

PRICE--\$2.00 PER YEAR

BIBLIOTHEQUE NATIONALE
THE

CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News

THE OLDEST MEDICAL JOURNAL IN THE DOMINION

Vol. LIV

TORONTO, CANADA, JANUARY, 1921

No. 5



A STANDARD EXTRACT OF MALT

SURPASSES ALL OTHER EXTRACTS OF MALT IN NUTRITIVE AND DIASTASIC (STARCH CONVERTING) EFFICIENCY. IT IS THE BASIS OF A NUMBER OF LOGICAL COMBINATIONS WITH APPROVED REMEDIES.

Maltine Plain
" Ferrated
" Cod Liver Oil
" Creosote
" Pepsin and Pancreatine
" Hypophosphites
" Cascara Sagra
" Phos. Iron, Quin. and Strych.
Malto-Yerbine

FOR SALE by ALL DRUGGISTS
SAMPLE ON APPLICATION

The Maltine Co.
Toronto

Malto-Yerbine Each fluid ounce contains the active principle of 30 Grs, Yerba Santa.
A Stimulating Expectorant

The Ottawa Truss and Surgical M'f'g Co.

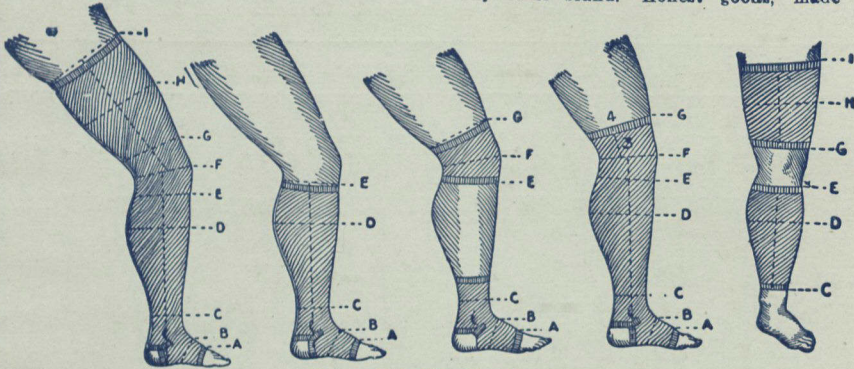
MANUFACTURERS OF

Limited

Trusses, Elastic Stockings, Suspensories, Shoulder Braces,
Supporters, Chamois Vests, Crutches, Splints, Rubber Sundries

THE ONLY FACTORY OF ITS KIND IN CANADA

OTTAWA STANDARD HOSIERY --- Worthy, because made so. Wears longer and fits better than any other brand. Honest goods, made in Canada, upon order of the physician, according to measurements, from absolutely fresh elastic and best floss silk. No excuse now for accepting inert, lifeless stockings, so send in your orders and get freshly made stock. Your every order will prove a *patient-keeper* — stocking will do what you expect of it.



GARTER STOCKINGS	Silk	Lisle Thread	ANKLETS	Silk	Lisle Thread
" LEGGINGS	\$4.50 each	\$3.50 each	KNEE STOCKINGS	\$ 3.00 each	\$2.50 each
KNEE CAPS	3.50 "	2.75 "	THIGH STOCKINGS	7.50 "	6.00 "
	3.00 "	2.50 "		11.00 "	9.00 "

Discount to the Profession, 10 per cent.

The Ottawa Truss and Surgical M'f'g Co., Limited, Ottawa, Canada

Muscular Pain

is often the most distressing feature of the maladies common to Winter—colds, La Grippe and tonsillitis. As a means of relieving such

myalgic pain, no remedy at the physician's command will be found more promptly effective than

PHENALGIN

Clinical experience has definitely established that PHENALGIN is especially useful, not only for its pain relieving properties but also for its freedom from depressing or deleterious action.

For many years, therefore, PHENALGIN has held first place as a safe dependable analgesic in La Grippe, Rheumatism, Gout, Migraine, Dysmenorrhea, and kindred conditions.

Samples and full information on request

THE ETNA CHEMICAL CO., New York

LISTERINE

A Non-Poisonous, Unirritating Antiseptic Solution

Agreeable and satisfactory alike to the Physician, Surgeon, Nurse and Patient. Listerine has a wide field of usefulness, and its unvarying quality assures like results under like conditions.

As a wash and dressing for wounds.

As a deodorizing, antiseptic lotion.

As a gargle, spray or douche.

As a mouth-wash-dentifrice.

Operative or accidental wounds heal rapidly under a Listerine dressing, as its action does not interfere with the natural reparative processes.

The freedom of Listerine from possibility of poisonous effect is a distinct advantage, and especially so when the preparation is prescribed for employment in the home.

LAMBERT PHARMACAL COMPANY

Twenty-first and Locust Streets

St. Louis, Mo., U.S.A.

66 Gerrard Street East, Toronto, Ont.

The Canada Lancet

JOHN FERGUSON M.A., M.D., AND W. EWART FERGUSON, M.B., EDITORS

VOL. LIV.

TORONTO, JANUARY, 1921.

No. 5

INDEX TO CONTENTS

EDITORIAL	193
What Shall the Medical Standard Be?—Smallpox Epidemics—Late Sir W. J. Gage—Friedman's Tuberculosis Serum.	
BLOOD SMEARS AND COUNTS	Major Harry Morell 197
DR. GLOVER'S CANCER SERUM	Report of Medical Academy 206
DR. GLOVER'S CANCER SERUM	Statements by Patients 211
DR. GLOVER'S CANCER SERUM	Dr. T. J. Glover's Reply 213
DR. GLOVER'S CANCER SERUM	Remarks by Editor Lancet 219
CURRENT MEDICAL LITERATURE	219
Anesthetics in Shock—Arsphenamin in Nonsyphilitic Diseases—Treatment of Combined Diabetes and Nephritis—Careers of Medical Men—A Consideration of the Nature of Auræ—Surgical Treatment of Typhoid Carriers—Polyuria and the Pituitary Gland.	
PERSONAL AND NEWS ITEMS	224
OBITUARY	227
Gerald O'Reilly—W. J. Greig—C. E. Graham—R. J. B. Howard—J. B. Crozier.	
BOOK REVIEWS	229
Syphilis—The Endocrines—Heart Afflictions—Biology—Chemical Pathology—Surgery—Basal Metabolic Rate Determination—Histology—Practical Preventive Medicine—French Medical Dictionary—Mayo Clinic Papers—Biochemistry—Gonorrhoea in the Male—Public Health and Hygiene.	
MISCELLANEOUS	234
1920 an Unhealthy Year—Toronto's Sudden and Violent Deaths—Infant Deaths in Britain—Communicable Diseases Cause Numerous Deaths—Big Medical Fees—Toronto's Vital Statistics—Contagious Diseases in Toronto—Congress on Military Surgery and Chemistry.	
MEDICAL PREPARATIONS	240
The Importance of Nutritive Repair—In Praise of Tobacco.	

THE CANADA LANCET, 200-206 ADELAIDE STREET WEST
TORONTO, ONT.

To
BUILD
UP

To
BRACE
UP

To
TONE
UP

Supplied in 11-ounce bottles
only—never in bulk.

Samples and literature sent upon
request.

Prescribe original bottle to avoid
substitution.

In ANY form of DEVITALIZATION
prescribe

Pepto-Mangan (Gude)

Especially useful in

ANEMIA of All Varieties:
CHLOROSIS: AMENORRHEA:
BRIGHT'S DISEASE: CHOREA:
TUBERCULOSIS: RICKETS:
RHEUMATISM: MALARIA:
MALNUTRITION: CONVALESCENCE:
As a GENERAL SYSTEMIC TONIC
After LA GRIPPE, TYPHOID, Etc.

DOSE: One tablespoonful after each meal.
Children in proportion.

M. J. BREITENBACH COMPANY
New York, U. S. A.

Our Bacteriological Wall Chart or our Differential Diagnosis Chart will be sent to any Physician upon request.
LEEMING MILES CO., MONTREAL, CANADA, AGENTS.

SPECIFY
HORLICK'S
MALTED MILK

Horlick's is the standard. It is the *Original* product.
Our special process insures results that cannot be
duplicated by imitators.

Its quality and reliability are such that the medical
profession has endorsed its use for over one-third
century as one of the most satisfactory infant-foods
next to mother's milk, and as a most efficient builder for
nursing mothers, invalids, convalescents, and the aged.

LITERATURE AND ANALYSIS UPON REQUEST

Horlick's Malted Milk Co.

Racine, Wis.

Slough, Bucks, Eng.

Montreal, Can.

ERGOAPIOL
(Smith)

For
AMENORRHEA
DYSMENORRHEA
MENORRHAGIA
METRORRHAGIA
ETC.

ERGOAPIOL (Smith) is supplied only in packages containing twenty capsules.

DOSE: One to two capsules three or four times a day. < < <

SAMPLES and LITERATURE SENT ON REQUEST.

MARTIN H. SMITH COMPANY, New York, N.Y., U.S.A.

Village of Robsart, Sask., requires a doctor, has a large seven roomed hospital fully furnished, large district surrounding the village without the services of a doctor.

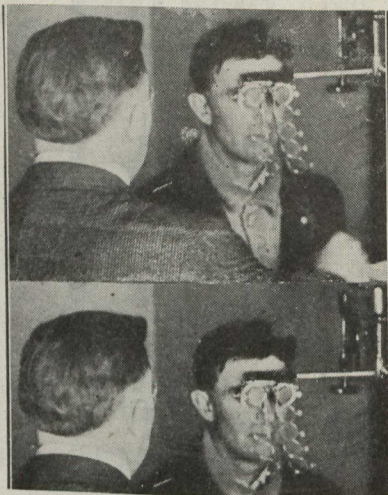
for further particulars write

C. E. Lightfoot,
Secy.-Treas.,
Village of Robsart,
Saskatchewan

SPECIAL!

Clinics in Your Office

Section of MOVIEGRAPH FILM.



Here's a neglected part of our profession that can now add 50 per cent to the income of the average practitioner—no matter where located—without expensive equipment!

An Iowa practitioner worked out a System that is revolutionizing Refracting—placing it on a basis of importance and remuneration next to surgery; takes but little time and doesn't interfere with other practice.

Determined that this System be placed where it belongs—with general practitioners—neither time nor expense was spared in preparing a wonderfully practical HOME P-G COURSE IN REFRACTION (University of Chicago Plan) with MOVIEGRAPH CLINICS—showing pictures and text simultaneously enabling you to see in your own office this Expert conducting Clinics, refracting old and young while details are explained so clearly that Principles and Technique are mastered in spare moments of the busiest doctor.

A System that is simple, rapid, accurate; with which more may be earned in half an hour than in half a day making calls.

Only a nominal sum, covering expenses, is asked and an Absolute Guarantee given. Must Be and Do all claimed. Professional and Bank references.

FREE THIS MONTH

A Refractometer (takes place of expensive outfit, doing away with the ordinary, slow, tedious, annoying, inaccurate Trial Case method) will be presented to each M.D. who enrolls this month.

Sign and mail Coupon direct to the doctor. Do it Now, or the opportunity may go to another in your territory.

..... COUPON

David Agnew Crawford, M.D.
310 State St.,

Guthrie Centre, Iowa, U.S.A. Date.....
I am interested in your HOME P-G COURSE IN REFRACTION and the REFRACTOMETER. Send particulars and references—both Bank and Professional.

I am ready to take the Course if convinced of its value, and prefer to pay (in monthly instalments, or cash and take discount. State which plan preferred.)

Name..... M.D.

Address.....

OVALTINE

TONIC FOOD BEVERAGE

IN THE SICK ROOM.

The ease of preparation of "Ovaltine" is an obvious advantage. The granules on being dropped into hot milk dissolve in a few seconds. Troublesome and tedious cooking processes are unnecessary.

A cup of "Ovaltine" contains as much nourishment as three eggs, and is digested and absorbed with the minimum of strain to the digestive functions. Its flavour is always acceptable even to the most fastidious, and after prolonged use "Ovaltine" is distinguished from ordinary invalid foods in being unusually rich in organic phosphorus compounds. This, combined with its high nourishing value, has a remarkable effect in hastening the recuperation of convalescents, and in building up emaciated patients.

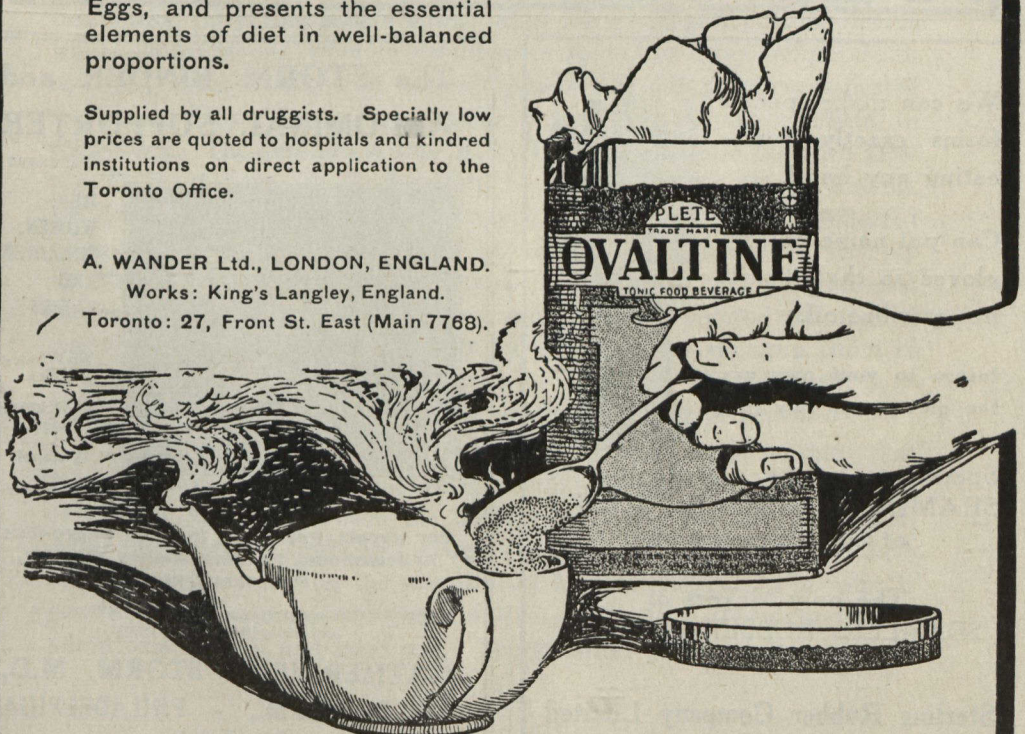
"Ovaltine" is composed of a highly concentrated extract of the vitalising and building-up properties contained in Malt, Milk and Eggs, and presents the essential elements of diet in well-balanced proportions.

