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EDITORIAL

THE FOOD VALUE OF CANDY.

All down the past centuries the human race has adopted such combinations of foods as best nourished the body. This was done long before there was a chemistry or physiology of food. Yes, long before the first chemist or physiologist was born. As the result of instinct, guided by experience, mankind had been consuming large amounts of sugar foods, or other foods that in the process of digestion are converted into sugars. These sugars or their equivalents were obtained from the juices of plants, or from various substances that were put through some process which changed them into sweet tasting, relishable, and nutritious foods.

The Carbohydrate group of foods contain carbon, oxygen and hydrogen in varying proportions. Sugars may be divided into the following groups:—

1. Sucroses, or disaccharids, such as cane sugar, beet sugar, maple sugar and malt sugar.
2. Glucoses, or mono-saccharids, such as grape sugar (dextrose), fruit sugar (levulose), and corn syrup.
3. Invert sugar, such as honey, which is one of the forms in which the earliest use of sugar is recorded.

It must be remembered that the large amount of starch consumed as food must be converted into glucose or dextrose sugar before it can be made use of in the body. It has been stated by eminent authorities on foods that about one-quarter pound of sugar per twenty-four hours is the maximum amount required by an adult. If more than this be consumed, the extra amount will be excreted by the kidneys. This would be about ninety pounds of sugar per annum. Children can assimilate more sugar than adults because of their relatively active muscular energy and relatively large body surface for losing heat in proportion to their size. They do not as a rule care for fat meat, and prefer sweets as a natural substitute.

It has now been established by chemists and physiologists that, if sugar be not taken as a food, the digestive organs make it out of other elements in the food. Such diets as potatoes, bread, cornmeal, arrowroot, sago and rice are very rich in starch, which yield in digestion maltose, then glycogen, and finally the sugar that feeds the body. The healthy adult working hard requires daily nearly 2,000 grains of nitrogenous foods, about 750 grains of fats, and about 6,000 grains of carbohydrates, made up of starches and sugars.

Candies are among the attractive and useful forms in which sugar is used as a food. They contain large quantities of cane sugar, with frequently some fats such as butter, nuts and fruits, corn syrup, starch, chocolate and flavoring. All of these elements are useful foods. Nuts and fruits are recognized as yielding a good percentage of proteid nitrogenous material, which is one of the absolute essentials in body building and nutrition. The fat is also a proper constituent in every dietary. Corn syrup is but another form of sugar, as has been aforesaid.

Starch found in exceedingly small quantities in good candy is also converted into sugar in process of digestion. Chocolate is a most nourishing fat food and a delightful stimulant, especially valuable in cases of extreme fatigue or exposure. The flavorings are stimulants to the digestive organs, and increase the flow of saliva, gastric fluid, pancreatic secretion, and the action of the intestinal glands.

There is a rather widespread notion that eating candy injures the teeth. There is not the least scientific foundation for this opinion. The lack of sugar is much more likely to injure the teeth, through impaired nutrition, than even its excessive use is liable to do by any digestive troubles which might result from such overuse.

In like manner there is very little foundation for the common opinion that the consumption of candies causes diabetes. It is true that the abuse of sugars may produce a mild form of temporary diabetes, which disappears on the proper regulation of the diet. This form of diabetes is quite rare and unimportant. The excessive ingestion of any other food will cause derangement of health also. It is very doubtful if the use of candy, in any form, ever causes a case of true diabetes.

Statistics show that the annual per capita use of sugar in Canada and the United States is about eighty-four pounds. That of Britain, before the war, was about ninety pounds, though the latter figure does not represent the consumption of Britain itself, as a certain percentage of the sugar used in the country was exported to other countries in the form of sweet goods. This would give such large consumption figures per year as:

Canada.....	314,000 tons
United States.....	3,954,187 tons

This gives some idea of the importance of sugar and sugar products as food. The amount of sugar which each individual requires, indeed must have, may be taken partly in beverages, with fruits, with cereals, as a dessert, as jam or preserves, or as candy. The housewives are making fruit candies when they put down jams the ingredients of which are some fruit and cane sugar. Such fruit candies, however, lack the other valuable materials which are incorporated in candies as produced by our Canadian manufacturers, and therefore are not so well balanced from a dietetic standpoint.

In candy, as a food, the essentials are the selection of good material, that the preparation should be well done, and that the product be properly kept in the sales shops. These are the same essentials one expects in the preparation of any other article of food; and apply to bread as much as they do to candy. Good flour, good baking and good keeping will insure good bread. Good material, good making and good keeping will guarantee good candy. These conditions being assumed, then candies are among our most valuable foods, particularly so as foods for the young, whose instincts have guided them correctly in their fondness for sweets of all kinds.

Confections in which chocolate is combined are not only delightful, but conducive to good health, and among our most highly esteemed modern food products.

THE COMING MEDICAL ACT.

To those who took part in the interviews which the members of the Ontario Government granted to all who wished to be heard, it must have become very apparent that the master word in the propaganda of the various "cults" is "ignorance." Views were advanced on medical subjects that were most astonishing in the extreme.

Some put forth the claims of chiropractic, and tried to show how it had come to revolutionize the healing art. All diseases, aches and pains, according to this cult, are caused by some displacement of the spinal column, and this gives rise to some pressure upon a nerve, and forthwith a tonsil enlarges, or a cancer comes in the stomach, or a fibroid makes its appearance in the uterus, or, if a man with such a displacement visits a swamp, he will have chills and fever, the ague in other words; and, again, if he gets a chiropractor to punch his back, his ague will leave him in spite of the busy mosquito.

Then the osteopath came along with his assertion that the medical men did not learn anatomy properly. Indeed, the statement was made that the professors of anatomy in our medical colleges do not teach ana-

tomy properly, because they do not know what constitutes true anatomy. The human body, to the osteopath, must be a different sort of structure to what it is to the ordinary, but not inspired, mortal. The osteopath, too, holds that the vast majority of our ills come from a spinal column displacement, and that, once this is put to rights, new nerve energy flows into the diseased part, and presto! the person is made well. Twist a certain joint in the neck, and manipulate certain muscles, and behold you, the membrane of diphtheria falls from the tonsils. Give a peculiar rotation to a vertebra in the lumbar region and the ulcers of typhoid fever heal, and the fever takes its departure, as the evil spirits did long ago out of the afflicted Gadarene. Or in pneumonia, straighten up the back, raise the ribs, give a pull on the clavicles towards the patient's head, and then watch the resolution go on apace in the lungs. Forget all you have been taught about germs. All you need to do is to learn poor old Andrew Taylor Still's theory about displacements.

Then came along the Christian Scientists, with their venerated claim that they "do not practice medicine." They do it all "by prayer and faith." Their remedy for a broken leg is a splint of "prayer." For the plague they would prescribe "prayers" at so much for each; for the argument was put forth by the special advocate that "the laborer is worthy of his hire." They disclaim all knowledge of disease; and, indeed, Mrs. Eddy states that to study disease is to cause disease, and unfit one to be a good Christian Scientist. All disease is a delusion, a mere figment, an error of mortal mind—that is, our mind. Yet, in the face of such teachings, the advocates for this body contended that they were specially faithful in their observation of the health laws by reporting contagious cases. This leads to a *reductio ad absurdum*. One cannot report a case of typhoid fever or smallpox if he does not know such a disease when he meets it. According to the Christian Scientist text book by Mrs. Eddy, it is wrong to study disease, or know anything about it. So the Christian Scientist impales himself on his own horn. They should have no right whatever to undertake the task of treating people until they can shew a complete change of view towards disease.

The medical profession and the medical teaching bodies appeared also, and put forth their views. While there were differences on the methods of governing the medical profession, there were no differences of opinion on the one thing essential, namely, that all who practise medicine must secure the licence of the Medical Council. Surely to this there can be no reply. Take the medical course of study, pass the examinations, get the qualification of the province, and then call oneself a chiropractor or an osteopath, or a mano-therapist, or a homeopath, or a Christian Scientist, if he so pleases. This is the stand for the entire medical profession to take.

