the Hospital for Crippled Children which was housed on North Charles Street. Some years ago this hospital was relocated at Woodlawn, Maryland and its name changed to the James Lawrence Kernan Hospital for Crippled Children as a memorial to the public spirited Baltimorean whose generous Will made the change possible. Dr. Taylor was continued as chief surgeon of the institution and held this position until his death. It was largely through his marked executive ability that it has been brought to its present high state of usefulness. In 1901, Dr. Taylor was made Associate Professor of Orthopedic Surgery in the University of Maryland, and later promoted to the position of Professor of Orthopedic Surgery. As a teacher, he exhibited marked ability in presenting his subject clearly and lucidly to his pupils. He was a recognized authority upon his specialty and held the respect of his confreres and colleagues. Besides being the author of a book on the “Surgery of the Spine and Extremities,” he was a prolific contributor to the current medical literature upon topics bearing on his chosen field of effort. He is survived by his wife who was Miss Florence Templeman. During all his years of service at the University of Maryland his interest in the task assigned him never lagged, but continued to the end unabated. By his death the University has suffered a real loss, the Board of Instruction a highly efficient teacher and the children of Baltimore and Maryland a true friend and benefactor. Those of us who knew him will always cherish his memory as a prized heritage.

Dr. Alfred Thomas Le Boeuf, Salem, Mass.; B. M. C., class of 1908; aged 46; died, January 18, 1929, of influenza.

Dr. William G. Coppage, Baltimore, Md.; P. & S., class of 1898; aged 56; died, February 15, 1929.

Dr. Joseph William Tartar, Iron River, Wis.; P. & S., class of 1895; aged 57; died, in January, 1929, of influenza.

Dr. William Beauregard Crisp, Roxboro, N. C.; P. & S., class of 1885; aged 68; was found dead in bed, January 11, 1929, of angina pectoris.

Dr. Nugent George Frost, Humbold, Ariz.; class of 1918; aged 34; died, December 29, 1928, of pulmonary tuberculosis.
Dr. William Whelan Pascoe, Adams, Mass.; B. M. C., class of 1894; died, December 2, 1928, of peritonitis following an operation for perforated gastric ulcer.

Dr. Charles Wesley Moyer, Rockford, Ill.; P. & S., class of 1895; aged 61; died, December 29, 1928, of carcinoma of the colon and pulmonary embolism.

Dr. William Clyde Burns, Baltimore, Md.; B. M. C., class of 1890; died, December 18, 1928.

Dr. John Clark Manning, Baltimore, Md.; B. M. C., class of 1904; aged 56; died, December 29, 1928, of pneumonia.

Dr. Edward Thomas Mason, Savageville, Va.; class of 1891; aged 58; died, December 5, 1928.

Dr. Remer Young Lane, Orange Park, Fla.; P. & S., class of 1884; aged 67; died, December 3, 1928, of heart disease.

Dr. John Sawyer Hitchcock, Proffit, Va., class of 1893; veteran of the Spanish-American War; for many years head of the health department of Massachusetts; aged 59; died, December 14, 1928.

Dr. Richard T. Galvin, Providence, R. I.; P. & S., class of 1906; aged 49; died, December 26, 1928, of cerebral hemorrhage.

Dr. William Baker Morrison, Hagerstown, Md.; class of 1895; aged 62; died, December 14, 1928, of heart disease.

Dr. Joseph Peyton Fearington, Winston-Salem, N. C.; class of 1887; aged 66; died, November 23, 1928, of pneumonia, chronic nephritis and heart disease.

Dr. David Ridenour Newcomer, Sharpsburg, Md.; class of 1923; interne University Hospital, 1923-1924; aged 30; died, December 22, 1928, of a fractured skull received by falling off the roof of his house.

Dr. John Sansbury, Forestville, Md.; P. & S., class of 1895; aged 59; died, December 13, 1928, of carcinoma of the rectum.

Dr. Clifton C. Laws, Chesapeake City, Md.; class of 1895; aged 55; died, January 14, 1929.

Dr. Max Freedman, Newark, N. J.; class of 1926; aged 28; assistant resident surgeon, at the West Baltimore General Hospital; died, December 13, 1928, of acute nephritis.

Dr. Daniel I. McColley, Wilmington, Del.; P. & S., class of 1889; aged 60; died, November 26, 1928, of fracture of the cervical vertebrae received in a fall downstairs.

Dr. Edgar Ransom Park, York, Pa.; P. & S., class of 1892; aged 64; died, January 10, 1929, of lobar pneumonia.

Dr. Alvey J. Smith, Wolfsville, Md.; class of 1898; aged 63; died, January 12, 1929.

Dr. George Wythe Cook, Washington, D. C., class of 1869; past president of the Medical Society of the District of Columbia, the Washington Obstetrical and Gynecological Society and the District of Columbia Board of Medical Examiners; formerly professor of physiology, National University Medical Department, and professor of clinical medicine, Department of
Medicine, George Washington University; veteran of the Civil and Spanish-American Wars; aged 82; died, December 26, 1928, of cerebral arteriosclerosis.

Dr. John George Schweinsberg, Baltimore, Md.; class of 1909; aged 40; died, January 10, 1929, of chronic nephritis and cardiac disease.