Supplied by all druggists. Specially low prices are quoted to hospitals and kindred institutions on direct application to the Toronto Office.

A. WANDER Ltd., LONDON, ENGLAND.

Works: King's Langley, England.

Toronto: 27, Front St. East (Main 7768).



"In all infectious diseases, in all chronic anæmic and asthenic conditions, the mineral content of the Organism becomes impaired." (Prof. ALBERT ROBIN of PARIS)

Fellows' Compound Syrup of the Hypophosphites

The Standard Mineralizing Tonic

combines the nutritive action of the Chemical Foods, Calcium, Sodium, Potassium, Iron, Manganese, and Phosphorus, with the dynamic properties of Quinine and Strychnine

Literature and Samples sent upon request

FELLOWS MEDICAL MANUFACTURING CO., Inc.
26 Christopher Street New York City

We can make special forms exactly duplicating any hand.

Can put name on any gloves so that it will not sterilize off.

Insure to your own use the gloves you pay for.



Specialists in the manufacture of
SEAMLESS RUBBER GOODS
of every description.

The only Makers of
SEAMLESS RUBBER GLOVES
[in Canada.

Sterling Rubber Company Limited
Guelph, Ontario

The STORM BINDER and ABDOMINAL SUPPORTER

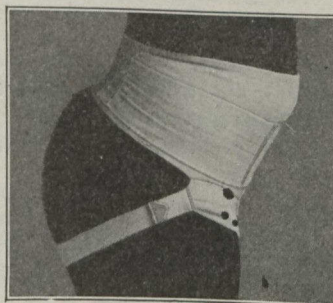
(PATENTED)

**MEN,
WOMEN,
CHILDREN
AND
BABIES**

No Whale-bones.

No Rubber Elastic.

Washable
as
Underwear



**For Hernia, Pertussis, Relaxed Sacro-iliac
Articulations, Floating Kidney, Obesity,
Pregnancy, etc.**

Send for Illustrated Folder and Testimonials of Physicians.
Mail orders filled within 24 hours.

KATHERINE L. STORM, M.D.
1701 Diamond St., - PHILADELPHIA
PA., U.S.A.

The Canada Lancet

VOL. LIV

TORONTO, JANUARY, 1921

No. 5

EDITORIAL

WHAT SHALL THE MEDICAL STANDARD BE?

Recently representatives of the drugless healers waited upon Premier Drury. The following item from the lay press gives some idea of what occurred:

"Having learned that the medical profession is seeking legislation this session providing among other things for investigation of all deaths where chiropractors were in attendance up to ten days before death occurred, representatives of the chiropractors of the province appealed to Premier Drury for an opportunity to meet any action prejudicial to their work. The deputation was led by Dr. E. Duval and included Doctors D. B. McLean, F. H. Secretan, E. J. Chattoe and Dora Fleming. Dr. Duval in the course of a statement made to the Premier reflected upon the medical profession rather severely and was brought up sharply by Mr. Drury. Mr. Drury in expressing his desire that all professed healers should be given justice and consideration, pointed out that it was the duty of the Government to see that whoever set up a claim to be a healer should have some warrant for doing so. He promised, however, that in any action taken all those affected would be consulted."

The attitude of the premier is to be commended when he said "that whoever set up a claim to be a healer should have some warrant for doing so". This has always been the contention of the medical profession. After long years of study and struggle the medical profession of Ontario has succeeded in raising the standard of Medical Education to what is known as the license of the Ontario Medical Council. This standard is admittedly a high and good one. The question at once arises why do

osteopaths, chiropractors, and Christian Scientists wish a lower or different standard. In the group of studies laid down by the Ontario Medical Council there is not one that should not be included in any medical course of studies that would qualify for the practice of medicine.

The fact that osteopaths, chiropractors, and Christian Scientists disclaim the use of drugs does not show cause why they should not conform to the Medical Council's standard. If they are going to treat sick and injured people they must be able to diagnose all manner of maladies, medical and surgical. This can only be done after completing a full course of medical studies on the didactic and clinical subjects. It would be a most serious state of affairs if a drugless healer undertook to treat a case of severe pain and was unable to distinguish the lightning pains of locomotor ataxia from the pains of gall stones or lead colic. Or to institute a course of spinal treatment for the emaciation and weakness of diabetes mellitus.

The action of the drugless healers is not logical. No matter what method may be adopted in the treatment of disease, the primary essential is to possess a thorough knowledge of the human body, its many maladies and their recognition. Anything less than this is only seeking a short cut into the practice of medicine.

But the onus is on the medical profession to lay before the Government its views on these subjects. It is the duty of the profession that the public health and safety of the people lie only along the pathway of a properly educated body of medical practitioners. There should be no divisions. There is only one practice of medicine, namely, the Scientific. At best the most ideal training that can be given is all too limited to solve the many problems produced by disease. The people are entitled to the best, and it is the Government's duty to see that this is given.

SMALLPOX EPIDEMICS.

By the press despatches we learn that the City of Ottawa is passing through a smallpox epidemic. This is just what one might expect, and could have foretold. There has been kept up a persistent propaganda against vaccination, and many have come to regard this operation as yielding no protection, and as carrying with it many dangers. This is all wrong of course. If vaccination is properly performed it is a preventive measure of the utmost value. On the other hand, with care it is attended by infinitesimally small risks. Yet, ignorance of the preventive

value of vaccination is widely spread, and the opposition to it crops up in many quarters, and often where least expected.

The following appeared in the press of 14th January :

"Ottawa is in the grip of one of the most serious smallpox epidemics in its history, and the disease, which all year has been confined to certain sections, is now prevalent all over the city. Dr. T. A. Lomer, Medical Officer of Health, states the outbreak is beyond control, and that drastic preventive steps must be taken to safeguard lives. The Board of Health officials have been working day and night, the Hopewell Hospital is filled to capacity, and cases are being treated in their homes.

"It is stated that nearly 100 cases are being treated. According to reports published to-day, the Hopewell Hospital is filled and medical treatment is being given to fourteen patients in their homes. There are eighty-three Ottawa homes under smallpox quarantine.

"The type is severe, but owing to prompt medical treatment, not deadly. Only one case of "black pox" has been reported to the authorities and the victim died.

"Mayor Plant and Controller Ellis have affirmed their intention of going to jail before bowing to a general vaccination order, if the 1921 Board of Health, which will be appointed Monday, recommends such a course to City Council. The general vaccination order has been requested by Dr. T. A. Lomer, civil Medical Officer of Health. Controller Cameron, Labor, also opposed the order."

This reads very much like what appeared in the press about Toronto a little more than a year ago. There is a very great deal of sickness and suffering with loss of time even though no deaths occur. Then there is all the loss of business that a large city must experience with a smallpox epidemic on its hands. One of the difficulties in dealing with smallpox of recent years is the fact that it has been of such a benign character. If it should assume for a few weeks a malignant or deadly type there would be a rush to the vaccination stations and many of those now opposing vaccination would be crying loudly for protection, and blaming the medical profession for the loss of life.

It is going to take a severe lesson to bring the people to their senses in this matter; and we do not hesitate to state that it is bound to come. In spite of the fact that there are many immune persons from efficient vaccination, and many who are partially immune from an inadequate vaccination, there will come along some day a very severe form of the disease which will slay its thousands, and mark for life its tens of thousands. Then will be realized who has always been in the right.

THE LATE SIR WILLIAM JAMES GAGE.

In the passing of Sir William Gage there passed from our midst a noted philanthropist. His gifts in time, thought and money were many and great, and all for the benefit of humanity. The case of those suffering from tuberculosis appealed to him very specially.

The institutions at Gravenhurst and Weston shall remain as great monuments of his efforts and generosity. It is stated that about 15,000 patients have been treated in these hospitals. He also took a keen interest in the Victorian Order of Nurses.

It now remains for others to see to it that the work he so splendidly began shall not languish for lack of aid.

FRIEDMAN'S TUBERCULOSIS SERUM

The Berlin Medical Society, after eight meetings and much debating over the Friedmann tuberculosis specific, is unable to reach a verdict that is generally acceptable to the membership. It appears that the trend of evidence submitted was discouraging to those persons who anticipated revolutionary results in the treatment of the disease by the famous turtle serum.

Dr. Kraus, of Berlin, who advised further experimentation on the ground that there should be success in a hundred test cases before a decision be given, has warned against the use of the Friedmann serum as a preventative, and declared that it was at best suitable only in individual cases, and should not be used as a popular remedy.

On the other hand, Dr. Deschicsh praised Herr Friedmann as a benefactor along with Pasteur and Jenner, but a majority of the speakers before the society were either cautious regarding what they had to say or wished to further test the serum over a period of years before rendering a decision whether it was a success or a failure.

The serum discovered by Dr. Friedrich Franz Friedmann, German specialist, which he asserted was a cure for tuberculosis, was investigated for more than a year by the United States Health Service, which discredited it in 1913. Experts of the service declared that "far from making small animals more resistant to tuberculosis, a majority of those inoculated were made more susceptible to it." Many medical societies and boards of health have rejected the serum. A bitter fight for and against Dr. Friedmann has raged in German medical circles since the discovery of his "cure" was announced.

ORIGINAL CONTRIBUTIONS

BLOOD SMEARS AND COUNTS

By Harry Morell, M.D., Major C.A.M.C.

Formerly Pathologist to the Regina General Hospital and 15th Canadian General Hospital.

ALTHOUGH blood smears and counts, both relative and total are of great importance and afford much information, the results from such an examination should only be considered along with other signs and symptoms. An absolute diagnosis from a single count or smear, except in such diseases as the invasion of the blood by parasites and the essential blood diseases, is as unusual and unsound as a diagnosis made from a single temperature record, and that blood examinations must be interpreted in connection with clinical histories. It must be realized that in blood work that many conclusions of to-day may be supported and strengthened by later observations, and others may be found to be untenable or require revision to some extent. There can be no doubt whatever that the routine examination of a stained blood smear affords a wide range of information in addition to the percentage of leucocytes, and as there are no real difficulties in its preparation, one need have no hesitation in adopting it as a routine practice and affording it the same attention as urine and sputum examinations.

The importance of a well made blood film requires no emphasising and the information obtained from such a film in the diagnosis of many conditions and diseases as, leucocytosis, the leukaemias, and the anaemias cannot be overestimated.

It must be clearly understood, however, that a blood film has its limitations and in many instances it is only presumptive and must not be interpreted as absolute and as a reliable substitute for a total count. Again—the mere estimate of the total number of leucocytes sheds no light upon the nature of an existent relative leucocytosis. To be guided only by the total number of circulating leucocytes may be misleading.

It is when a relative and an absolute count is made that valuable evidence may be gained by the physician in various blood diseases and in other conditions, and by the surgeon for the suspected presence of suppuration and an indication of the degree of resistance of the patient.

One of the first requisites necessary, is a simple and reliable method of preparing and staining the specimen of blood, and to get satisfactory results, attention should be paid to the following:—

1. Select slides of good quality, clear glass, not too thick, and free from defects.

2. The slides should be free from grit and grease.

3. A good method to prepare the slide, is to rub it well with soap and water, or what is better, either Sopolio or Bon Ami, flush well with lots of water, dry, then wipe off with alcohol and finally polish with an old linen cloth.

It is only by observing details that a good smear will be obtained.

To obtain the blood, puncture the back of the thumb with a cutting edge needle after applying bandage and flexure. Care should be taken in collecting the drops of blood, the smaller the better.

In spreading the film, Daniel's method is easy to follow and gives excellent results.

“In this method a drop of blood is taken on the surface of a slide near one end, the edge of another slide is brought in contact with this drop which then spreads out as to fill the angle between the two slides along the whole extent of the line of contact. On pushing the upper slide towards the other end of the lower slide a film of blood will be left behind. The thickness of this film is easily regulated, as, if the angle between the two bodies is acute the film left behind will be very thin; if the angle be nearly a right angle a thick film will be left.

An angle about 45 gives the desired thickness, but it is well to slightly vary the thickness of the film by alternately slightly, increasing and diminishing the angle made between the two slides as the upper one is pushed along, so that different parts of the film will be suitable for examination for different purposes.”

It will be noted, that the drop of blood is taken on the slide on which the smear is made, and the blood is drawn along the advancing spreader, and not pushed along. The spreading of the smear is better effected by placing the lower slide on a solid table or stand and the spreader applied firmly to the drop of blood. In this manner of making a smear the cells will not be broken up or distorted to any extent. By drawing transverse lines with a grease pencil at about half an inch from the ends of the slide will prevent the stain from running over, will give a space for identification marks and will allow for the handling of the specimen without interfering with the smear to be examined. Take the

first drop which oozes and spread quickly, the film should be allowed to dry spontaneously using no heat. For a second and subsequent smear, the bandage should be removed and a fresh supply of blood allowed to circulate between each drop taken otherwise the proportion of cells will be misleading.

Should the patient be in bed, allow the arm to hang over the side; if sitting, the arm may be swung several times between each specimen taken.

Of the various blood stains, the eosinate of methylene blue is generally recommended. This compound was first used by Romanowsky for demonstrating malarial parasites, but many modifications are now employed for staining blood films generally and also for bacteria and protozoa.

The best modifications of the original Romanowsky are those of Jenner, and Leishman-Jenner's being the more suitable for the histological study of the blood, and Leishman's for the study of protozoa.

The difference in these stains is that Jenner's stain is made by adding an aqueous solution of eosin to one of methylene blue. The stains combine and form a precipitate which is collected in a filter, and dissolved in methyl alcohol.