Whether the Medical Council should be composed of fifteen, as recommended by Judge Hodgins, or of a larger number is mere detail. Whether or no the university degree should carry the right to practise is also a detail. The one thing needful is a high standard before any one shall have the right to treat the sick or injured. This is ground that cannot be assailed. It is taking the sure position that the safety of the people is the first thing to be considered. The one thing that is constantly held up before the people of to-day is "safety first," and this course is "safety first" for the people.

THE SURGEON IN THE WAR.

"The surgeon skilled our wounds to heal is worth more than armies to the nation's weal." So sang Homer long centuries ago, when surgery was in a very primitive condition. What would Homer have said if he had witnessed the recent war, and sang of it rather than of the siege of Troy?

Let us quote here the words of Professor George Wilson, of Edinburgh, who was operated on by Professor Syme in the days prior to the use of anaesthetics:—

"During the operation, I watched all the surgeons did with a fascinated curiosity. Of the agony it occasioned I will say nothing. Suffering so great as I underwent cannot be expressed in words, and thus, fortunately, cannot be recalled. The particular pangs are now forgotten; but the black whirlwind of emotion, the horror of great darkness, and the sense of desertion by God and man, bordering close on despair, which swept through my mind and overwhelmed my heart, I can never forget, however gladly I would do so."

But to-day the patient who has to undergo an operation, or the wounded man who is carried in from the battlefield, is given an anaesthetic which robs the surgical work necessary of most of its terrors. Then add to this the use of modern methods to prevent sepsis, and one sees what has been done in one field of the healing art. In the recent war reconstructive surgery has done great things, which would have been quite impossible but for the boons of anaesthetics and antiseptics.

The transplanting of skin, flesh and bone—often contributed by others—is the new method which most amazes the lay mind. In one military hospital there is a patient whose defects have been made good by bone borrowed from three comrades. The repair of shattered and dehumanized faces is another crowd-compelling wonder. But the making of new joints, the replacing and re-education of nerves, and, above all, the new idea of a useful stump, though less easily explained, are even more

wonderful. The last-named advance, which is mainly due to the Italian surgeons, is nothing less than a revolution in amputation. It is no longer a question of preserving a mere stump—every bit of muscle and sinew which can be kept is now utilized as motive powers for the movable parts of wonderfully designed artificial limbs.

In face of this, we find a writer in a recent issue of a newspaper telling us that if drugless healers are put out of business, the people will be at the mercy of those who have nothing to offer the people but drugs and operations. Such writers think that the medical profession do nothing but order some medicine. They ignore the advice they give. They know nothing of all the other treatments that are not drugs.

RADIUM.

Radium is one of the rarest of the chemical elements, and is of very high price. The cost of a milligram at present is \$100. Radium has been much used in the treatment of cancer, birth marks, and for the removal of warts. It would be much more fully employed were the price reduced.

One cause for the shortage of radium for surgical purposes is the extensive use made of it in the manufacture of luminous dials for watches and clocks. It is also used in the manufacture of many instruments that have to be used in the dark. This was very specially the case during the war. About ten cents' worth is sufficient for the dial of a watch.

It is an interesting fact that the radium on a dial would really last for nearly 2,000 years. It would not be recognizable, however, after a few years, as the zinc sulphid which is mixed with the radium to enable it to give forth its light would gradually disappear. The radium deposits on worn-out watches and instruments could be used again if there were any way of collecting a sufficient number of the articles to warrant the trouble and expense of separating it.

Detecting the presence of radium is comparatively simple. It is done by a small but complicated instrument which indicates the proportion of radium in a piece of ore. Not all ore containing radium is worth the trouble of extracting the element. Radium is present in all carnotite ores, but the amount, geologists are fond of explaining, is often as slight as the amount of gold in the water of the ocean. Both radium and gold are there, but to extract them at a profit is impossible.

Even when ore rich enough in radium to warrant excavation is located, the cost of separating the radium is great. For one part of radium in this ore there are 3,000,000 parts of other substances, and it takes eight carloads of chemicals to treat one ton of ore. The ore is treated with acid to dissolve the uranium and vanadium present. From

the acid solution the radium is precipitated and then collected in much smaller bulk, dissolved and precipitated again several times until it is reduced to a form of salts. It is usually kept and used in this form, stored in a casting of lead to protect articles in the vicinity from the effects of the rays.

An attempt has been made to employ mesotherium as a substitute for radium. It is obtained from a certain kind of sand, found in Brazil. Mesotherium takes longer to reach full strength than does radium, but it loses it much more rapidly.

CONCERNING FELLOWSHIP WITH GERMAN PHYSICIANS.

The war will probably soon be over, unless the Germans by some new act of treachery force the civilized nations to go in and beat them to the ground. When it is over the question will come up as to what we are going to do with the German medical men. Are we going to admit them to fellowship again as though nothing had happened? That is unthinkable, for the physicians of Germany have vied with the other professional classes and university men in spewing out their hatred of the decent nations and in gloating over the barbarism and unspeakable cruelty of their ruling classes and the army. We have been accustomed to think that the collective soul of the medical profession is farther along than those of most other professions and avocations—more altruistic and more humane. But we have left out of our thinking the brutalizing effect of Teutonic environment. We have forgotten our student days when we shuddered at the inhumanity displayed in their clinics by the leaders of the medical profession in Germany—the brutal disregard of the feelings, mental and physical, of the patients driven by their sufferings to seek relief even at a university clinic.

The German physicians are, just as we should have expected to find them, much of the same material as their military masters. When the German brutes were bombing hospitals and torpedoing hospital ships, did any German physician raise his voice in protest? Not one, or if there was one his feeble note failed to carry across the water. The German medical journals not only published no protests, but even expressed approval in some cases of the vilest atrocities. In the *Deutsche medizinische Wochenschrift*, the leading German medical weekly, for example, the editor, Dr. J. Schwalbe, wrote exultingly of the work of the submarine pirates in sinking the *Lusitania*, and sneered at President Wilson's mild remonstrances against a repetition of the crime. The editor of the *Münchener medizinische Wochenschrift* was also well pleased with this infamy. But the German doctors were not content with a passive approval of their country's disgrace, they were actively inhuman—looters

and worse. The reports of their crimes are piling up, especially now that the prisoners are getting back from the hells of German cruelty and are relating their sufferings—tales of desertion of German doctors when epidemic disease appeared in the prison camps, of neglect in many cases to care for the prisoners' wounds, of incredible brutality in other instances in the treatment of the sick and wounded, of jeering at the sufferings of English officers weakened by loss of blood, blows, and starvation, of the theft of instruments from Belgian surgeons in whose homes they were billeted—but the list is too long. There is material for a large black book of medical crimes, less coarse, perhaps, but almost as cruel as those of the Bryce report.

Of course, every medical man in Germany is not a brute, for there are some exceptions to all rules, but all must expect to be accounted such so long as by silence they acquiesce in the brutal acts of their colleagues. Until the German medical profession as a whole repudiates those who have disgraced their calling we can have no dealings with any of the breed. The French scientific societies, including the Paris Academy of Medicine, have voted not to hold any intercourse with the scientists of Germany and Austria, and their example should be followed everywhere. We should go further, however, and refuse admission to fellowship to the present generation of German doctors. The State Boards, fortified by an act of legislature if necessary, should refuse to grant a license to practise to any man applying with a German diploma during the next twenty-five years, and even after that if those of the new generation still defend the crimes of their fathers.—Editorial, *Medical Record*, 14th December, 1918.

FOR RESEARCH WORK.