Dr. Jacob H. Steling, New Freedom, Pa.; P. & S., class of 1886; aged 77; died, January 5, 1929, of cerebral hemorrhage.

Dr. James Middleton Boyette, Southport, N. C.; P. & S., class of 1885; aged 71; died, November 6, 1928, of diabetes mellitus.

Dr. Metellus Rowan Barclay, Chicago, Ill.; class of 1889; aged 61; died, November 28, 1928, of chronic myocarditis.

Dr. Alexander W. MacDonald, Baltimore, Md.; P. & S., class of 1890; aged 63; died, January 15, 1929, of pneumonia.

Dr. Edwin Kirpatrick, Elgin, Ill.; P. & S., class of 1886; aged 75; died, January 5, 1929, of cardiac disease.

Dr. Archibald A. Chisholm, Manuels, Newfoundland; class of 1897; aged 62; died, October 7, 1928.

Dr. William Scott Griffith, Johnstown, Pa.; B. M. C., class of 1898; aged 53; died, January 5, 1929, of pneumonia.

Dr. Kent Cato Hammond, Dundalk, Md.; class of 1925; aged 27; died, January 24, 1929, of pneumonia.

Dr. Charles H. Bubert, Baltimore, Md.; P. & S., class of 1888; aged 65; died, January 30, 1929, of pneumonia. Dr. Bubert was a well known, prominent and respected general practitioner of the "West End." Baltimore. He was for many years supreme medical director of the Approved Order of Heptasophs. Dr. Howard M. Bubert, our honored secretary, is a son. The Bulletin takes this opportunity to offer to Dr. Bubert, our heart-felt sympathy over his bereavement.

Dr. Frank J. Garrett, Rockingham, N. C.; class of 1889; aged 64; died, December 23, 1928, of post-operative broncho-pneumonia.

On February 19, 1929, at Bridgeport, Conn., U. S. A., the sudden death of Frank Harvey Coops, B. A., M. D., P. & S., class of 1896, came as a shock to his large circle of friends. Although for some years past he had not been in robust health, the end came suddenly and unexpectedly.

Dr. Coops was born in Milton, Nova Scotia, about sixty-two years ago. He was educated in the schools at Milton and Liverpool, at Dalhousic University, N. S., where he received his B. A. degree; at Baltimore, Md., and Boston, Mass. For the past twenty-odd years he practiced at Bridgeport, Conn., where his abilities placed him in the front rank of the profession. To a first-rate scholarship was added a pleasing personality which made association with him a valued experience for those who were thus privileged.
Dr. Emil Novak, of Baltimore, Md., was the guest of honor at a dinner given by the Alumni of the University of Maryland, at Charleston, West Virginia, on April 9th. The dinner was held at the Daniel Boone Hotel, and at least twenty-five alumni, representing all three of the parent schools, attended. In a short after-dinner address Dr. Novak emphasized the widening influence of the Alumni Association in the life of the University, and described some of its more recent activities. He spoke especially of the efforts being constantly made to improve the standard of the Bulletin, and told also of the Association's new Medical Alumni Centre, with its possibilities for influence among both graduates and undergraduates. Mention was also made of other activities, such as the Student's Loan Fund, which the Association maintains for the assistance of deserving students. Dr. Novak reports that he was deeply impressed by the fine spirit evident in this group of Alumni, representing as they did many of the leaders of the profession in Charleston. Among those present were the following:

| O. H. Bobbitt | R. H. Kessel | C. F. Sayre |
| R. K. Buford | C. L. Lyon | A. A. Shawkey |
| I. P. Champe | W. A. McMillan | W. F. Shirkey, Jr. |
| C. E. Copeland | M. I. Mendeloff | J. R. Shultz |
| E. F. Gott | W. W. Point, Jr. | B. H. Swint |
| J. R. Hunter | C. A. Ray | R. H. Walker |
| R. A. Ireland | J. U. Rohr | R. E. Woodall |

After the dinner Dr. Novak delivered an address before the Kanawha Valley Medical Association, on "Ovarian Dysfunction and Uterine Cancer as Causes of Menopausal Bleeding."
MEETING OF THE OHIO STATE MEDICAL SOCIETY

The Ohio State Medical Society meets in Cleveland on May 7, 8, and 9. The headquarters are at the Hotel Hollenden, located at Superior Avenue and East 6th Street. The sessions will be held in the Cleveland Public Auditorium.

OKLAHOMA STATE MEDICAL MEETING

The Oklahoma State Medical Meeting will be held in Oklahoma City, May 27th, 28th and 29th. The Huckins Hotel in Oklahoma City will be headquarters for this meeting.

Dr. C. Calvin Hoke, our Field Secretary, urges any of our Alumni who wishes to attend to get in touch with him at 707 Petroleum Building, Tulsa, Okla. If there is a sufficient amount of urging, he will be able to arrange for a get-together on one of the above dates.

STATE MEDICAL MEETING IN WESTERN NEW YORK

Dr. Milton E. Gregg, of Mottville, N.Y., our Field Secretary for the Western part of the State, writes that the Annual Alumni Meeting for that section of the State will be held this year at Utica during the first week of June. The meeting will be held in connection with the State Medical of Western New York and Dr. Mott anticipates the largest meeting that has been held in the history of the Association.
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