In Leishman's stain, the methylene blue is first rendered polychrome, so that in addition to the pure blue color of the ordinary methylene blue it is in part changed into a red stain. The difference is indicated by change in color of the solution, so that in thin layers it has a reddish tinge. There are many ways in which to render the methylene blue polychromatic, Leishman adds a solution of carbonate of soda, but whatever method is adopted, the subsequent steps are the same as in the preparation of Jenner's stain.

Leishman's stain brings out more markedly the important constituent of nuclei, known as chromatin in its various arrangements, which is important in studying malarial parasites.

Both Jenner's and Leishman's stains are produced by the formation of the chemical compound eosinate of methylene blue in a solvent of methyl alcohol, and both fix and stain the film at the same time.

For the study of the histology of the blood Jenner's stain leaves nothing to be desired, it is clean, rapid, and gives excellent blood pictures. It also keeps well, if kept in a bottle with a close-fitting stopper.

The cells in a Jenner stained film show up in the following colors:

R. B. C.'s	Pink to terra-cotta, varying with the amount of hg present in the cells.
Nuclei	Blue
Polymorphs	Dull red to purple
Eosinophiles	Deep red
Basophiles	Dark blue
Blood plates	Light blue
Malarial parasites	Blue
Bacilli and Cocci	Blue

By a thorough knowledge of their properties and methods of use, better results will be obtained if one confines himself to one or two stains in routine work, than by the use of many, with indifferant results.

Sometimes the stability of the stain is very unsatisfactory and unreliable and although one may carefully follow the orthodox technique, the results are often disappointing through various causes. It may be interesting to note why poor blood pictures sometimes result from the use of these stains and briefly to point out their micro-chemical action on the various elements and also how to remedy the unsatisfactory results obtained or to prevent them. It is known that different protoplasm have affinities for different stains, as acid, basic or natural. All nuclei of cells and animal parasites take the basic or neutral. All nuclei of cells and animal parasites take the basic or alkaline stain; the protoplasm proper take the acid or neutral, while the granules in the protoplasm may take any of the three and be basic, neutrophilic or eosinophilic, therefore the most serviceable stain is one which contains different ions which is a combined stain, of which Jenner's and Leishman's are examples and are modifications of Romanowsky. These stains containing eosin and methylene blue are dissolved in methyl alcohol because of its fixing qualities, and their efficiency depends upon the quality of the methyl alcohol. If it be pure and if it be neutral the stain will be good. If the methyl alcohol be acid, the stain will be worthless. Methyl alcohol is a primary alcohol and if kept in a well filled tight stoppered bottle it undergoes no change; but behaving as all primary alcohols can on exposed to the action of air or oxygen. For staining purposes it is then useless. The normal staining solution must be neutral, the normal reaction of the blood is neutral or faintly alkaline, the smear must be the same. This, if brought in contact with a solution which is acid in reaction, means the normal staining properties of the blood cells are in-

habited. It also means that the various stains (aniline dyes) act and color differently, depending on the media in which they are dissolved, so that if methyl alcohol be oxidized into an acid, the stain is useless. The basic and neutral ions fail to incorporate with the nuclei or granules or the protoplasm of the white cells.

The red cells stain intensely but the whites may be invisible, except for the bright red granules of the eosinophiles. In other words the acid in the solution has disturbed the normal affinities between the cell protoplasm and the stain.

It will be therefore understood, that many of the disappointments met with in using the various modifications of Romanowsky are due either to a poor quality of methyl alcohol or allowing the staining solution to be exposed to the air becoming oxidized and converted into an acid stain which is useless.

To obviate this, see that the methyl alcohol is reliable in the first place, and later it must be protected from the air by keeping bottle containing stains tightly corked.

In making up the stain, it will be found that tablets are the most convenient and simple to use. Jenner's and Leishman's stains may be obtained in tablet form from Messrs. Burroughs Wellcome & Co. The same house put up methyl alcohol in hermetically sealed capsules especially for dissolving stains, which is absolutely reliable and recommended. There is no occasion to use German chemicals when this make can be procured.

The making of the staining solution is a very simple matter. One of the tablets is powdered and dissolved in 10 c.c. of methyl alcohol and when the stain is dissolved it is ready for use. The bottle should always be kept tightly corked.

TO USE JENNER'S STAIN.

The stain is dropped on the dried blood film and allowed to act for five minutes, when the stain is flushed off well until the film has assumed a pinkish tint. The slide is blotted with filter paper and examined directly with the oil immersion.

TO USE LEISHMAN'S STAIN.

A few drops of the stain are placed on the dried smear and allowed to remain one minute. If it shows any tendency to dry over any part of the film in this period, add more stain. To the fluid stain on the slide at the expiration of this minute distilled water is added drop by drop, and

by oscillating the slide the stain and water are mixed as rapidly as possible. The amount of water required should be about double that of the stain, but a better guide is to add the water in such an amount, that when mixed with the stain the dark blue colour of the latter is replaced by a pinkish colour in the mixture while the precipitate can be seen floating in the fluid. The water mixed with the stain should be allowed to remain on the film for five minutes. The stain is now flushed off with distilled water and a drop of distilled water is allowed to remain on the film for about a minute. The water is now flushed off rapidly with distilled water, the specimen dried with filter paper and examined directly under an oil immersion lens.

It is unnecessary to use cover glasses on dried and stained blood films.

The principle of all modifications of the Romanowsky stain for chromatin is that the staining takes place during the precipitation of the stain, in the original process during the precipitation of the mixture of aqueous solutions of the stain, and in Leishman's method during the precipitation by water of the combined stains dissolved in methyl alcohol.

In making the differential count and estimating the percentages of the various types of white cells, it is necessary to identify the following:

Small and Large Lymphocytes, Large Mononuclear, Transitional.
Eosinophiles, Polymorphnuclear and Basophiles.

For recording the differential count, a computing chart is shown here which was devised by Dr. A. E. Osmond of Cincinnati. This is a most useful and convenient method to follow and when completed it shows at a glance an index of the condition of the patient's blood.

This chart should be considered as a standard, and might be adopted by many hospitals with advantage. It is figured out on a basis of a count of two hundred leucocytes, and marked on the left to designate the various types of cells. At the bottom are the calculated percentages, and at the top the actual number of cells counted when the vertical columns are filled. The heavy lines put in vertically are simply to facilitate the count by indicating when fifty, a hundred, or a hundred and fifty units are counted for a certain type of cell, and by referring to the figures at the top row, one can at once read off the actual number of cells counted and easily sum up when a total of two hundred has been reached. This being done, the percentages are read off directly from the bottom figures, and the usual calculating with the possibility of error is entirely removed.

CITY GENERAL HOSPITAL

Name.....John Doe..... Age...36..... Sex.....M.....
 Service of Dr.....James Smith..... Ward.....2B.....

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150
Polymorphs	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Lymphocytes	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Large Mononuc.	V	I																												
Eosinophiles	IV																													
Basophiles	I																													
	5	10	15	20	25	30	33	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150

White Count.....9,000..... AnisocytosisNegative...
 Red Count.....3,300,000..... PolychromatophiliaNegative...
 Haemoglobin85%..... Basophilic Degeneration..Negative...
 Color Index.....1.2..... Nucleated Reds.....Negative...
 Polymorphs64%..... MalariaNegative...
 Lymphocytes30%.....
 Large Mononuclears.....3%.....
 Eosinophiles2%.....
 Basophiles5%.....
 Remarks

Examination made by.....James Smith.....
 Date....Dec. 10, 1920.....

.....Harry Morely.....Pathologist

I have modified the original chart slightly and made some changes. It will be noticed that in the count the small and large lymphocytes are included in one group, as suggested by Stitt, who holds that to divide the lymphocytes into small and large is unnecessary and impractical for a differential count.

In reading a completed blood chart, which should express the sum total of the examination made, it should be remembered that not only may the essential and parasitic blood diseases be diagnosed, but there are many acute processes where much information and assistance may be gained from such an examination. Careful judgment is required in the interpretation of blood counts and smears in surgical conditions as in inflammations, suppurations, and septic processes, which must always be considered with the clinical history of the case, this is especially true when the question of operation is contemplated.

The important point when studying a blood chart is the comparison of the relative proportion of polymorphs to the total number of leucocytes.

In acute inflammation the degree of polymorph increase indicates the severity of the pathologic process.

The total leucocyte count is an indication of the degree of resistance of the body.

Suppuration and gangrene is shown by a disproportionately high increase of polymorphs, the greater the disproportion, the more certain is the presence of pus. In the absence of absolute leucocytosis, a relative polymorph increase indicates a most serious condition with little resistance. A relative polymorph, below 70% and a moderate total leucocyte count with over 1% eosinophiles, practically exclude suppuration, and indicates strong bodily resistance.

High total counts with moderate relative polymorph leucocytosis is of excellent prognosis. In high leucocyte counts, if the leucocytes remain stationary or fall, while the relative polymorph count progresses the underlying disease is advancing and operation is called for. It is in connection with the question of operation in appendicitis, cholecystitis, or other suppurative conditions, that the matter of a differential count is of great value and of prime importance, for instance a leucocytosis with 85 to 90% of polymorphs indicates pus, and immediate operation. Percentages over 90% polymorphs point to peritonitis, and with such high percentages of polymorphs there is an absence of total leucocytosis with a disappearance of eosinophile the prognosis is grave.

If, on the other hand, there is a high total count with moderate relative polymorph increase, the prognosis is excellent. As an example if there be a leucocytosis but with less than 75% polymorphs it shows an infection of little virulence, or a walled off process. It is at times difficult to form an opinion when the polymorphs are under 80%, but it is held that in adult life, pus is rarely found with a relative polymorph increase below 80%. This does not apply to children where lymphocytes are more numerous, and pus may be present when the polymorphs are as low as 70%.

There is no leucocytosis, either relative or absolute in many cases of so called "cold abscesses", the contents of which is frequently found to be not true pus, but debris, also in numerous cases of pus tubes, in which the thick purulent fluid will be found generally to be sterile. It is apparent from the above that the differential count is of greater value considered in comparison with the total leucocyte count, but taken in

conjunction with the total count, the net result is of extreme interest and importance, especially when it is accepted that the general rule for leucocytosis in inflammation and suppuration is:—The relative increase of polymorphs varies directly with the severity of the infection, and the degree of leucocytosis, i.e., the total number of leucocytes varies directly with the body's power of resistance. This rule justifies the following:—

- 1—Slight Polymorph increase—Slight infection.
- 2—Great Polymorph increase—Severe infection.
- 3—Slight degree of leucocyte increase, with slight increase of Polymorphs
=Fair resistance with slight infection.
- 4—Marked degree of leucocyte increase, with slight increase of Polymorphs—Good resistance with slight infection.
- 5—Slight degree of leucocyte increase, with great increase of Polymorphs
=Poor resistance with severe infection.
- 6—Marked degree of leucocyte increase, with great Polymorph increase
=Good resistance with severe infection.
- 7—Absence of leucocyte increase, with great Polymorph increase
=Very poor resistance to a severe infection.
- 8—Gradually increasing degree of leucocyte increase, together with decreasing Polymorphs—Convalescence.

Stitt says that according to Cabot, leucocytosis varies in infections as follows:

- 1—Severe infection—good resistance; early, marked and persistent leucocytosis.
- 2—Slight infection—slight resistance; leucocytosis present but not marked.
- 3—In fulmination infections we may have no increase in whites, but a higher percentage of Polymorphs.
- 4—Slight infections and good resistance may not be productive of leucocytosis.

Reducing the above four conditions to the degree of relative and total leucocytosis, one would expect to find in (1):

Severe infection with good resistance—Great polymorph increase with marked degree of leucocytosis.

- 2—Slight infection with slight resistance—Slight polymorph increase with slight leucocyte increase.
- 3—In fulminating infections—Absence of leucocyte increase with great polymorph increase points to very poor resistance to a severe infection, or we may say, in the absence of absolute leucocytosis, a relative leucocytosis, especially over 80%, indicates a most serious condition with little resistance. Low total counts with high relative counts of polymorphs is of poor prognosis. In many cases the reactive powers are paralyzed and there may be no variation in the count, either total or relative.
- 4—Slight infection and good resistance—Slight increase of polymorphs with marked degree of leucocytosis, or as is sometimes found there may not be leucocytosis, total or relative present.

REFERENCES :

- Blood Staining, Wyatt Wingrave, Pathologist London Polyclinic.
 Blood Stains and Blood Examinations, A. E. Osmond, Cincinnati.
 Practical Bacteriology, Blood Work, Parasitology, Stitt, 5th Ed.
 Laboratory Studies In Tropical Medicine, Daniels, 3rd Ed.
 Bacteriological Technique, Eyre, 2nd Ed.
 Diseases of the Blood, Coles, 3rd Ed.
 Pamphlet Differential Leucocyte Count, Pallasade Co.

 DR. GLOVER'S CANCER SERUM

Report on Dr. T. J. Glover's Cancer Serum by the Committee of The Toronto Academy of Toronto.

IN the interim report of the special committee appointed by the Council of the Academy of Medicine to report on the cancer serum of Dr. T. J. Glover, which was handed out January 14th, it is pointed out that there is no evidence to warrant the hope that a specific cure for cancer has been discovered by Dr. Glover, or that any cure has ever been produced by the Glover serum in any disease which had been definitely established as cancer. After referring to the claims which have been advanced for the serum, and after referring to the history of some cases, the report goes on to state that in many cases of cancer, whether the disease was in either a mild or an advanced stage, the progress of the patient has been steadily downward in spite of the use of the Glover serum and that the course of the cases is apparently uninfluenced by the use of this serum. The special committee also draw attention to the fact that their work was greatly handicapped by Dr. Glover's refusal to permit

them to visit his laboratories or to examine his cultures. They further state that the doctor would not demonstrate to them his ability to cultivate cancer cells and organisms, as he has claimed he is able to do, and that he also declined to show that he was able to produce cancer by inoculation, or that he could immunize animals against the disease.

While feeling that the results of their investigations were very unsatisfactory, the Council have expressed their willingness to investigate further if Dr. Glover is ready to aid them by supplying data which is now lacking with regard to his cases. The report follows:

THE COMMITTEE'S REPORT.