Notice has been received at the University of Toronto that a number of studentships and fellowships in research work will be awarded during the second quarter of the current year, 1918-19, by the Honorary Advisory Council for Scientific and Industrial Research. The departments of science in which capacity for research will be accepted as qualifying for a studentship or fellowship are: Biology (economic), chemistry, engineering, geology, metallurgy, mineralogy and physics. Candidates for the studentships, which are of the value of \$750, must be British subjects from 20 to 32 years of age, who are prepared to devote at least nine months of each year exclusively to this work. The fellowships are worth \$1,000 the first year and \$1,200 if extended another year. They will be awarded only to those who, either through previous tenure of a studentship or otherwise, have shown a high capacity for research on some problem the extension of which is of importance to the national industries of Canada.

ORIGINAL CONTRIBUTIONS

ONE OF CHINA'S GREAT PROBLEMS.

By CHAS. W. SERVICE, B.A., M.D., Cheungtu, West China.

THE backwardness of the Chinese in all questions relating to the study of modern scientific methods is deplorable. This is especially true of medical science. But as the result of nearly a century of medical work carried on by western medical practitioners, China is now accepting western civilization in its many phases. But probably nowhere has this change effected such a revolution in ideas and customs as in the medical field. The stage of pioneering has largely passed, and gradually an atmosphere of receptiveness has been created. This change of mind in China has naturally wrought a change in the scope of the medical work done by the western practitioners. During this period the conditions in which medical work had to be done were discouraging. Yet very much has been done in the medical and surgical treatment of millions of patients. Much has also been done in the way of medical research. But to treat all the sick and wounded of China under present conditions is obviously an impossible task. No foreign agencies can do more than touch the fringe of the problem. 200,000 doctors are needed in China, of whom there are less than 2,000 at the present time. With medical science much more exact and exacting than formerly, the number of cases under one doctor must be greatly reduced. How meet the problem of the ever-increasing number of patients? This can only be met in one of two ways, either by sending many more foreign doctors or by training thousands of Chinese youths in the science of western medicine. A certain increase in the number of foreign doctors in China will be necessary for years to come, chiefly for the purpose of training Chinese leaders, who will be able to commence the solution of China's great physical problem.

The above is also true of the dental situation in China. China has had multitudes of native practitioners, who have attempted to do something to relieve the ills of her people. But who ever heard of a native dentist? Moreover, to meet the oral needs of 400,000,000 of Chinese the number of qualified dentists from abroad is almost negligible.

Then there is the formidable problem of public health. China can make little substantial progress until she begins to solve this fundamental problem. Insanitary China needs a revolution of ideas, customs and life. Ignorance, prejudice and superstition have to be removed, and for this purpose outside help is absolutely essential.

So important is the medical situation and so great is the opportunity for medical education in China, that the Rockefeller Foundation has established a China Medical Board, with a resident director in Peking.

Its purpose is to assist in the promotion of scientific medicine, to train a truly Chinese medical profession, and especially to prepare medical leaders. It proposes to spare no expense in the establishment of two Medical Colleges in China, one in Peking and one in Shanghai, in which the teaching will be done in English. In this enterprise it desires to co-operate with already established medical work, and indeed to build on the foundation of medical education built by medical missionaries. Indeed, they have recently entered this field of medical education by taking over the Union Medical College in Peking, an institution which had been successfully carried on for some years by several missionary organizations. The beginning of their other proposed medical college scheme, in Shanghai, has been postponed on account of the war.

Obviously, the development of these two great Rockefeller Foundation teaching centres in China, while helping to meet the urgent medical needs of China, cannot do all that is required. The opinion unanimously prevails among the 450 members of the China Medical Missionary Association that there must also be a few high-grade medical colleges in which the Chinese language shall be the teaching medium. A few union medical colleges already exist, but these are all under-developed, and do not measure up to the highest requirements of modern medical educational standards, either in plant, equipment, staff or endowment. The effort now is to slightly reduce the number of these teaching institutions and to strengthen the remainder by further unions.

One of these union medical colleges is in West China, in the City of Chengtu, the provincial capital of Szechwan, the largest and most populous of all the provinces of China, with a population of 40,000,000. With the two other provinces of West China, and also Tibet included, the constituency served by this institution is about 100,000,000. Chengtu is one of the several large cities in China officially recognized by the China Medical Missionary Association as a most strategic centre for the development of medical education in China.

PROCEEDINGS AND RESOLUTIONS OF THE THIRD RESUSCITATION COMMISSION.

BY PROFESSORS HOWELL, STEWART AND THOMSON, Editors.

THE Commission met in New York at the Rockefeller Institute, Friday, May 17, 1918, under the auspices of the Committee on Safety Rules and Accident Prevention of the National Electric Light Association.

There were present at the meeting: Past Assistant Surgeon E. F. DuBois, U.S.N.R.F., of the Bureau of Medicine and Surgery, Navy De-

partment; Dr. D. L. Edsall, Professor of Medicine and Dean, Harvard Medical School; Mr. W. C. L. Eglin, Chairman of Committee on Safety Rules and Accident Prevention of the N.E.L.A.; Dr. Yandell Henderson, Professor of Physiology, Yale University, and Consulting Physiologist of the Bureau of Mines; Dr. Wm. H. Howell, Professor of Physiology and assistant Director of the School of Hygiene and Public Health, Johns Hopkins University, Member of the National Academy of Sciences; Dr. Reid Hunt, Professor of Pharmacology, Harvard Medical School, Secretary of Commission; Prof. A. E. Kennelly, Professor of Electrical Engineering at Harvard University and the Massachusetts Institute of Technology; Dr. Charles A. Lauffer, Medical Director of the Westinghouse Electric Co., Pittsburgh, Pa.; Dr. S. J. Meltzer, Rockefeller Institute, Chairman of Commission, Member of the National Academy of Sciences; Dr. Joseph Schereschewsky, Assistant Surgeon General, U.S. Public Health Service; Dr. G. N. Stewart, Professor of Experimental Medicine, Western Reserve University, Cleveland; Prof. Elihu Thomson, General Electric Co. West Lynn, Mass., Member of the National Academy of Sciences; Lieut.-Colonel Edward B. Vedder of the Army Medical School; Major Frank G. Young of the Ordnance Division of the War Department.

A telegram was received from Surgeon-General Gorgas that Dr. Charles H. Frazier, Professor of Surgery, University of Pennsylvania, is to represent his office. (In a subsequent communication Major Frazier accepted his appointment.) Conferees: Mr. P. H. Bartlett, Philadelphia Electric Company; Mr. Wills Maclachlan, Electrical Employers' Association, Toronto, Canada; Mr. C. B. Scott, Chairman of the Sub-Committee on Accident Prevention, N.E.L.A.; Dr. F. E. Schubmel, General Electric Co., West Lynn, Mass.

The object of the Commission, the Chairman stated, is to consider efficient methods of artificial respiration in emergency cases, *as they are met with in peace as well as in war*. For more than a century, England has had several life-saving societies, and many special commissions have been appointed to investigate the methods employed in resuscitation. In this country, about six years ago, a Commission on Resuscitation from Electric Shock was created for the first time, by the initiative of the National Electric Light Association. It is now generally recognized that efficient artificial respiration is, for such conditions, the best and practically the only means available for resuscitation. It requires but little consideration to realize that the need for an efficient means of artificial respiration is very wide-spread.* The Committee on Safety Rules and Accident Prevention of the N.E.L.A., of which Mr. Eglin is the Chairman, agreed that **THE THIRD RESUSCITATION COMMISSION SHOULD CONSIDER ITS PROBLEMS FROM A GENERAL POINT OF VIEW.**

Mechanical Methods. Dr. Meltzer demonstrated in the laboratory for physiology and pharmacology, the efficiency of the method of pharyngeal insufflation in an etherized dog after complete removal of the anterior wall of the thorax, in which the lungs and heart were exposed to full view (18 minutes).

Dr. Rossiter of the Carnegie Steel Company demonstrated the latest device of the Pulmotor Company, which is not identical with the original Pulmotor. He showed also the original Pulmotor. He stated that he had resuscitated eight gas cases, in which the respiration had stopped. This was done by the original Pulmotor, in which he had more confidence (30 minutes).