Your committee begs leave to present an interim report as follows:—

At its first meeting, October 11th, 1920, the members of the Committee were unanimously of opinion that it would be impossible to estimate the value of the treatment on the basis of the examination of 15 cases selected by Dr. Glover from among the large number to whom the serum had been administered. Such a superficial and incomplete investigation would be of no scientific value and, therefore, unsatisfactory alike to the Medical profession, to Dr. Glover and to the public at large. It was, therefore, recommended that the scope of the committee be enlarged so as to include the examination of all available data, experimental and clinical, upon which Dr. Glover had based claims, which if substantiated, would mark an advancement in our knowledge of the causation and treatment of cancer of the greatest importance. Your committee accordingly communicated its views to Dr. Glover, who previously had promised the Academy to present to the Fellows at an early date the results both of his experimental and clinical work.

The Council of the Academy approved of the wider scope of the investigation advised by the Committee, and also of the collaboration of a number of eminent authorities in other centres, in the consideration of the data obtained by the Committee and in the preparation of the report to be based thereon.

In view of the interest manifested both by the medical profession and the public, and the hope which had been aroused that an important contribution had been made to our knowledge of the causation and treatment of cancer, your Committee was impressed with the necessity for proceeding with care and thoroughness to collect all available facts, to examine them critically but with open minds, in order to appraise as accurately as possible the value of Dr. Glover's work.

DR. GLOVER'S CLAIMS.

The claims which have been made by Dr. Glover may be considered under two headings—

- (A) Experimental.
- (B) Clinical.

(A) Experimental Claims:

(a) That Dr. Glover has cultured cancerous cells and from them has isolated and cultured an intracellular organism which he has found confined to any present in every type of cancer.

(b) That by inoculation of these cells and organisms, cancer has been produced in a number of animals, including pigeons, rats, mice, rabbits, guinea pigs, hens, etc., and that a number of medical men, including the Deputy Minister of Health of Canada, Dr. J. A. Amyot, had examined this material.

(c) That by the injection of cultures of these cells and organisms "into the jugular vein of a horse of the roan type between the ages of seven and nine years," a serum has been obtained which when injected into experimental animals, renders them immune to inoculation by the cancer cells and organisms before-mentioned. In other words, while the animals not treated by the serum develop experimental cancer, those previously treated by it are immune.

(d) That the serum injected in cases of human cancer has been found capable of producing improvement or cure.

Your committee, therefore, regrets to report:—

(1) That Dr. Glover refused to permit a visit to his laboratories by representatives of the committee.

(2) That he refused the request of the committee to be allowed to examine his cultures and experimental material at present available.

(3) That he has not acceded to the request of the committee to demonstrate his ability to culture cancer cells and organisms.

(4) That he has not acceded to the request of the committee to demonstrate his ability to produce cancer by inoculation or to immunize animals against it.

Your committee, therefore, has no evidence to substantiate Dr. Glover's claims on the experimental aspect of the question under investigation.

(B) Clinical Claims.

Your committee has endeavored to collect information which would enable it to decide:

(a) Whether Dr. Glover has succeeded in producing cures in cases definitely established as cancer (1) regularly, (2) occasionally.

(b) Whether his serum produces improvements in cases definitely established as cancer, beyond that which occasionally occurred spontaneously or under palliative measures.

NO CURES ESTABLISHED.

In order to answer these questions, your committee:

(1) Has examined 12 of the 15 cases selected by Dr. Glover and asked for an opportunity for re-examination of them in order to follow their course.

(2) Has sought to obtain from the medical attendants of patients, confirmation of diagnosis and a statement as to the clinical condition of the patient before applying to Dr. Glover for treatment.

(3) Has obtained from St. Michael's Hospital through Drs. J. D. Loudon and J. M. McCormack a list of cases treated in that institution. Only those cases were included in this list which had received at least five injections of serum.

(4) Has sought to obtain from Dr. Glover a complete list of the cases treated by him privately with notes of their progress and ultimate results obtained.

(5) Has sought to obtain from the Fellows of the Academy, from hospitals and from practitioners at large, reports of the results of the serum treatment in cases which had come under their observation.

From the data above mentioned, as far as obtained, the Committee has found no evidence to warrant the hope that a specific cure for cancer has been discovered by Dr. Glover, or that a cure has been produced by the serum in any case definitely established as cancer.

It has evidence on the other hand that many cases of cancer, both early and advanced, have progressed steadily downwards, the course apparently uninfluenced by the use of the serum.

In answering the question whether the serum produces improvement in cases definitely established as cancer, beyond that which occasionally occurs spontaneously or under palliative measures, the Committee is confronted with a number of difficulties attendant upon the estimation of the value of any new form of treatment.

These may be summarized as follows:

(a) Good results at times are obtained in cases supposed to be cancer, but in which the nature of the condition has not been established on incontrovertible evidence. In such cases, the usual conclusion of the

medical attendant is a priori that his diagnosis was wrong, rather than that a cure of cancer has been effected.

(b) Sufficient time must elapse to judge the ultimate results. Temporary improvement frequently occurs after the removal of mechanical obstruction by operation or by sloughing of a cancerous growth.

(c) Retrogression or even spontaneous disappearance may occur in cases of cancer so that it is not uncommon to get considerable temporary symptomatic improvement apart from any treatment.

(d) Psychic influences are of great importance: this aspect of the case has been emphasized by Weil, a well known authority, as follows:

"It is indeed, very remarkable that a patient who has been consigned to death as a victim of a hopeless malady, should regain his spirits and his appetite, when he is again confronted with the hope of a cure, and of the eradication of his disease? It is a phenomenon well-known to every student of the disease that a large proportion of cases responds in just this manner to any treatment which is offered them. Osler has described a case of cancer of the stomach in which the mere visit to a consultant of sanguine temperament, though poor judgment, whose assurance of the patient that there was no possibility of cancer, resulted in a disappearance of all the symptoms and a gain of eighteen pounds in weight. It is this psychic influence, which has occasionally deluded the honest student of cancer cure, and which has also so generously played into the hands of the dishonest."

DATA LACKING.

It is scarcely necessary to point out that when an investigator claims to have made certain discoveries and these of fundamental importance, before they can be accepted by scientific men, the fullest opportunity must be afforded for investigating the data upon which such claims are based, with details of methods sufficiently definite to permit of the repetition of the experiments by independent workers, and that failure of an investigator to submit his work to the recognized canons of science must tend to its being discredited.

The data which your committee has been able to obtain have not convinced it that the results of treatment obtained by the use of Dr. Glover's serum are better than those obtained by similar methods introduced by others, and which have ultimately disappointed the hopes entertained of them.

In conclusion this interim report, your committee wishes to state its readiness to examine any data not yet submitted, but which Dr. Glover

may decide to place before it, and to collaborate in their findings with recognized authorities who have already expressed their willingness to do so or with others whom Dr. Glover himself may nominate.

All of which is respectfully submitted.

JABEZ H. ELLIOTT, (ex officio)
 W. H. HARRIS Chairman,
 H. B. ANDERSON,
 HERBERT A. BRUCE,
 JOHN J. MacKENZIE,
 JABEZ H. ELLIOTT, (ex officio)
 HARRIS McPHEDRAN, Secretary.

The undersigned who were added to the Committee concur in the above report:

GEOFFREY BOYD,
 W. P. CAVEN,
 A. PRIMROSE.

Presented to the Council of the Academy and adopted. January 13th, 1921.

J. H. ELLIOTT, President,
 F. C. HARRISON, Hon. Secretary.

STATEMENTS MADE BY PATIENTS

THE following statement appeared in the Evening Telegram of 14th January, the same date as that on which the report appeared in the press:

Despite the skepticism as to the efficacy of the Glover cancer serum expressed in the interim report of the investigating committee of the Academy of Medicine, there was no diminution of the confidence voiced by patients who were seen to-day at the Glover Institute on Jarvis st.

"I just laugh at that," said Mrs. Hugh Bowman, of Hamilton, referring to the report. "My own case is sufficient for me. I was given but a few days to live in the summer, and I am just getting along splendidly now.

"I was taken ill last summer, and after X-rays were taken in Hamilton, Niagara Falls, New York, and in Toronto, I knew that I had cancer of the stomach. Not ten per cent. of the food I took ever entered my stomach. The week before I took Dr. Glover's treatment I lost ten pounds in weight. I was going down fast. On August 27th I got my first treatment. I have had twelve treatments now, and just feel splendid.

GROWTH DISAPPEARS.

"You can hardly find the growth, which was large in size then. I can eat, sleep and get around now. They all said 'operate,' but I said 'no operation,' and I was right. I have met other women who have gone home happy—free from pain. If Dr. Glover did nothing more than to take away that awful pain, and let a patient sleep, he has done so much."

W. Mains, of Abbey, Sask., said he had been a sufferer for eighteen months.

"DECIDEDLY BETTER.

"I have had seven treatments and am decidedly better," he declared. "There is absolutely no question about that. Doctors out west told me there was nothing for it but an operation. When I came here I couldn't eat—could only take liquid nourishment. Now I eat three meals a day."

Asked what he thought about the report, Mr. Mains "thought he could read between the lines—that Dr. Glover was not giving away his discovery for other to use until he was ready."

BOON OF SLEEP.

Another Toronto patient stated he had tried radium treatment, but had steadily become worse. He had been obliged to walk the floor nights. He had lately begun the treatment and was able to sleep, as a general rule, and the pain only bothered him a little at times.

DR. GLOVER AWAY.

Dr. T. J. Glover is still in New York, where he has been off and on for the last two months, only coming back for a day at a time.

In his absence, the work here is conducted by Dr. J. A. R. Glancy. A secretary, stenographer and other attendants comprise the staff. Dr. Glover has given up the house and office he formerly occupied on Broadview avenue, and resides in Parkdale.

Dr. Clancy, who has been associated with Dr. Glover from the first clinic held at St. Michael's Hospital, refused to discuss the interim report. "You will have to see Dr. Glover regarding that when he returns to the city," said he.

PHYSICIAN HAS FAITH.

Asked, however, if he still maintained his faith in the serum, Dr. Glancy stated most emphatically that he did, and in reply to direct questions said:

"We have several cases which we consider cures, and the majority of cases, even advanced ones, have shown improvement. We have had those beyond hope, but we feel that if their condition is alleviated then something good has been accomplished."

"What work has Dr. Glover been doing in New York?"

"He has been trying to further perfect his serum at the laboratory there."

NO STATED FEE.

Asked as to the number of patients treated by Dr. Glover, Secretary Clarke stated that Dr. Glover would have to impart such information.

The price paid for treatment was practically named by the patients themselves. Those who were penniless got it for nothing.

(A careful study of these cases furnishes no proof of the presence of cancer or its cure. These cases to be of any value would have to be examined by competent persons, with microscopical study of sections from the growths. Inflammatory swelling may disappear, and without the aid of treatment. Many reported cures of cancer may belong to this class. The two tests that must be complied with are, first, that the growth contains epithelial cells arranged in the manner characteristic of cancer; and, secondly, that these cells entirely disappear, and the part becomes once more or normal histological formation. These two tests are absent in the cases mentioned by the Telegram. They must, therefore, be discarded as worthless.—Ed. Lancet.)

DR. GLOVER'S REPLY

DR. T. J. GLOVER'S reply to the report of the Committee of the Academy of Medicine, Toronto:

In The Evening Telegram for 18th January, 1921, Dr. Glover issued the following reply to the report from the Academy of Medicine:

Up to date I have not received any official report from the Academy of Medicine regarding the findings of their committee.

"As they have seen fit to use the press in order to give their report as wide a publicity as possible, without first communicating with me, as one medical man would expect from another, I feel it is my duty to reply to this report through the same medium.

MOST SEVERE TEST.

"Let me say at the outset that I gave the serum the most severe practical test that anyone could give it, by treating cases which were

beyond any known help, and regarded as absolutely hopeless. Many of these cases had been operated upon, had radium, X-Ray treatments, or a combination of them, and had been given up as absolutely hopeless.

"A number of these cases under serum treatment have shown marked improvement by a diminution in the size of the growth and in their general condition. My clinic shows that I have apparently cured cases of cancer which could not be improved by operation, administration of radium or X-ray methods. This can be verified by both doctors and patients who attended my clinic from different parts of Canada and the United States.

HAD TO PROCEED SLOWLY.

"Until recently I had not been sure of the correct dosage of the serum, and had to be content to use small doses and proceed slowly until I had perfected my serum. Only those who attended my clinic will appreciate the difficulties under which I was working. In the early history of the serum I spent most of my time treating patients, which time I should have spent in research work and improving the same.

SUGGESTED TEST.

"During the last week of September, the Deputy Minister of Health interviewed me and suggested that I attend before the Academy of Medicine and give a clinical demonstration of my work. He suggested that I show the effect of my serum on fifteen cases, that the demonstration be strictly clinical and that it was not necessary to go into my scientific work at present. He further suggested that I meet the committee appointed by the Academy of Medicine on a date to be set by the academy, and that the following evening I go before a general meeting of the academy. I agreed to do everything he suggested. These arrangements were later confirmed in a letter received from the Academy of Medicine.

CONVINCED U. S. EXPERT.

"On the morning of October 14th, an American authority on the subject of cancer called on me at my office and asked to see some of my patients, stating that he had been invited to attend a meeting of the committee for that afternoon and confer with them, advising them regarding asking me questions about my serum. The authority referred to, after examining many cases, stated to me in the presence of another medical man, that the serum appeared to be a cure. I understand that he expressed the same view that afternoon at the meeting of the Special Committee of the Academy of Medicine.

"Up to the time of the report of the said authority on cancer, it had been understood that the demonstration to be given by me, should take the form of a clinic, and that no investigation would be made from a scientific point of view.

"You will therefore understand my surprise at receiving a letter by special messenger, which is as follows:

October 15th, 1920.

"Dr. T. J. Glover, 538 Jarvis St., Toronto.

"Dear Dr. Glover,—As previously arranged the committee appointed by the Council of the Academy of Medicine will meet you at your office at 10 a.m. on October 19th. They regret, however, that owing to unforeseen circumstances they will be unable to examine any clinical cases, as had been intended, and sincerely hope that this will in no way inconvenience you.

"Yours sincerely,

(Sgd.) "J. H. McPhedran,
"Secretary Special Committee."

LOSS TO UNDERSTAND.

"I am at a loss to understand why the members of the Special Committee should have to change their minds and abandon the idea of having a clinical demonstration to ascertain the value of my serum, after asking for same. I am also at a loss to understand the unforeseen circumstances which could have arisen and made it impossible for the examination of my clinical work. May I respectfully ask the question: Whether they were influenced by the authority from the United States?"

STATEMENT ACCEPTED.

"This letter was followed by another letter the same afternoon. The letter is as follows:

1276 King Street, West, October 15th, 1920.

"Dear Mr. Glover,—Regarding our Tuesday meeting I may say the committee feel disposed to accept your statement relative to the clinical condition of your cases.

This will render the personal examination of your patients by the members of the committee unnecessary. We feel the time can be more profitably spent in a general discussion of the situation.

"Sincerely yours,

(Sgd.) W. H. Harris.

"It is beyond my comprehension why this special committee appointed by the Academy of Medicine to investigate the results of this serum and to examine patients who had been treated by it, should accept my statement as to the improvement of my patients.

IS INVESTIGATION NECESSARY?

"If my statement as to the improvement of my patients is accepted, why is the investigation of the committee necessary? I have always understood that this investigation was being made in the interest of the public, and that the Academy of Medicine were anxious to know whether the serum had the beneficial effect claimed for it. I am, at any rate, of the opinion that this seems unreasonable, to accept my statement as to the effect of the serum upon patients. It was to say the least a little out of the ordinary course for a committee to report their clinical findings without an examination of the patients. In my experience it was never done before. I spent considerable time in preparing for the clinical demonstration.

ADVISED TO SEE DEPUTY.

"After receiving the letters referred to, I conferred with different medical men. They advised me to see the Deputy Minister. I heard on October 17th that he was in the city, but I did not succeed in locating him until he was getting on the train at the Union Station. He read the letters and told me that he was not aware that they had been written, or that the committee had adopted the course outlined.

"He changed his plans, and we went together to the King Edward Hotel, from where he phoned the president of the Academy and chairman of the special Committee, and asked them to come to the hotel and see us.

MIDNIGHT CONFERENCE.

"Notwithstanding the fact that it was after 11 o'clock at night, both gentlemen came; also the situation was discussed until 4 a.m. the next morning. During said discussion I insisted that the committee should not accept my statement as to the improvement of my patients, and that I go on with the clinical demonstration, as they had agreed to. The president finally agreed that the same committee or a new one would meet me on Tuesday morning, October 19th, 1920, the original date set for the clinic that they had previously arranged for.

GIVEN ONLY ONE HOUR.

"The special committee came to my office at the appointed hour on Tuesday, Oct. 19th, when I was told by a member of the committee that he could only allow me one hour for my clinical demonstration as he had other appointments, although the committee had ample time from Oct. 6th to arrange their appointments for the day set by them for the demonstration. The committee endeavoured to spend most of their time in securing from me the formula of my serum and the scientific preparation, which I refused to give. It was evident after that, what their one object was.

PROMISED DEMONSTRATION.

"I explained to them that according to the arrangements this was a clinical demonstration, and later on I would give a demonstration of my scientific work. I nevertheless disclosed sufficient details to enable them to lay a foundation for a clinical demonstration. I suggested a number of times that they examine my cases. I may say that the president of the Academy of Medicine also suggested that this be done, as that was the purpose for which they had come. They examined twelve cases out of twenty which I had present. This they did in about an hour, which is ridiculous.

COMPREHENSIVE SELECTION.

"In selecting cases for the demonstration I did not select cases which would show the serum in its most beneficial light, but selected cases which would demonstrate every known type of cancer. There were six members of the committee present, including the president. The examining was chiefly done by two members. They did not go into the histories of the cases in detail, but were satisfied with the summary. While the clinic was proceeding different doctors were in an adjoining room. Some of them came from distant points to be present at the clinic. Notwithstanding the expense incurred and time lost by these prominent medical men, the committee elected to ignore them entirely.

ALL DIAGNOSED BEFORE.

"Every case submitted to the special committee had been previously diagnosed by competent and reliable medical and surgical men, and every known test had been done to arrive at a correct diagnosis, except in one case where a section of tissue was refused. This was a typical case, and had been treated by radium for six months before coming to me. The reports of the different doctors of the various patients were available while the committee were carrying on their investigation.

INSPECTION OF LABORATORY.

"I note from the report made by the committee, they have seen fit to find fault with me because I refused to allow a member of the committee to go through my laboratory. I may say that I have never at any time suggested that I show them through my laboratory. About three o'clock one afternoon I received a letter which stated that one of the members was going to New York that night (presumably on private business) and that he would like to go through my laboratory. I gave the messenger who delivered the letter my reply, stating that it was impossible for me to comply with the request.

PSYCHIC EFFECT RIDICULED.

"I further note that the committee have a great deal to say about psychic effect on cancer patients. I have never seen, and doubt if any member of the committee has ever seen cancerous growths disappear by psychic effect, and when we get into the realm of psychic effect on cancerous growths, we are getting far afield of the purpose for which the special committee was appointed. The serum under discussion does not work by psychic effect.

A QUESTION.

"The committee also had something to say on spontaneous cures. May I ask the question:

"Has any member of the committee ever seen a spontaneous cure of cancer, also may I ask: Does any member of the special committee consider himself an authority on cancer, and if so, what scientific work has he ever done on it?

"From time to time different false reports have been given to the press by certain parties. These appeared to be given for a purpose. I cite one fact which appeared in one of the morning papers sometime ago, that I refused to meet the Academy of Medicine and give a demonstration on the date suggested by them, at which time the Academy had my letter agreeing to their arrangements. This report was given by a certain member of the Academy, which he afterwards admitted. The president of the Academy was good enough to deny this report the same evening.

NO MORE SECRECY.

"In view of the unsatisfactory outcome of the investigation of the special committee, I must say that no further investigation will be held behind closed doors with this committee."

DR. GLOVER'S CANCER SERUM

By the EDITOR OF THE CANADA LANCET.

IN this issue will be found the report prepared by the Committee of the Academy of Medicine, some statements made by patients, and Dr. Glover's reply to the Committee of the Academy of Medicine.

This discussion should not be carried on in the lay press, as it is easy to mislead the public in a matter that is so highly scientific and technical. The time has come when a commission should be appointed under the authority of the Government to investigate the whole affair under oath, and with power to examine the methods of preparing the serum and the results of its administration. This Commission should have power to compel persons to attend and give evidence.

This Commission should contain a Jurist of eminence, as chairman, and several medical scientists of recognized standing on such subjects as pathology, clinical medicine, bacteriology, surgery and diagnosis. This Commission should study the cases that have been treated and that are undergoing treatment. The most exhaustive efforts should be made to determine in every instance the real nature of the disease, and thereby exclude every case regarding which there might be any doubt as to its being true cancer.

This should be done in the interests of both the people and the medical profession. If the serum has merit this should be made known with the least delay. If it is devoid of merit the public should be made aware of the fact. Dr. Glover should be the first to welcome such a method of investigation.

Truth demands this course, the interest of the medical profession demands this course, and the interest of the public demands this course.

CURRENT MEDICAL LITERATURE

ANESTHETICS IN SHOCK

McKeen Cattell (*American Journal of Surgery*, July, 1920), gives the following summary of the experimental studies which were conducted on the effect of anesthetics in shock:

1. In the normal animal, ether, rapidly administered, causes a moderate fall in blood pressure, followed immediately by a recovery, so that by the time a degree of anesthetization is reached sufficient to cause a disappear-

ance of the eye reflex, the pressure is normal. In shock the animal becomes very sensitive to ether, the same degree of anesthesia produced under exactly similar conditions resulting in a marked drop in blood pressure.

2. An increased sensitiveness to ether is brought about by any circumstances which tend to depress the general condition of the animal such as low blood pressure, hemorrhage, severe operation, or the injection of acid into the circulation.

3. In a shocked animal, sensitive to ether, nitrous oxide and oxygen may be given in the most favorable proportions, so as to produce the same degree of anesthesia produced by ether without causing a fall in blood pressure.

4. Experiments on the heart volume in intact cats, and on contractions of the isolated turtle heart, together with deductions from blood pressure, show that ether, from the very beginning of its administration, results in a depression of the heart and a decrease in its output, which is sufficient to account for the fall in pressure in both the normal and the shocked animal.

5. Large doses of adrenalin injected intravenously in shocked animals usually result in the disappearance of the sensitiveness to ether for a period of an hour or more. The evidence indicates that adrenalin acts on the heart in a manner which antagonizes the effects of ether. Pituitrin does not influence the pressure drop produced by ether in the shocked animal.

6. Determinations of leg volume with a plethysmograph, perfusion experiments, and results obtained from the injection of ether directly into the circulation, together with the form of the blood pressure curves, indicate that ether causes a contraction of the peripheral vessels in the normal animal. This constriction is caused, (a) by a direct stimulation of the vasomotor centre and, (b) by a reflex to the fall in pressure resulting from depression of the heart. In shock no evidence of a vasoconstriction produced by ether was obtained, and pressor effects from asphyxia or sensory nerve stimulation become less or are entirely absent.

7. The cause of the greater depressing influence of ether on the blood pressure in shock is a disturbance of the vasomotor system. The usual compensatory constriction no longer occurs to offset the decreased output of the heart, so that there is no recovery of the blood pressure during the inhalation of ether, but instead, the pressure continues to fall. This might be due to a depression of the vasomotor centre or to an already existing maximum constriction, so that there would be no compensation. *New York Med. Jour.*, 4 Sept., 1920.

ARSPHENAMIN IN NONSYPHILITIC DISEASES

The main point made by Mathew A. Reasoner and Henry J. Nichols, Washington, D. C. (*Journal A. M. A.*, Sept. 4, 1920), is that for practical therapeutic purposes, the beneficial effects of arsphenamin and neo-arsphenamin are most apparent in a limited number of spirochetal diseases.

They act as a specific in Vincent's angina, relapsing fever, yaws, gangosa and pulmonary spirochetosis (if given early) in man, and in equine influenza.

A therapeutic effect is noted in rat-bite disease, in certain dental conditions and in fowl spirochetosis. The complete measure of the effect in the latter condition has not yet been established.

No apparent benefit has been found in such other spirochetal diseases as Weil's disease and yellow fever.

Good results have been obtained in syphilitics, in a number of non-syphilitic conditions, which are influenced adversely by that disease.

Their use has been recommended in conditions in which arsenic is indicated. In such case the effect is alternative rather than specific, and ordinarily there is no special advantage over liquid potassi arsenitis.

There is a limited effect on certain protozoal diseases, as malaria (tertian and quotidian), some of the trypanosomiasis and leishmaniasis. It is possible, however, that this effect may be nonspecific.

With the exception of anthrax, and possibly glanders, few favorable results are reported in bacterial diseases.

Except in Vincent's angina, arsphenamin and neorsphenamin should be administered intravenously in medium-sized dosage. Two or three injections usually accomplish the desired purpose, except in pulmonary spirochetosis, which may require a series of injections. In diseases showing liver involvement, it has been recommended that neo-arsphenamin be given on account of its supposed lesser degree of toxicity.

TREATMENT OF COMBINED DIABETES AND NEPHRITIS

In 100 unselected diabetic cases in which examination was made by Frederick M. Allen, J. W. Mitchell and J. W. Sherrill, New York (*Journal A. M. A.*, Aug. 14, 1920), the blood urea was found below 30 mg. per hundred c.c. in sixty-seven; between 30 and 40 mg. in seventeen; between 40 and 50 in ten, and above 50 in six. The McLean urea index was found below 80 in fourteen cases. Four of these patients were clinically nephritics. In addition, there were twelve cases of hypertension with traces

of albuminuria, and seventeen cases with palpably sclerosed peripheral vessels without albumin or hypertension. The treatment of combined diabetes and nephritis is conducted according to the usual principles for the two diseases. Diabetic treatment by means of a high protein diet, gluten bread and the like may be inimical to an associated nephritis with impaired nitrogen excretion; but it is readily possible to adjust the protein ration to both diseases. If meats are forbidden in the treatment of hypertension, the diet of a diabetic with hypertension is seriously limited; but with restriction of salt, such a patient is able to choose his protein at will. In the majority of combined cases the diabetes or the nephritis or both are mild, although sometimes they are severe. There is no serious conflict in the treatment even here. The diabetes does not interfere with protein restriction for the nephritis, or salt restriction for the hypertension. There is an actual problem in providing the necessary calories. This is solved by undernourishing the patient to the point at which he can tolerate 30 gm. of carbohydrate. Incidentally, the unusually low protein ration raises the tolerance for carbohydrate. With this carbohydrate, it is possible to fill up the rest of the diet with fat without acidosis. The relief of the hypertension relieves the heart, and the patient is capable of more exercise and work than before. At the same time, the weakness of diabetes and undernutrition seems not to impair the heart, but is the greatest safeguard against overtaxing. Three illustrative cases, demanding great judgment in treatment, are cited.