Dr. James M. Booher, Medical Director of the Life Saving Devices Co., demonstrated the Lungmotor. He showed a number of bloodpressure tracings, taken from animals which had received artificial respiration by means of this apparatus. In reply to a question, Dr. B. stated that in these experiments the Lungmotor was connected with the animal by means of a tracheal cannula. (In human cases the Lungmotor is applied by means of a face mask.) Dr. Booher left with the Commission histories of a number of cases in which the lung had been used (30 minutes). (The Commission found no time to examine these written histories, but Dr. Booher mentioned verbally especially two cases. One of these cases was subsequently investigated by the Chairman. The life of a poliomyelitis patient with complete paralysis of the respiration was maintained for thirty-six hours by means of the Lungmotor. The reporting physician is of very good standing.)

In introducing Mr. Foregger, the Chairman explained that the physician who was most competent to present the details of the apparatus of the Foregger Company is now in France. Mr. Foregger was allowed fifteen minutes. The apparatus consists in modifications of the insufflation apparatus of Meltzer. Among other changes, the apparatus carried an oxygen generator tank. In reply to a question, Mr. Foregger stated that the oxygen thus generated may last eight or ten minutes.

Manual Methods. Mr. Eglin read a letter from Mr. M. W. Alexander, of the General Electric Co., stating that he hoped the "Commission would be very definite in recommending the prone-pressure method, as experience has proved its value."

Mr. C. B. Scott stated that the Accident Prevention Committee of the N.E.L.A. had reached the point in its investigation where it felt that the prone-pressure method was best to recommend, bearing in mind that machines are not always available in emergencies. His own company had had nine successful cases of resuscitation by the prone method and three unsuccessful cases in which mechanical means were used.

Dr. Schubmehl stated that the prone-pressure method has been most successfully applied by their two hundred and twenty-five first-aid men.

Mr. Maelachlan stated that he had the duty of training possibly three thousand men in the prone method. Their system required the men to practice this method at least once a month. The men are instructed not to desist in less than three and a half hours, and that not till then should they listen to advice from a physician, who might tell the operator that the patient was dead.

The Secretary read the following parts of a letter from Professor Schäfer of Edinburgh to the Chairman: "The prone method has been adopted *exclusively* for about twelve years by the Royal Life Saving Society, the only important organization in the British Empire whose object is the resuscitation of the apparently drowned. It has also been adopted for several years by the London and other police force, by the Board of Trade, by the Army and the Navy." "The most important thing is, in cases of drowning, to have something ready which any man can use; which will effect respiratory exchange—whether exactly as much as normal, matters very little."

RESOLUTIONS ADOPTED BY THE COMMISSION.

In the discussion following the presentation of methods and evidence to the Commission, the following important facts were emphasized:

1. That in most accident cases no resuscitation apparatus is at hand for immediate use.
2. That reliance upon the use of special apparatus diminishes greatly the tendency to train persons in the manual methods and discourages the prompt and persevering use of such methods.
3. That police officers or physicians often interfere with the proper execution of manual methods, in that they direct that the patient be removed in an ambulance to some hospital, thus interrupting the continuance of artificial respiration.
4. That in many hospitals the members of the staff are not all acquainted with the methods of artificial respiration.
5. That in medical schools instruction is not properly provided for students in the manual methods of artificial respiration.

In view of these facts, the following resolutions were adopted by the Commission:—

1. The prone-pressure or Schäfer method of resuscitation is preferable to any of the other manual methods.
2. Medical schools, hospitals, fire and police departments, the army and navy, first aid associations, and industrial establishments in general, should be urged to give instruction in the use of the prone-pressure method of resuscitation.

3. Individuals who, from accident or any other cause, are in need of artificial respiration, should be given manual treatment by the prone-pressure method immediately on the spot where they are found. It is all important that this aid be rendered at once. The delay incident to removal to a hospital or elsewhere may be fatal, and is justifiable only where there is no one at hand competent to give artificial respiration. If complications exist or arise, which require hospital treatment, artificial respiration should be maintained in transit, and after arrival at the hospital, until spontaneous respirations begin.

4. Persons receiving artificial respiration should, as much as possible, be kept warm, and the artificial respiration should be maintained till spontaneous breathing has been permanently restored, or as long as signs of life are present. Even in cases where there is no sign of returning animation, artificial respiration should be kept up for an hour or more.

5. A brief return of spontaneous respiration is not a certain indication for terminating the treatment. Not infrequently the patient after a temporary recovery of respiration stops breathing again. The patient must be watched, and if normal breathing stops, the artificial respiration should be resumed at once.

6. Artificial respiration is required only when natural respiration has ceased. In cases of simple unconsciousness from any cause in which natural respiration continues, artificial respiration should not be employed without medical advice.

7. The Commission recommends that in cases of gas asphyxiation, artificial respiration, whether given by a manual method or by special apparatus, should be combined when possible with the inhalation of oxygen from properly constructed apparatus.

8. With regard to the employment of mechanical devices for artificial respiration, the Commission feels that it ought not at present to take a definite stand either for or against any particular form of apparatus. However, the Commission recommends, that the use and installation of apparatus should be confined, for the present, to properly equipped institutions under medical direction. The Commission recognizes the great need of simple devices capable of performing artificial respiration reliably and efficiently. It therefore recommends a careful study of the problem, directed toward *the development of a reliable method appropriate for general adoption.** Such studies can best be carried on in properly equipped hospitals and laboratories which offer opportunities and facilities for critical observation and experimentation.

In view of the importance which the knowledge of proper methods of resuscitation possesses for public health and safety, and considering the fact that many practitioners, members of hospital staffs and graduates of medicine are not thoroughly familiar with the methods of resuscitation,

especially that of the prone-pressure method, the Commission recommends:

(a) That medical journals (and other scientific and practical journals which are interested in the problem of resuscitation) be asked to publish the resolutions adopted by the Commission.

(b) That a copy of these resolutions be sent to the medical colleges, with a request that proper instruction in this subject shall be arranged for in the college schedules.

(c) That these resolutions be sent to as many hospitals as possible, with the recommendations that members of the house staff shall familiarize themselves with the methods of resuscitation.

(d) In order that the resolutions of the Commission may be brought to the attention of interested circles (fire and police departments, industrial plants, etc.), it was agreed that they be communicated to the Associated Press (by the National Electric Light Association).

It was voted that the Third Resuscitation Commission should be properly organized and continue its existence, ready to respond when requirements arise. The following officers were elected:

President—Dr. S. J. Meltzer.

Vice-President—Dr. Yandell Henderson.

Secretary—Dr. Reid Hunt.

Treasurer—Mr. W. C. L. Eglin.

It was voted to appoint a committee for the collection of verifiable data relating to resuscitation. The President appointed to the committee:

Dr. D. Edsall, Chairman.

Dr. Reid Hunt, Secretary.

Prof. Elihu Thomson, and the President *ex-officio*.

APPENDIX.

The Commission consists of fifteen members. Fourteen approved the foregoing report without qualifications. The fifteenth member wishes to qualify his vote by the following statement:

Dr. Yandell Henderson qualifies his support of the resolutions as follows:—

While I concur in a considerable part of the report of the Resuscitation Commission, I dissent from the statement in Resolution 8, recognizing "the great need of simple devices capable of performing artificial respiration reliably and efficiently."

Devices which are excellent from the mechanical standpoint are now available and widely sold; but the evidence regarding them indicates clearly, I believe, that even if these devices were on the spot where several gassings or electrocutions occurred, and if all the victims were treated with them, except one who was given manual (prone treatment), this one

would have much the better chance of recovery. In actual practice the apparatus is seldom right on the spot adjusted and ready. Critical time is lost, and thus in the above suppositious cases, as they actually occur, the only victim with any considerable chance of resuscitation (aside from those who recover spontaneously and are credited to the apparatus) is the one treated manually.

Even more important is the fact, demonstrated now by universal experience, that when apparatus is known to be obtainable, it is sent for and the manual method neglected. Thus to-day the apparatus in public use is, one the whole, contributing very materially to decrease the saving of life.

THE ADRENALINO-PITUITARY TREATMENT OF ASTHMA.

By R. BENSUADE, M.D., Physician to the Paris Hospitals, and L. HALLION,
Deputy Professor at the College of France.

(Selected from *The Medical Press*, 4th December, 1918.)

VERY satisfactory and immediate results can be obtained in the treatment of the attack of asthma by the subcutaneous injection of either adrenaline or of pituitary extract, or, still better, by a mixture of the two substances.

The solution with which we obtained the results to be set forth below contained per c.c. half a milligramme of hydrochloride of adrenaline and an amount of disalbumenized total extract of pituitary body corresponding to 0. gr. 25 centigrammes of the fresh gland. This we employed at the rate of one c.c. a day, but one of our patients, unknown to us, made three injections in twelve hours without any untoward symptom.

We have employed the adrenalino-pituitary mixture in 56 cases of asthma, and also in a few cases of persistent spasmodic cough. The youngest patient was 8 and the oldest 60 years of age. We have given, in all, some 500 injections.

In almost every instance the treatment determined subsidence of the asthmatic attack. The effect usually made itself felt within from two to five minutes after the injection, and a single injection in most instances sufficed to cause the attack to subside. As a rule the relief is immediate and complete. One of our patients, employed at a neighboring railway station, when he feels the attack coming on, runs round to the hospital, gets his injection, and is able to return to work in the course of a few minutes. In most of these cases not only does the attack cease, but complete quiescence takes place, so that when the attack is by night refreshing sleep follows.

This abrupt passage from the state of crisis to one of absolute well-being does not obtain in every instance, the effect sometimes merely amounting to relief, short of total subsidence. When patients have had to be given injections several days following, the results of the second and third injections have seemed more effectual than the first. In any event a patient who reacts to a given dose invariably remains sensitive to that dose without any tendency to tolerance, consequently we are not called upon to increase the dose in order to obtain the same effect. In one instance the patient has been employing the remedy for the last four years, and the effect has in no wise diminished.

Although it is necessarily somewhat difficult to estimate the efficacy of a remedy in such a capricious disease as asthma, I think we are entitled to conclude from our experience that not only does it, in favorable cases, afford immediate relief, but it seems to lengthen the interval between subsequent attacks. This is also Borchardt's opinion, and his view is that this effect is due to the pituitary constituent.

The most remarkable instance from this point of view is that of an elderly lady 60 years of age, who had been having extremely severe attacks for the last 30 years, at least once a month. She had a daily injection for three days following, which on each occasion relieved her instantly, and since then, for upwards of eighteen months, she has not had a single real attack, at most a little bronchial whistling.

Apart from these successful cases we had five in which the treatment proved altogether inoperative. One of them was that of a patient with typical essential asthma who had had attacks ever since childhood. This patient obtained no relief whatever even after taking six daily consecutive injections, although he is forthwith relieved by inhaling the fumes of anti-asthmatic powder.

A friend informs me that in the case of a girl with typical asthma eleven daily injections afforded no relief at all. When the first injection fails to exert a beneficial influence it is, in our opinion, undesirable to push the remedy. It may be that in these unbenefited cases a larger dose would produce the desired effect, but personally we have never given more than one c.c.

Patients who have been obliged to have recourse to morphine to obtain relief are unanimous in preferring the adrenalino-pituitary injection. Comparing the effect of the morphine injection to that of this mixture, one of them said his impression was that morphine abolished his individuality without acting on the attack, whereas our injection seemed to act on the attack without impinging upon his individuality.

As far as our experience goes, these injections do not seem to expose the patient to any undesirable collateral consequences. Dr. O. Weiss, for

that matter, injected himself with five times the amount without experiencing any inconvenience.

In the great majority of instances the injection gives rise to no discomfort whatever. Occasionally, after the first injection, does the patient complain of slight tremors, the sensation of electric shocks, of weakness in the legs, restlessness or palpitation lasting at most a few minutes. The symptoms, such as they are, are in all probability due to the adrenaline, and are, if anything, attenuated by the pituitary extract.

Speaking generally, it may be undesirable to employ this treatment in cases in which, for any reason, hypertensor drugs are contra-indicated. At the same time this is a theoretical objection which is open to the criticism that, in the dose we recommend, administered hypodermically, we have never remarked any tendency to heightening of the blood pressure.

So much for the clinical aspect; it remains for us to explain the action physiologically, and this is no easy matter. Suppose we admit the general opinion that an attack of asthma is due to spasmodic contraction of the unstriated bronchial muscle fibres. Adrenaline and pituitary extract have, in general, the effect of causing the contraction of unstriated muscle fibre, so that *a priori* one would expect their action to do more harm than good. Clinically, however, the contrary is the case, so that we are driven to the conclusion either that the bronchial unstriated muscle fibres have a physiology differing from unstriated muscle fibres in general, or else that the spasm theory of asthma is to be discarded.

If we were led to the second conclusion we should have to ask ourselves whether, in an attack of asthma, a certain engorgement of the pulmonary circulation does not come into play. In such case, to explain the favorable effect of pituitary extract, we might invoke the fact, established by Wiggers, and also by one of us, that under the influence of pituitary extract the pressure is lowered in the pulmonary artery and raised in the carotid. But as this is essentially a practical article, it is unnecessary to carry this theoretical discussion farther. It will suffice to establish the unquestionable efficacy of this combination of adrenaline and pituitary extract in the treatment of the attack of asthma.

VITAL STATISTICS OF LONDON.

London's death rate increased heavily during the past year, principally because of the Spanish influenza epidemic, which was responsible for the demise of nearly 300 citizens. During the year there were 1,242 births, 545 marriages and 1,195 deaths, as against 1,143 births, 463 marriages and 867 deaths in 1917. During December 27 died of influenza, the 81 deaths recorded being exceeded by only two births. In December, 1917, there were 105 births against 58 deaths.

CURRENT MEDICAL LITERATURE

INFLUENZA.

Observations of approximately 500 cases in the Michael Reese Hospital and in private practice during the recent influenza epidemic are contributed to *The Journal A. M. A.*, Nov. 9, 1918, by Solomon Strouse and Leon Bloch, Chicago. They divide the cases according to the character of the onset into three groups, the first beginning with more or less severe coryza; the second with varying degrees of prostration, backache, chilly sensations and elevated temperature, and the third with a feeling indefinite discomfort, no fever at first, but a few hours later a definite rise of temperature. Careful examination at the beginning usually revealed few signs except slight reddening of the anterior pillars of the pharynx and often an intense conjunctival congestion. Many coughing patients showed no signs of bronchial involvement, the cough being probably due to tracheal congestion. In a large percentage, however, careful examination at the onset revealed a more or less circumscribed area with râles or dullness or changes of breath sounds in the chest. All these cases, the authors think, should be considered pneumonia. One of the most important lessons of the epidemic is the potential danger shown by these pulmonary signs, even with normal temperature. A very slight condition of this kind, after careless exposure, developed into severe pneumonia. The pneumonia symptoms occur either after a complete defervescence following fever of one or two days or after a slight drop of temperature, not to normal, or with no reduction but an elevation on the third or fourth day. Persistence or a rise in temperature on the third day, the authors believe, indicates bronchopneumonia. The patient may not appear ill in the beginning, but later the symptoms appear. At times the uncanny combination of absence of radial pulse with sweating and cyanosis, but retention of mental faculties, is a pretty sure sign of coming death. The low pulse rate, characteristic of the disease, is of no definite value. Patients seen early with a pulse rate above 100, provoked suspicion of some complicating disease, although occasionally an increased pulse rate may have been caused by too large doses of acetylsalicylic acid. Late in the disease, with an increase in the severity of the condition, a rapid pulse is present. A rather striking feature was the inverted type of temperature. Perhaps the most common site of pneumonic trouble was in the left lower lung posteriorly, but this was not general, as any or all parts might be involved. Respiratory rate was, as a rule, slow, and an increased rate indicated not only more pulmonary involvement but greater toxemia, and was generally an unfavorable sign. Cough was a prominent and troublesome sequel, and actual pleuritic pain occurred in a small percentage. There