CAREERS FOR MEDICAL MEN

The higher educational qualifications now required of medical students and the greatly improved methods of instruction have resulted in multiplying the careers, aside from regular practice, which are now open for graduates of medicine. At the present time, for example, the graduate may enter the medical service of the Army, the Navy or the Public Health, Canal Zone or Indian services; he may find a special opportunity in industrial medicine; in insurance; as a school physician; in public health work; on hygiene boards; in administrative work in general hospitals, or as a medical attendant in an institution for the insane, the crippled or the feeble-minded. There is also an increasing demand for medical missionaries and for medical teachers abroad. There is a growing demand for medical teachers and unusual opportunities in medical research. There is an increasing number of research institutes, providing special advantages with fair incomes for physicians especially qualified for in-

vestigative work. So many, indeed, are the opportunities for the well educated physician, aside from regular practice, as to more than justify the present reasonably high standards of preliminary and medical education. The great increase in the number of careers open to medical men are not only benefiting larger number of well trained graduates in medicine, but also, through their activity and influence, insuring a better understanding in the future of problems relating to public health and the prevention and cure of disease.—*Jour. A. M. A.*

A CONSIDERATION OF THE NATURE OF AURAE

L. B. Alford (*Archives of Neurology and Psychiatry*, February, 1920), has attempted to point out anew the analogy between auræ and the hallucinations occurring in connection with sleep, hynosis, crystal gazing, etc. According to this view, auræ should be regarded not as the result of discharges of an epileptic nature in some part of the cortex, but as deficiency reactions, like dreams, occurring when there is a disturbance of consciousness of a certain type. Their relation to the loss or disturbance of consciousness in epilepsy and migraine is assumed to be the same as that of dreams to drowsy or sleep states, and their content should be regarded as being determined by the same factors that determine the content of dreams and similar hallucinations which develop in connection with disease of the organs of special sense or of the nerves connecting them with the brain.—*New York Medical Journal.*

SURGICAL TREATMENT OF TYPHOID CARRIERS

H. J. Nicols, J. S. Simmons and C. O. Stimmel (*New Orl. Med. and Surg. Journ.*, October, 1919), summarize their observations as follows: 1. So-called urinary typhoid carriers are really kidney carriers and can be cured by nephrectomy. An additional argument for operation is present if the infected kidney is functionless. One such case is recorded. 2. Intestinal carriers are really bile-passage carriers of two kinds: (a) In which the gall-bladder alone is infected; these can be cured by cholecystectomy; four such cases are recorded. (b) The gall-bladder and bile passages are both infected. In these cases cholecystectomy does not cure the carrier and the condition is incurable at present. Two such cases are recorded. 3. The surgical treatment of typhoid carriers, while not perfect, is the best available.—*Charlotte Medical Journal.*

POLYURIA AND THE PITUITARY GLAND

The role of the pituitary and of its infundibulum in the production of diabetes insipidus seems gradually to be defining itself on the therapeutic as well as on the experimental side. Kennaway and Mottram have recently shown that subcutaneous injection of posterior lobe extract causes anti-diuresis. In normal subjects they found that this decreased excretion was compensated later by an increased flow, so that the total quantity of urine excreted in the twenty-four hours remained constant; but in diabetes insipidus, Konischegg and Schuster found the day's volume of urine reduced by injections from 9 to 3.3 litres, and Rosenfeld showed that sodium chloride (5 to 7 grams) added to the food was after injection excreted in a concentration greater by about 50 per cent. than when no pituitary extract was given. In view of the fact that for many years the action of pituitrin was supposed to be diuretic, any fresh observations on the results of injections are of value. Crowson and Bouttier report a case of polyglandular syndrome with adiposity, amenorrhœa, polyuria, and a certain degree of myxœdema. Hemianopic diminution of the visual field and ocular palsy appeared to localise the tumour in or near the pituitary body. Injections of posterior lobe extract were made, and these had an elective and exclusive action on the polyuria, which was appreciably reduced. Camus and Ronssey have shown experimentally that polyuria depends, not upon a lesion of the pituitary itself, which they have successfully removed without causing diabetes, but upon a lesion of that part of the brain to which the stalk of the gland is attached.—*Medical Press.*

PERSONAL AND NEWS ITEMS

The nature of the attendance at the institute of the Public Health Service on venereal disease control, recently held in Washington, furnishes striking evidence of the fact that modern warfare on disease is not exclusively nor even chiefly medical. Prevention, in disease as in everything else, is now considered even more important than treatment; and prevention is very largely a social problem, in solving which every class of the community has its part. Thus, the institute which conducted two-weeks intensive training for 511 medical men and women and social workers, who had come from all parts of the continent to familiarize themselves with the recent marvellous advances in both the medical and the social aspects of the twin diseases, had among its

students more than a hundred physicians of high standing, 48 directors of clinics, 47 nurses, 22 police women, 15 educators, and about 50 national, state and city health officers, editors, travellers-aid secretaries, athletic directors, Y.M.C.A. secretaries, and representatives of other important social agencies.

Premier Drury asked for more data and promised consideration of the representations made in reply to a deputation representing the Ontario Association of Osteopathy which waited upon him on the 3rd of January, asking the co-operation of the Government in introducing a new medical bill which would permit the citizens of the province to employ whatever form of medical assistance they desired in cases of sickness.

The Maternity Hospital by-law for \$55,000 to convert the old nurses' cottage into a maternity hospital and to build an addition to provide accommodation for 25 patients was carried by the electors of Galt on New Year's by a majority of 419.

Six doctors from the Ministry of Health and Physical Education of Czecho-Slovakia recently visited Toronto. Their names were: Dr. Karl Drimi, Dr. Vladimir Basika, Dr. Brumil Vacek, Dr. Ivan Halek, Dr. Vladimir Petrik, and Dr. Antonin Kolinsky.

A hold-up which gave every indication of being the work of amateurs occurred on the Wharncliffe road two miles out of London, late on 11th January. When Dr. Colling, of Lambeth, was driving into town for a nurse, he found the roadway blocked by rails which had been taken from a nearby fence. As soon as he stopped and got out, he was pounced upon by two undersized men. After a hot fight he beat them off and they disappeared in the darkness. The county police were set to work on the case.

The Property Committee of the Toronto City Council adopted plans for a reception hospital to cost about \$400,000 with accommodation for 60 patients.

In submitting figures to the Board of Health, Dr. Hastings states that 458 deaths were registered in December, 1920. The general mortality rate was 10.5—the lowest registered for this month of the year. The rate in 1918 was 12.0. The total number of deaths during 1920 was 7,720, making the rate for the year 14.1. "This unusually high rate is largely the result of the second influenza epidemic experienced early in the year," states the doctor.

Madeline Bres, of Paris, who is now 82 years old, and who was the first woman in the world to obtain a doctor's degree, is blind and penniless. She has been offered by the state charities a bed in the public ward in a home for the aged.

Reputable London (England) physicians have issued a warning against the growing popularity, especially among women, of psychoanalysis, the newly revived treatment which seeks to cure mental troubles by calling up and examining buried memories, in which they see grave danger if practised by amateurs.

There were 5,169 cases of smallpox and 33 deaths in Ontario during the year 1920, as compared with 3,046 cases and nine deaths in 1919, according to the Statistician's report. There were 555 cases during December, scattered over 71 municipalities, which indicates the disease is more sporadic than epidemic. December had only 973 cases of measles, with seven deaths, compared with 1,026 cases and 14 deaths for a year ago. There were only 39 cases of influenza, with nine deaths. There is no disease prevalent beyond the normal extent at present. Venereal cases to the number of 507 were reported during the month.

Through the Department of Soldiers' Civil Re-establishment the Government is helping out returned soldiers out of employment by providing free medical attendance to them in cases of illness. They will get the services of a doctor and medicine free, either in their homes or in a hospital, but maintenance in the latter will not be provided. The soldier organizations, however, have represented that, if this concession were made, they believe the municipalities would provide the hospital accommodation.

A fine of \$100 and costs or three months' imprisonment was the sentence handed out by Magistrate Cohen to C. E. Anisden, an osteopath, who was convicted in the Police Court recently for prescribing and operating contrary to the law.

Development of a comprehensive colony at Portage La Prairie for the care of the feeble-minded, for the detention of incurables and ameliorating treatment for epileptics and others similarly afflicted, is planned by the Provincial Government. The project will take about ten years to complete. It is estimated that the total cost will approximate \$3,000,000. The custodial home for the feeble-minded, a contract for which was let several weeks ago to Wyatt & Ireland, for \$168,000, is the initial unit of the scheme.

Dr. Frederick Henry Holland, of Godalming, England, who was physician to the Duke of Wellington, died a few weeks ago at the age of 91.

OBITUARY

GERALD O'REILLY, M.D.

Dr. Gerald O'Reilly, one of Hamilton's well-known practitioners, died on 2nd January. While his health had been indifferent for several years, his death was unexpected. He appeared to be fairly well as late as midnight on 1st January, but took ill during the night and passed away. After he had been graduated Dr. O'Reilly became attached to the staff of the Toronto General Hospital, where his brother, the late Dr. Charles O'Reilly, was Superintendent for many years. Later Dr. O'Reilly went to Fergus, where he took up practise with the late Geo. Orton, M.P. for Centre Wellington. After this he went to Guelph, but there his health failed him, and he returned to Hamilton about twelve years ago.

While not affiliated with any of the local Masonic lodges Dr. O'Reilly was a member of the Masonic lodge in Fergus. He was also a member of the Irish Protestant Benevolent Society, took a keen interest in athletics and was a lifelong Conservative.

He is survived by one brother, Major (Dr.) E. B. O'Reilly, of Hamilton; two sisters, Miss Elizabeth O'Reilly and Mrs. A. H. Kittson, 104 Herkimer Street, and a nephew, Major Brefney O'Reilly, of Toronto, Principal Medical Officer of the Air Force of Canada.

WILLIAM J. GREIG, M.D.

One of Toronto's well known medical practitioners passed away in the person of Dr. William John Greig, who died on 5th January at his residence, 85 St. Clair Avenue, East, following a protracted illness of more than a year's duration. Dr. Greig was in his 64th year, and had been practising medicine in the city for thirty years.

He was born in East Whitby, Ont., a son of the late Alexander Greig, one of the old homesteaders of that section. Receiving his early education there, he later entered Toronto University, and graduated in

both arts and medicine. Later he took a post-graduate course in Edinburgh, Scotland. Until a year ago he had kept up a steady practice and was very prominent in medical circles. He was an active member of St. James' Presbyterian Church, and also was a member of the Oddfellows' lodge. Surviving is his wife and one son, J. Greig.

CHARLES EVERETT GRAHAM, M.D.

Dr. Charles Everett Graham, one of the pioneer residents of the City of Hull, Quebec, who played an important part in the history of its early development and was a large property owner in the city, passed away on 11th January after a brief illness.

He was born at Kingston, in 1844, and was graduated from McGill College in 1865, with honours, and in 1866 took up the practise of his profession in Hull. In 1872 he was appointed a Justice of the Peace and became Mayor of the city in 1873, and served until 1879.

Dr. Graham is survived by two sons, George D. Graham and Charles K., and one daughter, Mrs. Mildred Maybury.

R. J. B. HOWARD, M.D.

Dr. Robert Jared Bliss Howard, a noted authority in the medical world, died in London, England, where he had resided for many years on 9th January. He was educated at McGill University, at Montreal, and at the London Hospital. He was a Fellow of the Royal Society of Medicine. Dr. Howard was married in 1888 to Margaret Charlotte, second daughter of Sir Donald Alexander Smith, who played a dominant role in the history of Canada from 1869 until his death in 1914 and who was made Baron Strathcona and Mount Royal. Following the death of her father, she succeeded to his title. Dr. Bliss Howard is survived by his widow, two sons and two daughters. He was a son of the late Dr. Palmer Howard who was Dean of the Medical Faculty of McGill University for a time.

JOHN BEATTIE CROZIER, M.D.

John Beattie Crozier, physician, philosopher, historian and political economist, died in London, England, 8th January.

Dr. Beattie Crozier was born in Canada in 1847. He was educated at the Galt Grammar School and Toronto University. His published works include: "The Religion of the Future," "Civilization and Pro-

gress" (translated into Japanese), "History of Intellectual Development" and "Sociology Applied to Practical Politics."

Dr. Crozier was granted two civil list pensions each for life, by the British Government. He was a strong protectionist and started the campaign against the free trade policy of Britain by his articles in *The Fortnightly Review*. Of him it has been said:

"As a writer on philosophy and letters he has few superiors in England and none in Canada."

After graduation Dr. Crozier went to London for post-graduate study, and remained in England.

BOOK REVIEWS

SYPHILIS

By Loyd Thompson, Ph.B., M.D., Physician to the Syphilis Clinic, Government Free Bath House; Visiting Urologist to St. Joseph's Hospital; Consulting Pathologist to the Leo N. Levy Memorial Hospital, Hot Springs, Arkansas; Lieutenant-Colonel, Medical Reserve Corps, United States Army; Member of the American Urological Association and of the American Association of Immunologists. Illustrated with eighty-one engravings and seven plates. Second edition, thoroughly revised. Lea and Febiger, Philadelphia and New York, 1920. Price, \$7.

This very excellent book has reached its second edition. It is well written and illustrated. The author has a complete acquaintanceship with the best literature on the subject, and gives his experience and the result of his extensive reading in the present volume of nearly 500 pages. The very latest and best views on diagnosis and treatment are put forth. We recommend this work as one of the best on the subject.

THE ENDOCRINES

The Endocrines By Samuel Wyllis Bandler, M.D., F.A.C.S., Professor of Gynecology in the New York Post-Graduate School and Hospital. Octavo of 486 pages. Philadelphia and London: W. B. Saunders Company, 1920. Cloth \$7.75 net. Canadian Agents: The J. F. Hartz Co., Limited, Toronto, Ont.

This is a new and exceedingly interesting book on the very important subject of the Internal Secretions. The internal secretory glands have now come to occupy a front place in the thought of physiologists and clinicians. These glands are now known to perform functions of the utmost importance to the human body. They influence growth and health, and their disease causes some very grave derangement of health. This work by Dr. Samuel Wyllis Bandler comes at an opportune moment.

Much good work has been done of late years, and in this volume all this observation and experimentation is gathered up and placed at the disposal of the reader in a most attractive form. We have looked into the merits of this book with much pleasure.

HEART AFFLICTIONS

Their Recognition and Treatment, by S. Calvin Smith, M.S., M.D., Instructor in Medicine, University of Pennsylvania Graduate School of Medicine; Visiting Physician to the Philadelphia General Hospital; Visiting Physician for the Study of Cardiovascular Affections, Philadelphia Hospital for Contagious Diseases; formerly Instructor in Medicine, Jefferson Medical College; formerly Cardiovascular Examiner, United States Army. Illustrated. Philadelphia: F. A. Davis Company, Publishers, 1920; Price, \$5.50 net.

In this book, the author covers the main diseases of the vascular system. The various subjects are handled in a very lucid manner, and in such a way as to be of special value to the practitioner of medicine. The book is printed, bound and illustrated in a most attractive style, and reflects much credit upon the publishers. The author has done well in the information he has placed at the disposal of the reader. It is a very good book, very well written, and will prove most useful.