was a normal or slightly diminished systolic blood pressure in the moderate cases, also a somewhat lowered diastolic pressure. In the female cases, practically all menstruated between the first and third days of the disease, and many had menstrual troubles following the disorder. Positive blood cultures were without diagnostic significance. Bacteriologic findings are shown in a table. The *Bacillus influenzae* was found only in small numbers in the sputum and throat, the pneumococcus was found in a high percentage of throat cultures, and was next to the staphylococcus in frequency. *S. viridans* seemed next in frequency. Complicating conditions were not necessarily of unfavorable import, with the exception of pregnancy in which the mortality was high. The clinical course ranged all the way from a few days to two weeks of acute symptoms, and convalescence was often prolonged. In no disease was the prognosis so difficult to make, and no specific treatment of value was discovered. The treatment was, therefore, necessarily symptomatic. The contagiousness of the disease was remarked; in spite of precautions, a number of the interns and nurses contracted it. The air in one of the wards on culture revealed the hemolytic streptococcus. The disease is a most treacherous one.

INFLUENZA.

Ruth Tunnicliff, Chicago (*Journal A. M. A.*, Nov. 23, 1918), reports experiments made to determine the relation between influenza and its complicating pneumonia and the green-producing streptococcus isolated at Camp Meade, by the late Capt. George Mathers. "He isolated a green-producing streptococcus from the sputum in 87 per cent. of 110 cases of influenza and pneumonia examined. The cultures were made on the first or second day of the disease. The influenza bacillus was also isolated in 58 per cent. of the sputum cultures. The coccus appeared in the sputum smears as gram-positive diplococci, 2 microns in length, with slightly pointed ends and a capsule. In the cultures they grew in pairs and long chains and showed a capsule. On human blood agar plates the colonies were large (from 0.25 to 0.5 cm. in diameter), green, flat, moist, with regular edges, and had a tendency to become confluent. The colonies often showed umbilication in forty-eight hours. Cultures of this organism were not soluble in bile. They grew as a flocculent growth in glucose and plain broth, the fluid generally remaining clear. They fermented glucose, lactose, and saccharose, but neither mannite nor inulin, except in one instance. Sputum injected intraperitoneally into mice was virulent, killing them within twenty-four hours. These cocci were not agglutinated by type pneumococcus serums." It is generally recognized that opsonins are the only antibodies easily demonstrated in streptococcus infection, and the experiments were mainly directed by this fact. The conclusions are,

substantially as follows. Specific opsonins for the green-producing streptococcus isolated from influenza patients developed during the course of the disease, and a specific decrease of the opsonins occurs in the pneumonia following and persists unless the patient recovers, when it returns to normal or above. These changes are specific for this particular organism, and would indicate that it was of some significance in influenza and the complicating pneumonia. Accompanying the leukopenia of influenza occurs a nonspecific decrease in the phagocytic activity of the leukocytes, and continues unless the patient recovers. It is suggested that the leukopenia and this diminution of the phagocytic activity in influenza may account in some degree for the severity and frequency of secondary infection in this disease, and it is possible that convalescent serum or immune horse serum may be useful in promoting leukocytosis and also in increasing the antibody content of the serum.

INFLUENZA BACILLUS.

Gladys H. Dick and Eleanor Murray, Chicago (*Journal A. M. A.*, Nov. 9, 1918), have studied the Pfeiffer influenza bacillus in the two forms originally described by him as the "true influenza" bacillus and the "pseudo-influenza bacillus," the latter appearing in long thread-like forms, but culturally both identical. The present epidemic has shown both of these forms. In some cases, aerobic plates of sputum have practically pure cultures of a small gram-negative bacillus contaminated only rarely by colonies of staphylococcus. Sputum from other cases has yielded equally pure cultures of the long thread-like organism. In a patient whose sputum, and also blood cultures, showed the long thread-like type, aerobic plate cultures of the pneumonic area in the lung gave a pure culture of an organism which at the end of twenty-four hours' growth appeared in smears as a very small gram-negative bacillus, and after forty-eight hours, as long, wavy or curled, gram-negative threads which would ordinarily be classed as leptothrix. But in every case direct smears of the sputum showed only the small bacillary form, suggesting that the organism was the same in all. To determine whether the action of the medium influenced the morphology, they tested it in blood agar, in acid, neutral, and alkaline mediums with smears made at the end of twenty-four and forty-eight hours. The strains that resembled leptothrix in the original cultures still showed the long thread in the more acid medium, but in the less acid and neutral mediums they grew as small bacilli indistinguishable from the true influenza bacillus. Transitions between the two forms were observed when tested with the acid and neutral mediums separately. The authors conclude that with such variations in the morphology, it seems not justifiable to classify influenza bacilli as true and

pseudo on the basis of morphology alone. In isolating influenza bacilli, both the leptothrix-like form as well as the small bacillary form should be recognized.

INFLUENZA.

J. W. Nuzum, Isadore Pilot, F. H. Stangl, and B. E. Bonar, Chicago (*Journal A. M. A.*, Nov. 9, 1918), report on the epidemic of influenza observed at the Cook County Hospital. From September 23 to October 29, more than 2,000 patients were admitted to the wards, and of these, 642 died, a mortality of 31 per cent., the age period of highest mortality being between 25 and 30 years. At the time of writing the mortality seems to be on the decline, but while it lasted the epidemic seriously crippled the medical and, more especially, the nursing staff. More than fifty of the nurses and twelve of the physicians contracted the disease, and among them three deaths occurred. The influenza bacillus was isolated in only 8.7 per cent. of the total cases and in only one instance did it appear to have caused the pneumonia. It was met with more frequently among 125 soldiers who were admitted, than among the civilian patients in whom it was isolated only exceptionally. Pneumococci were the predominating organisms in the sputum, throat and lung cultures, both during life and at necropsy. The possibility of a filtrable virus suggested an experimental study. Washings from the nose and throat of typical cases were filtered through Mandler and Berkefeld filters of medium porosity and the cultures of the clear filtrates inoculated into the anterior nares of volunteers and into monkeys, without results. Of the pneumococcal types, which were present altogether in 72.6 per cent., Type I was the least frequent, and Type IV the most common, Type II being second. Of eighty-six pregnant women admitted to the maternity ward with influenza or pneumonia, twenty-one died shortly after miscarriage, and twenty before this could occur, the mortality being, altogether, 45.5 per cent.

INFLUENZA.

H. A. Christian, Boston (*Journal A. M. A.*, Nov. 9, 1918), objects to the distinction in the mortality reports of the present epidemic of influenza and epidemic influenza and pneumonia. In his opinion, the returns should be bronchopneumonia and (epidemic) influenza. We cannot say at present whether the disease is primarily due to the influenza bacillus or whether the resulting pulmonary consolidation is primarily so due or is caused by concomitant bacteria. Christian's reasons for believing that in practically all fatal cases of epidemic influenza there is a pneumonic process in the lungs before death are as follows: (1) that in 126 fatal cases in the Peter Bent Brigham Hospital no patient failed to show

physical signs justifying the antemortem diagnosis of bronchopneumonia; (2) that in 23 consecutive necropsies, not one failed to show corresponding pathologic changes in the lungs; (3) in patients coming to necropsy the pulmonary changes are more extensive than were indicated by physical signs during life, and (4) clinical studies of non-fatal cases justify the belief that, with very few exceptions, all severe cases have bronchopneumonia. He does not absolutely deny that the influenza patient may succumb to an overwhelming toxemia from meningitis or encephalitis without pulmonary involvement, but none such occurred in the hospital under his observation. The physical signs on which is based the diagnosis of the pneumonia were areas of bronchial breathing or consonating râles, usually both, frequently bronchophony, and often dulness on percussion. The early foci of consolidation were found almost invariably in the region of the angle of the scapula and the intrascapular regions, as shown by the roentgen ray. From all the facts that Christian has observed, he considers that it is incorrect to attribute the fatalities in this epidemic as due to uncomplicated influenza.

INFLUENZA.

The epidemic of influenza at Camp Sherman is described by Alfred Friedlander (Cincinnati), C. P. McCord and F. J. Sladen (Detroit), and G. W. Wheeler (New York), Medical Officers at Camp Sherman, Chillicothe, Ohio (*Journal A. M. A.*, Nov. 16, 1918). At the beginning the syndrome was not characteristic, but the uncertainty as to the diagnosis was abruptly ended by the appearance of the characteristic symptoms later, in a large number of cases. At that time the population of the camp was 33,044, the majority were white, but 8,531 were colored. Of this total 46.8 per cent. had been in service one month or less, and these furnished 69 per cent. of the influenza cases. The analysis shows that the incidence of the disease decreased with the length of residence. The total number of individuals affected was 10,979. During all stages of the epidemic, the casual organism was sought bacteriologically in the sputum, throat and blood cultures from patients, and also in postmortem cultures from heart and lung. The predominating organism was the pneumococcus, the different types in the following percentages: Type IV, 80 per cent.; Type III, 18 per cent.; Type II A, 2 per cent. Certain immediate contacts with influenza patients without showing symptoms of the disease were also examined bacteriologically, and the pneumococcus was found in 76 per cent., and when typed were invariably Type IV. One culture with pneumococcus predominating gave two colonies of Pfeiffer's bacillus. The cultural conditions for this organism were suitable, but in no other cases does it seem to have been detected. In 46.7 per cent. of the necropsy

examinations *S. hemolyticus* appeared. It cannot be claimed, however, that the pneumococcus was the casual germ of the epidemic, as previously a high percentage of the population harbored Group IV pneumococci, but the nature of the clinical manifestations support the view that some form of pneumococcus of special virulence was rapidly distributed among the soldiers of the camp. Two types of the clinical manifestations are noted. The epidemic was introduced by mild cases with fever, coryza, conjunctivitis, dry hacking cough, but little or no leukocytosis and no noteworthy chest findings. The rapid spread of the trouble gave it a rather serious aspect, but within five days there was full realization of the presence of true influenza. When once started, the progress of the epidemic was appalling. "This second type (Type II), recognized as true influenza, was characterized by sharper onset, chills, quicker and higher rise of temperature, frequent epistaxis, distressing aches and pains, increasing prostration, red, glazed pharynx without tonsillitis, and an increase in the subjective manifestations of bronchitis, but still without noteworthy physical findings in the chest. Some cases of gastro-enteritis and a few of the so-called nervous form of influenza were observed." Two types of the more seriously ill patients demanded attention. In the one (Type III), respiratory distress was marked, but the lung signs were meager and they did not necessarily progress to pneumonic consolidation. The other severely ill type (Type IV) was the prominent feature of the epidemic, and gave a clinical picture not emphasized in published reports. Many patients exhibited a strikingly intense cyanosis, like methemoglobinemia, with high fever, intense air hunger, complete exhaustion and prostration. They were semicomatose or had a low muttering delirium. The lungs showed diffuse bubbling râles in addition to the subcrepitant ones. Death occurred within from twenty-four to forty-eight hours. Necropsies showed acute inflammatory general pulmonary edema, without any lobular distribution. The condition suggested exposure to chlorin gas, and some of the patients retaining consciousness suffered intensely. The chief complication, besides the pneumonia described, was a secondary virulent bronchopneumonia with low leukocyte count, low fever, rapid pulse and respiration. The asthenia from influenza was so profound as to greatly diminish the resistance to the pneumonia. The absence of physical signs to localize the area of involvement was marked. Other than the pneumonias the complications were few, slight and unimportant. The treatment consisted in a great care to avoid undue exposure, rest in bed indoors, free purgation, gargles, and acetylsalicylic acid and Dover's powder constituted the usual medical treatment. It is important to state that many of these influenza cases later developed bronchopneumonia after return to normal temperature. The acute inflammatory pulmonary edema was specially resistant to medical treatment, and must be regarded as the

most fulminant type of influenza. The general sanitary measures of quarantine, ventilation, forbidding congregation of soldiers indoors, etc., were carried out.

BRONCHOPNEUMONIA.

A preliminary bacteriologic report of the epidemic of bronchopneumonia at Camp Grant, Ill., is offered by E. F. Hirsch (Chicago) and Marion McKinney, Camp Grant, Rockford, Ill. (*Journal A. M. A.*, Nov. 23, 1918). They report on the findings from throat cultures where the predominating organisms on Loeffler's medium were gram-positive and usually diplococci. Other throat cultures were taken on blood agar plates to differentiate the gram-positive organisms, and to favor the growth of influenza bacillus if present. Many of the plates were pure cultures of fine green colonies containing gram-positive diplococci as such or in short chains, frequently lancet shaped. The occurrence of the influenza bacillus was only occasional, never in pure culture, and when found, always with a predominating number of the above described diplococci. A few colonies of hemolytic streptococci were noted in twenty of the 159 blood agar plates, nonhemolytic in not more than twelve. In approximately 200 necropsies made during the epidemic, there was found regularly an extensive irregular consolidation of the lungs. The lungs appeared voluminous and dark red, with much blood and edema. During the decline of the epidemic, gray nodular consolidations were found, with other complications of pneumonia. The above mentioned diplococci were also found in the heart's blood and lung exudate and spinal fluid necropsy. A large number have been isolated in cultures and experimented with on animals, demonstrating its great virulence. To control the investigations, throat cultures were taken from fifty of the German prisoners. These men had entirely escaped the infection. Colonies of pneumococci were found in twenty of the cultures, and tried on white mice without the slightest effects. The following are the authors' conclusions: "1. The epidemic of bronchopneumonia at Camp Grant is due to infection by a virulent strain of pneumococcus. 2. The virulence of this organism exceeds greatly that of strains usually identified as pneumonia. 3. This virulence is such as to explain the epidemic of bronchopneumonia. 4. *Bacillus influenzae* played no rôle in the epidemic at Camp Grant."

EPIDEMIC PNEUMONIA IN PREGNANCY.

W. J. Woolston and D. O. Conley, Chicago (*Journal A. M. A.*, Dec. 7, 1918), report on the effects of epidemic pneumonia on pregnant women received in the Cook County Hospital between Sept. 18 and Nov. 5, 1918. In all, there were 2,154 pneumonia patients received, and 101 of these

were pregnant women. Of these 101, fifty-two died, a mortality of 51.4 per cent., as compared with 719, or 33.3 per cent., of the remainder. The patients were mostly of the poorer classes, and extremely ill on entrance. Of the fifty-two deaths of pregnant women, 53 per cent. died within the first twenty-four hours, 73 per cent. in the first forty-eight hours. In thirty-nine of the fifty-two, interruption of pregnancy occurred by abortion, premature labor or labor about term, irrespective of the month of gestation. Thirteen, or 25 per cent., remained pregnant at death, practically all in the fifth to seventh month of pregnancy. Of the forty-nine patients discharged, twenty-one, or 42.7 per cent., aborted or went into labor prematurely or at about term. The remainder remained pregnant on discharge. The cause of the frequency of interruption of pregnancy is uncertain, but the extremely toxic condition with, perhaps, the lack of proper oxygenation of the fetal blood, may have been responsible. The cough, which is a constant feature, undoubtedly played a part, and the exertion incident to abortion or labor also tended to have a harmful influence on the mother. It was noticeable, however, that abortion was easy, very rapid and painless. The mental state of the patient may have had something to do with this. The bleeding, incident to labor, did not seem to affect the clinical course, and complications were few. Blood counts revealed the characteristic leukopenia, the degree varying with the severity of the infection. The white cell count gradually increased as the improvement occurred, and five patients with true leukocytosis of from 15,000 to 20,000 at the onset, all recovered. Of the twenty-two babies born, two developed definite symptoms of bronchopneumonia within from eighteen to twenty-four hours after birth. This makes it difficult to say that infection did not occur in utero. Lung punctures of the stillborn gave negative cultures, however.