BIOLOGY

A text-book of Biology for Students in General, Medical and Technical Courses. By William Martin Smallwood, Ph.D., (Harvard), Professor of Comparative Anatomy in the Liberal Arts College of Syracuse University. Four edition, thoroughly revised; illustrated with 229 engravings and three plates in colors. Lea and Febiger, Philadelphia and New York: 1920; Price, \$3.50 net.

Few realize how interesting the study of Biology can be made until they have perused such a book as the one by Professor Smallwood. He tells his story of the life and growth of animal and plant life in such a manner as to render what might be regarded as a hard, scientific study of one of the most fascinating of subjects. There is marked leaning throughout to the evolutionary view, and this adds much to the value of the book. In the hands of the thoughtful reader this work will prove most helpful. Of many books on the same subject this is one of the most interesting and stimulating we have ever read.

CHEMICAL PATHOLOGY

Chemical Pathology, being a discussion of General Pathology from the standpoint of the chemical processes involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Fourth edition, revised and reset. Octavo of 695 pages. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$7.00 net. Canadian agents, The J. F. Hartz Co., Limited, Toronto, Ont.

Professor H. G. Wells does not now need any introduction to the medical profession, as he has long been known and recognized as one of the foremost students and teachers of chemical pathology. We have become familiar with his splendid work, and what we have said of it on former occasions is now repeated with the remark that we notice many improvements and much new matter. This is truly a great work, and covers a very wide range of subjects. It is difficult for one to realize how important the subject of Chemical Pathology is until he examines this work. The chemistry of the cell, the tissues, bacteria, immunity, inflammation, the ductless glands, gout-diabetes, etc. etc., are discussed in a scholarly way. This book is a real guide.

SURGERY

Its Principles and Practices for Students and Practitioners by Astley Paston Cooper Ashhurst, A.B., M.D., F.A.C.S., Associate in Surgery in the University of Pennsylvania; Surgeon to the Episcopal Hospital and to the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases; Colonel in Medical Reserve Corps, U.S. Army. Second Edition, thoroughly revised, with fourteen colored plates and 1129 illustrations in the text, mostly original. Lea and Febiger, Philadelphia and New York, 1920; Price, \$10.

In this volume of 1,200 octavo pages the author gives an excellent review of the best that is to be found in the modern books on surgery. The author's own experience is very great, and is here used to the very best advantage. This book is a very trustworthy guide to the student and practitioner. We think it may be taken as setting forth modern surgery at its best. We can well imagine that the great surgeon, after whom the present is named, would have been more than proud to have had such a work placed in his hands. It is, indeed, a superior work.

BASAL METABOLIC RATE DETERMINATIONS

Laboratory Manual of the Technic of Basal Metabolic Rate Determinations, by Walter M. Boothby, M.D., and Irene Sandiford, Ph.D., Section on Clinical Metabolism. The Mayo Clinic, Rochester, Minnesota, and The Mayo Foundation, University of Minnesota. Octavo volume of 117 pages with 11 tables and charts of explanations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$5.00 net. Canadian agents, The J. F. Hartz Co., Limited, Toronto, Ont.

The preface to this book states, "New Methods of Precision for the Study of disease are continually passing from the purely scientific to the more practical clinical application. The most recent of these methods of precision and probably the most difficult technicality is indirect calorimetry. This manual has been prepared in the effort to render this

valuable diagnostic method available to any well equipped and scientifically conducted clinical laboratory, and with the hope that the results of indirect calorimetry will not be thrown into general discredit by a neglect of the details requisite for obtaining a true basal metabolic rate. This should be taken in conjunction with the following from the first chapter: "By the term 'basal metabolism' or 'basal metabolic rate', of an organism is meant by minimal heat production of that organism, measured from twelve to eighteen hours after the ingestion of food and with the organism at complete muscular rest." The work is one of very meritorious research.

HISTOLOGY

The Essentials of Histology, descriptive and practical, for the use of students, by Sir Edward Sharpey Schafer, F.R.S., Professor of Physiology in the University of Edinburgh, formerly Jodrell Professor of Physiology in University College, London. Eleventh edition. Lea and Febiger. Philadelphia and New York, 1920; Price, \$4.50.

This is a work of the first order of merit. The distinguished author has long been before the scientific medical world as an exponent of the best sort of achievement on physiology and histology. In this edition he has brought the subject up to date in every detail. The illustrations are very fine, and of a most exquisite finish from the artistic point of view. The publishers have produced the book in the very best style of workmanship. It can be said with absolute confidence that the perusal of this book will not disappoint anyone. The coloring of many of the illustrations is very beautiful.

PRACTICAL PREVENTIVE MEDICINE

Practical Preventive Medicine. By Mark F. Boyd, M.D., C.P.H., Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Octavo volume of 352 pages with 135 illustrations. Philadelphia and London: W. G. B. Saunders Company, 1920. Cloth, \$4.00 net. Canadian agents, The J. F. Hartz Co., Limited, Toronto, Ont.

Here we have a very useful book on Preventive Medicine. This subject now occupies a prominent place in the eyes of both the medical profession and the public. The author very properly points out the important role that the medical men may play in the matter of safeguarding the health of the people, and emphasizes the thought that they should not lose the opportunity to act in this regard. Sections of the book are given to "Diseases due to invading micro-organisms", to "Deficiency Diseases", to "Occupational Diseases", to "Aspects of Hygiene", to "Demography", and to "Public Health". There is much useful infor-

mation in this book, and it should find a place in the library of all concerned in public health questions.

FRENCH-ENGLISH MEDICAL DICTIONARY

By Alfred Gordon, A.M., M.D., Paris, late associate in Nervous and Mental, Jefferson College; late examiner of the insane, Philadelphia General Hospital; Neurologist to Mount Sinai; to Northwestern General and to the Douglas Memorial Hospitals; Members of the American Neurological Association; Fellow of the American College of Physicians; Corresponding Member of the Société Médico-Psychologique de Paris, France; member of the American Institute of Criminal Law and Criminology, etc. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. Price \$3.50, net.

This is a very complete French-English dictionary. The medical term is given in French with pronunciation, and then the equivalent English term. We have examined this dictionary very carefully, and can recommend it as one that will meet all demands as a work of reference. The type is clear, and the arrangement ideal.

1919 COLLECTED PAPERS OF THE MAYO CLINIC, ROCHESTER, MINNESOTA.

1919 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1331 pages, 490 illustrations. Philadelphia and London: W. B. Saunders Company. Cloth, \$13.25 net. Canadian agents, The J. F. Hartz Co., Limited, Toronto, Ont.

This makes volume XI of the series, and the papers have been arranged by Mrs. W. H. Mellish. The volume contains articles on the Alimentary Canal, the Urogenital Organs, the Heart, the Blood, the Skin and Syphilis, the Head, Trunk and Extremities, the Nerves, Technic, and General Topics. The volume is well illustrated and its whole make-up is most attractive. The book reflects the utmost credit on all concerned in its production, and should find a place in every medical library.

BIOCHEMISTRY

The Principles of Biochemistry for Students of Medicine, Agriculture and related Sciences, by T. Brailsford Robertson, Ph.D., D.Sc., Professor of Physiology and Biochemistry in the University of Adelaide, South Australia; formerly Professor of Biochemistry in the University of Toronto; Professor of Biochemistry and Pharmacology in the University of California Illustrated with 49 engravings. Lea and Febiger, Philadelphia and New York, 1920; Price, \$8.00.

Professor Robertson has made a name for himself on the subject of Biochemistry, and his book will be welcomed by all who are working along the same line. It seems but a few days since he left Toronto for Australia, and his going was a distinct loss to Toronto. We are glad to note the appearance of his book, which will at once take a first place among

scientific works. This work reveals the true scientific spirit, and contains the fruits of much splendid research.

GONORRHOEA IN THE MALE

The Systematic Treatment of Gonorrhoea in the Male by Norman Lumb, O.B.E., author of "The Urethroscope in the Diagnosis and Treatment of Urethritis". Late R.A.M.C. Specialist in Venereal Diseases, and Officer-in-Charge of Division 39 and 51 General Hospitals, B.E.F., Clinical Assistant, St. Peter's Hospital for Stone. Second edition, Lea and Febiger, Philadelphia and New York, 1920; Price, \$1.75.

Here we have a first-class small book on the Treatment of Gonorrhoea in the Male. Every phase of the subject is very ably handled, and the book will prove an excellent guide to all who use it in the management of this very troublesome disease. It would be no small boon to those who have contracted gonorrhoea to be treated along the methods laid down by the author.

PUBLIC HEALTH AND HYGIENE

In contributions by eminent authorities. Edited by William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Bureau of Laboratories of the Department of Health, New York City. Illustrated with 123 engravings. Lea and Febiger, Philadelphia and New York, 1920; Price.

In this large volume there is set forth a very full statement of our knowledge on public health questions. The book is a very attractive one in every way, and is bound to give satisfaction to all who peruse its pages. We bespeak for it a wide sale and many interested readers. It brings the subject down to the most recent diseases, such as Trench Fever and Sleeping Sickness.

MISCELLANEOUS

1920 AN UNHEALTHY YEAR

In 1920 there were 24,284 cases of influenza with 2,416 deaths in Ontario. Practically every malignant disease was prevalent in the province to a greater extent than in 1919. There were 2,000 more cases of scarlet fever, 2,000 of smallpox, 1,500 of diphtheria, 13,000 cases and 200 more deaths from measles.

Tuberculosis caused only 1,662 deaths, as compared with 1,722 in 1919, showing that the dread plague is at least not on the increase.

There were 1,740 cases of syphilis, 2,158 of gonorrhoea and 82 of chanroid reported in the year.

TORONTO'S SUDDEN AND VIOLENT DEATHS

During the year 1920 three hundred and twenty-three people met with violent or sudden deaths in Toronto. A large number of the deaths were due to heart trouble. Seven children were killed by automobiles. Four murders occurred and eight newborn babies were found dead.

Following figures represent the year's fatalities:

Died suddenly or found dead	131
Automobiles	55
Asphyxiated	24
Drownings	17
Falls	17
Railway deaths	14
Burned to death	12
Alcoholic poisoning	10
Street cars	10
Suicides	7
Elevators	5
Electrocuted	4
Murders	4
Shot	3
Cycles	2
Waggon's	2
Frozen to death	1
Explosion	1
Falling bricks	1
Hanged	1
Crushed to death	1
Machinery	1

Sudden deaths during the month of December, which are included in the above list, were:

Died suddenly or found dead	9
Automobiles	4
Falls	1
Machinery	1
Poisoned	1
Murdered	1

INFANT DEATHS IN BRITAIN

The annual report for 1919 of the Registrar-General for England and Wales contains figures in the section dealing with infant deaths suggesting that Nature or Providence is trying to atone for war losses.

"While the time is hardly ripe yet to attempt an estimate of the total loss of births attributable to the war," says the report, "possibly the number may be somewhat over half a million or very similar to that of deaths on active service."

By the way of compensation the report shows fewer deaths occurring now in childhood. Death rates, by far the lowest on record, are shown in 1919 from measles and whooping cough, while the low death rate from diarrhoea has only once been bettered. The death rate at most ages of life shows a tendency to decline, except in the case of cancer. The excess of infant deaths in London over the average for the country, which was noted as an exceptional feature of the 1917 and 1918 figures, has disappeared.

COMMUNICABLE DISEASES CAUSE NUMEROUS DEATHS

Communicable diseases were responsible for more deaths in December than in the corresponding month of 1919. Following were the figures:

	1920	1919
Typhoid fever	11	13
Scarlet fever	47	26
Diphtheria	224	168
Smallpox	12	—
Measles	81	—
Whooping cough	59	33

BIG MEDICAL FEES.

The £12,000 fee said to have been paid to Dr. Deblet, the famous French surgeon, for attending the late King of Greece, although a big sum as medical payments go, by no means establishes a record.

Our own Sir Morell Mackenzie received just about double this—£20,000, with extras for travelling and hotel expenses—for attending the Emperor Frederick of Germany.

Dr. Lorenz, of Vienna, the "bloodless surgeon," was paid £32,000 by Philip J. Armour, the Chicago meat king," for curing his little daughter

of hip disease. But then he was detained in America for four months over the job.

Another famous bloodless surgeon, Dr. James Gale, was offered £50,000 by a wealthy patient suffering from lameness, on the principle of "no cure, no pay." Gale accepted the conditions, effected a complete and permanent cure, and received his fee—probably the biggest on record.

The first Baron Dimsdale, for a very brief attendance on the Empress Catherine of Russia, received his title, £10,000 in cash, an annuity of £500 a year for life, and £1,000 for the expenses of his journey between London and St. Petersburg and back.

TORONTO'S VITAL STATISTICS

Vital statistics compiled by the City Clerk show that the natural increase in the city's population during 1920—the difference in number between births and deaths—was six thousand.

Prior to 1914 the highest number of births registered was 14,500. Since then, and up until the close of 1919, the returns were much lower, but 1920 closes with the record number of births of 14,084. The figures for December follow:—

	Dec., 1920	Dec., 1919
Births	1,020	1,119
Marriages	520	549
Deaths	517	573

The comparison of the vital statistics for the years 1919 and 1920 in addition to showing the increase in births show that while there has been a higher death rate, marriages have increased substantially. The comparison follows:—

Births	14,084	11,684
Marriages	7,784	6,480
Deaths	7,894	6,251

The birth figures, including still births, for the years 1912 to 1920 follow: 1912, 11,100; 1913, 14,100; 1914, 14,500; 1915, 13,288; 1916, 12,866; 1917, 2,517; 1918, 12,195; 1919, 11,684; 1920, 14,084.

CONTAGIOUS DISEASES IN TORONTO

A slight increase in the number of diphtheria cases in the city is noticed in the monthly return of communicable diseases made by the Health Department to-day. During December there were 289 cases,

while during November there were 263. For the same month of 1919 there were 343 cases.

Other figures follow:—

	Dec. 1920	Nov. 1920	Dec. 1919
Diphtheria	298	263	343
Scarlet fever	180	176	180
Typhoid fever	5	12	6
Measles	26	19	56
Smallpox	29	15	1045
Tuberculosis	41	45	0
Chickenpox	102	110	153
Whooping cough	56	75	12
Mumps	3	13	143
Diphtheria carriers	44	75	12

INTERNATIONAL CONGRESS OF MILITARY SURGERY AND CHEMISTRY

An International Congress of Military Surgery and Chemistry, to which the cooperation of all doctors and chemists belonging or having belonged to the armies is solicited, is being organized by the Medical Service of the Belgian Army, to take place at Brussels in the month of June, 1921.

At the close of the great events which upset the world between 1914 and 1918, it is interesting to sum up the work of the several Medical Services and to combine, with a view to common progress, the lessons learned by every and all; it is also useful to determine the attainments of army medical science during the War so as to be able to condense them into teachings for the future.

The following questions have been set down for discussion:

- (1) Lessons of the War on the treatment of fractured limbs;
- (2) Antivenereal and antituberculous measures in the army;
- (3) Chemical and physical study of poisonous gas. Consequences of its action on the organism. Importance of these consequences as to the estimation of disablement.
- (4) General organization of army medical services.

Contributions to the Congress, as also papers and correspondence on the above-mentioned subjects, will be received until April, 1921, by the General Secretary of the Congress, Dr. Jules Voncken, Hospital Militaire de Liège (Belgium). A short summary of the papers should be mailed to the same address.

Grape-Nuts

finds its place in many a prescribed dietary because this prepared blend of wheat and malted barley fulfills a duty in illness or convalescence, as do few other foods.

All the nutritive qualities of the grains are preserved in Grape-Nuts, and its great ease of digestion and quick assimilation make it particularly valuable in every day practice.

Children are especially fond of Grape-Nuts because of its pleasing, nut-like flavor; and its sweetness (self-developed from the grains through processing and long baking) answers Nature's appeal for sweets in a natural, wholesome way.

Samples of Grape-Nuts, Instant Postum and Post Toasties, for personal and clinical examination, will be sent on request to any physician who has not received them.

Made by Canadian Postum Cereal Co., Ltd.,
Windsor, Ont.

MEDICAL PREPARATIONS

THE IMPORTANCE OF NUTRITIVE REPAIR.

The importance of nutritive repair, in the treatment of all bodily disorders, associated with loss of weight and general vitality, is too patent to need more than passing emphasis. The question of how best to bring about such a desirable result is, however, one that the physician is daily called upon to answer, and upon his ability to "build up" his more or less devitalized patients will largely depend his success in the treatment of chronic affections. Taking, for example, a patient suffering from Pulmonary Tuberculosis in the incipient or secondary stage, what are the approved measures to adopt to bring about improvement of nutrition and a consequent gain in weight and strength? All phthisiotherapists now agree that the therapeutic trinity of salvation for the tuberculous invalid is composed of: 1—Fresh, pure air, in abundance, both night and day; 2—A properly balanced ample supply of nutritious food; 3—Plenty of rest, especially during the febrile period.

While medication is useless, unless the patient is properly fed, "ventilated" and rested as above referred to, there is no doubt that intelligent medical treatment, designed to promote nutrition, is indicated in a majority of cases. If the tuberculous patient has been neglected, for any length of time, some degree of anemia is almost always present. In such cases, an absolutely bland, non-irritant, readily tolerable and assimilable form of iron, such as exists in Pepto-Mangan (Gude), cannot be but of benefit, by stimulating the formation of erythrocytes and hemoglobin, and thus augmenting the oxygen-bearing potency of the blood. Metabolic interchange is thus quickened, better absorption and assimilation of food follows, and as a consequence, nutritive repair is encouraged and hastened.

IN PRAISE OF TOBACCO

"Orators, statesmen, writers, artists, actors, poets, etc., have all acclaimed the delights of the fragrant weed," said an editorial in a Montreal newspaper. Tobacco's devotees have the steadfast conviction that it "offers solace; soothes the mind; gives the sense of rest and peace; calms irritability; ministers to domestic placidity, and provokes the mind to beautiful thinking". Probably the editor smoked a cigarette to put himself into the right frame of mind to pen these beautiful thoughts.

B & B Adhesive Plaster

A Supreme Creation

Let us send you a spool of B & B Adhesive. It will form a prime example of the B & B attainments.

Bauer & Black have spent 26 years in the perfecting of Surgical Dressings. Their laboratories are today models of their kind.

B & B products are made by masters of the art. And during all these years they have sought and secured the aid and advice of leaders in modern surgery.

B & B standards are exacting and extreme. All sterile dressings, for instance, are sterilized after packing. And constant incubator tests are made of center fibers to prove efficiency.



BAUER & BLACK, Limited
Chicago Toronto New York

*Makers of Sterile Surgical Dressings
and Allied Products*

B & B Handy-Fold Gauze comes in sealed parchmine envelopes. B & B Plaster Paris Bandages come in double containers, with extra plaster for finishing, and wrapped in water permeable paper.

A spool to try

As a sample of the B & B creations, let us send you some B & B Adhesive.

We have three experts who have spent over 20 years in the study of Adhesive. One has perfected the formula, one the rubber base, one the spreading.

They are aided by costly machinery. The spreading is done by six tons of rolls, each kept at a different temperature.

Let this Adhesive indicate how B & B products excel.

5-YARD SPOOL FREE

Mail this coupon with your name and address to

BAUER & BLACK, Limited
96 Spadina Avenue, Toronto

and we will mail you a 5-yard spool of B & B Adhesive in the two-inch width.

.....

.....

.....

"The D & L"
TRADE MARK

PRESCRIPTION 1920

IMPROVED HYPOPHOSPHITE MEDICATION.


TUBERCULOSIS.

In the early stages of Tuberculosis, alterative tonics, composed like Prescription 1920, of Hypophosphites combined with Strychnine and Quinine in an assimilable form, perform the very important function of guarding the body from waste by stimulating the tissue cells to take up nourishment. When the disease is confined to the glands, this Prescription will be found a valuable agent to assist nature in her task of forming barriers to prevent the disease spreading to the lungs and other organs of the body.

SPECIAL NOTE.

Prescription 1920 is supplied in the form of a syrup and is also put up without sugar for use in cases where sugar is contra-indicated as in diabetes. Stocks of both forms of this improved combination of the hypophosphite salts are now in the hands of your local druggist. We solicit your prescription for same.

Prepared in Canada by Davis & Lawrence Co., Mfg. Pharmacists, New York & Montreal.



For Kidney-Bladder-Prostate
A NEUTRALIZING G-U TONIC
VALUABLE IN
URETHRITIS - CYSTITIS - PROSTATITIS
AND ALL IRRITABLE AND WEAKENED BLADDER CONDITIONS
ALWAYS SOOTHING AND RESTORATIVE

OD CHEM. CO.
59-61 BARROW ST. NEW YORK

DOSE - ONE TEASPOONFUL FOUR TIMES A DAY

Vapo-Cresolene

for Influenza, Whooping Cough,
Spasmodic Croup, Bronchitis,
Broncho-Pneumonia, Asthma

and the bronchial complications incident
to Scarlet Fever and Measles.

Vaporized Cresolene is destructive to Diphtheria bacilli and may be advantageously used in connection with the treatment of this disease. Cresolene has twice the germicidal value of carbolic acid and is less toxic. The vapor is harmless to the youngest child. The accompanying vaporizer offers a means of easy and prolonged treatment.

Cresolene's best recommendation is its 40 years of successful use.

Let us send you our descriptive and test booklet which gives liberal sample offer.

THE VAPO-CRESOLENE CO., 62 Cortlandt Street, NEW YORK
Leeming-Miles Building, Montreal, Canada



For Quick, Revitalizing Effects—

WHERE BOVININE IS PRESCRIBED, you can always depend upon quick, revitalizing effects. As part of the diet of your patients to whom meat is forbidden, it is particularly efficacious.

BOVININE

The Food Tonic

is equally good for young and old. Since 1873 it has been highly regarded as a blood maker and tissue builder. An excellent tribute to the value of health-giving preparation is its continued recommendation by the medical fraternity everywhere.

SAMPLES AND LITERATURE
ON REQUEST

 THE BOVININE COMPANY

75 WEST HOUSTON ST.

[NEW YORK



GLYCO-HEROIN (SMITH)

For
Coughs
Bronchitis
Phthisis
Whooping Cough
Pneumonia
Asthma

AN ABSOLUTELY STABLE
AND UNIFORM PRODUCT
THAT HAS GAINED
WORLD-WIDE DISTINCTION
THROUGH ITS DEPENDABLE
THERAPEUTIC EFFECTS

DOSAGE:

The adult dose of the preparation is one teaspoonful, repeated every two hours or at longer intervals, according to the requirements of the individual case.
For Children of ten or more years, from one-quarter to one-half teaspoonful.
For children of three or more years, from five to ten drops.

FOR SAMPLES AND LITERATURE, ADDRESS:
MARTIN H. SMITH CO., New York, N.Y. U.S.A.

Read the Medical Record

For 54 years has reported all that is best in medicine, surgery, and the specialties throughout the world. Weekly, \$6. per year. Sample free.

WILLIAM WOOD & COMPANY, 51 Fifth Avenue, New York

DOCTOR

Your patients will appreciate your having *The Canadian Magazine* in your waiting room.

Sal Hepatica

THE STANDARD
SALINE LAXATIVE

Samples on request

Bristol-Myers Co.
New York



Fanning the Flame to put out the *Fire*

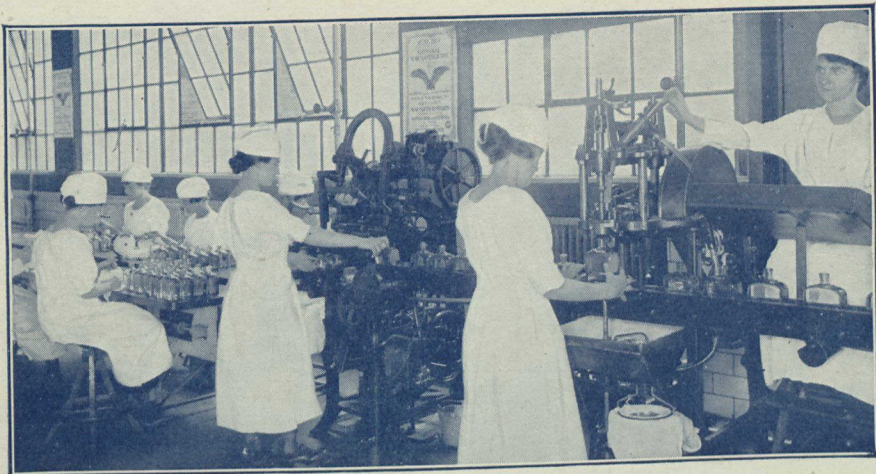
“*FANNING the Flame,*” is exactly what is being done when ice packs are used in treating pneumonia. Cold applications to the chest will drive the blood from the superficial circulation to an already congested and engorged lung.

Antiphlogistine
TRADE MARK

applied warm and thick over the entire thoracic wall, *relieves the congestion* by increasing the superficial circulation. The *cutaneous reflexes* are *stimulated*, causing contraction of the deep-seated blood vessels. The over-worked *heart* is *relieved* from an excessive blood pressure, *pain and dyspnoea* are *lessened*, the *elimination of toxins* is hastened and the *temperature declines*.

Send for “*The Pneumonia Lung*” booklet.

THE DENVER CHEMICAL MFG. COMPANY
Montreal



Finest Technical Equipment

THE Nujol Laboratories contain the most modern equipment. Everything that light, cleanliness, order and skilled supervision can accomplish has been done to make the home of Nujol the last word in sanitary science.

The expert chemists of the Nujol Laboratories of the Standard Oil Co. (New Jersey) have been able to produce absolutely pure Liquid Petrol-

tum of every viscosity from a water-like fluid to a jelly.

The viscosity of Nujol was determined after exhaustive research and clinical test, and is in strict accord with the opinions of leading medical authorities.

Sample and literature based on the writings of Sir Arbuthnot Lane and other eminent authorities will be sent gratis. Mail coupon below.



Chas. Gyde & Son, Canadian Agents for Nujol, 22 St. Francois Xavier St., Room 774 Montreal, P.Q.

Please send me booklets marked.

- "In General Practice"
 "A Surgical Assistant"

- "In Women and Children"
 Also Sample

Name _____

Address _____

Adrenalin in Medicine

5—In Combination with Local Anesthetics

THE importance of Adrenalin in the induction of local anesthesia can be estimated by a realization of the fact that one of the major prerequisites of an efficient local anesthetic is that it be compatible with Adrenalin.

In the rôle of synergist to the anesthetic Adrenalin serves a threefold purpose; it blanches the tissues, giving the surgeon a clear field of operation; it confines the anesthetic to the area into which it is infiltrated, preventing absorption and possible toxic manifestations; it intensifies and prolongs the anesthesia by diminishing the circulation, thus obviating the dilution, oxidation and rapid destruction of the anesthetic in the tissues.

The question of the quantity of Adrenalin to be injected with the local anesthetic solution deserves special consideration on the part of the surgeon. It should be remembered that after the effects of the injection of a *large* dose of Adrenalin have been dissipated, after the local ischemia has subsided, the patient is liable to have a secondary hemorrhage, owing to a reaction in the walls of the

vessels which manifests itself in obstinate dilatation. Many instances of sloughing are attributable to the strangulation ensuing upon the injection of too much Adrenalin. It is incumbent upon the surgeon, therefore, to regulate carefully the Adrenalin content of the anesthetic solutions he employs.

In laparotomies and other major operations in which an ounce or more of anesthetic solution is required the proportion of Adrenalin need not exceed 1 in 100,000. This concentration can be approximated by adding five drops of the 1:1000 Adrenalin to the ounce of anesthetic solution. When smaller quantities are to be injected it is permissible to increase the Adrenalin proportion to 1:50,000 or 1:40,000.

The most satisfactory results are obtained by first sterilizing (boiling) the anesthetic solution and then, after it has partly cooled, to add the requisite number of drops of Adrenalin 1:1000. This permits of gratifying flexibility; the surgeon is enabled to vary the proportion of Adrenalin in the anesthetic fluid at will and with a minimum of inconvenience.



PARKE, DAVIS & COMPANY