PANDEMIC IN ARMY CAMPS.

G. A. Soper, Washington, D. C. (*Journal A. M. A.*, Dec. 7, 1918), in a rather lengthy article, says that were it not for the pulmonary complication the diagnosis of pure influenza would be accepted by all for the pandemic which has circled the world, and it would not have attracted very much attention. This pneumonia places this outbreak, he says, among the most striking pandemics of modern times. Apparently, there have been three visitations or waves, each increasing in severity and mortality, and it is possible there will be more. During the period from September 12 to November 1, inclusive, there were 306,719 cases of influenza reported among the troops in America, and 48,079 cases of pneumonia, with 19,429 deaths. The total strength of troops may be taken as one and a half million. Therefore, it is proper to say that about one

in every five had influenza, and of these about one in six developed pneumonia, and that two out of five of the pneumonia patients died. The country as a whole suffered severely, but not so much so as the soldiers in camps, raising the death rate up to 3.24 per thousand in the principal cities. These figures are only guesses, but they serve to show the magnitude of the pandemic. The statistical facts are given as to the death rate, progress and spread of the disease in the various camps, and the order in which they were attacked. These items are illustrated by thirteen tables. The disease was more severe and fatal in cantonments than in tent camps, and the proportion of men attacked ranged from less than 10 to nearly 50 per cent. of the whole. As to fatalities from pneumonia, Camp Grant and Camp Sherman are foremost. The case fatality was still higher in others, but the number of deaths much less. The later the occurrence of the pandemic the comparatively less was its severity. The pneumonia following the influenza was most prevalent in those situated in the north central regions of the country. The steps taken to combat the epidemic may be collectively described as having fallen under three heads: (1) isolation; (2) sanitation, and (3) education. The medical officers were taught what to expect and how to prevent it, while sanitation included the cleaning and airing of barracks and bedding, oiling of floors to keep down dust, and general disinfectant measures. Details are given of all these as carried out in one camp, as an example. Hospital facilities were, necessarily, greatly enlarged. The disease seemed to be carried by persons from place to place rather than by things. It was a contact infection, and one of the most contagious. The causative agent is generally believed to be Pfeiffer's bacillus, and to be transferred from person to person by droplets of moisture from the mouth and nose. While the Pfeiffer bacillus is well known to exist perfectly harmless under normal conditions, it has been suggested that something must have increased its virulence, or an especially virulent strain made its appearance, or that the susceptibility of individuals has been increased. A final table is given, showing the number of deaths from the influenza pneumonia in the principal cities of the United States. The real total number of deaths resulting will never be known, and no available records show there has ever been so much fatal pneumonia.

VACCINES IN INFLUENZA.

Discussion has arisen in the various medical centres as to the efficacy—prophylactic and curative—of vaccines in the treatment of influenza. One of the chief theoretical difficulties in accepting the view that vaccines have a prophylactic virtue is the admitted fact that the immunity given by an attack of influenza is short-lived. Some observers think, indeed,

that so far from conferring immunity, an attack of influenza predisposes to further attacks. It has been noted, however, that those who suffered from influenza in the June epidemic have for the most part escaped in the present epidemic. If, then, an immunity lasting some months follows an attack of influenza, there seems to be no reason why during an epidemic an immunity cannot be conferred by therapeutic inoculation. Moreover, though the question can hardly be taken as settled, there is some evidence that the incidence of the disease is less among the inoculated than among the uninoculated. As regard the curative effects of vaccine, it has been noted that in some cases in which a vaccine was given early, temperature and pulse subside rapidly. Later in the disease there does not seem to be much evidence of its efficacy. When pneumonia occurs there is already a mixed infection, and it is probable that only a mixed vaccine of the several organisms present would be of use.—*Medical Press*.

ARMY STATISTICS.

Veneral disease rates for August, 1918, expressed as annual rates per 1,000 men:

All troops in U. S.....	205.97
Infections before reaching camp approximately 91.33% of total cases reported for the month.	
Infections after reaching camp 8.67% of total cases, or.....	13.7

August reports show decided increases over the data for recent preceding months in both total cases reported and in the incidence rate of venereal diseases. These increases are largely due to the high percentage of infection among an unusually large number of colored troops who were inducted in August. The colored troops of eight camps alone contributed 63% of the total cases reported for the month. However, the incidence rate of cases contracted after induction among colored troops is no higher than that of white troops. This annual rate for all troops in the United States for August shows a decrease of about 8 cases per thousand men over the July rate, which was approximately 22.

With the purpose of ascertaining the proportion of each of the venereal diseases present in the Army, records covering a period of twenty-two weeks in five camps, have been compared in the Surgeon General's office. The cases of each disease, gonorrhoea, syphilis, chancroid, have been segregated, also those of "mixed infection," that is, where more than one venereal infection was present in the same patient.

The total of cases in these five camps through the period indicated, was 30,719. Of these cases 79 per cent. were of gonorrhoea, 13.7 per cent. of syphilis, 4.9 per cent. chancroid, whereas 2.4 per cent. of the cases showed mixed infection.—*The Social Hygiene Monthly*.

NAVY STATISTICS.

The annual venereal disease rate in the Navy during the eight years previous to the war was, without appreciable variation, as follows:

Syphilis.	42.97 per 1,000
Gonorrhoea.	90.26 per 1,000
Chaneroid.	33.31 per 1,000

Total. 166.54 per 1,000

During the fiscal year July 1, 1917, to July 1, 1918, the period during which educational and preventive measures were introduced into Naval training camps, methods practically parallel to those adopted in Army camps, and developed through the Navy Department's Commission on Training Camp Activities, the rates were decreased by 60.75 per cent. In figures the rate for this year is as follows:

Syphilis.	12.28 per 1,000
Gonorrhoea.	69.39 per 1,000
Chaneroid.	24.10 per 1,000

Total. 105.79 per 1,000

Furthermore, according to latest reports, this rate still continues to decrease, reaching in August, 1918, an average of 80.34. The annual rate is obtained in the following way: The figure representing the total original admissions to the sick list during the week is multiplied by 1,000 and divided by the complement of men. The quotient is then multiplied by 52.—*The Social Hygiene Monthly*.

THE EFFECT OF BLOOD TRANSFUSION ON THE DEVELOPMENT OF TUBERCULOSIS.

Mayer and Hurley, of the Trudeau Sanatorium, Trudeau, New York, report interesting preliminary studies on the effect of the transfusion of blood to sheep that had been inoculated with bovine tubercle bacilli. They made three sheep tuberculous by intravenous inoculation. They then transfused one of these sheep with the blood of a normal sheep; a second, with the blood of a sheep that had been immunized by several inoculations of human tubercle bacilli and by tuberculin (B. E.); and the third was allowed to serve as control without transfusion. The tuberculous sheep that received normal blood apparently received no benefit from the transfusion, but at autopsy exhibited the same amount and degree of tuberculosis as the non-transfused control. The sheep, however, that had been transfused with the blood from the immune sheep had at autopsy markedly less tuberculosis than the normal control or the animal transfused with normal blood. The authors believe that the findings are suggestive to

show that normal blood in repeated transfusion is of slight value, while blood containing anti-bodies is possibly of considerable value.—*American Review of Tuberculosis*, Vol. 2, No. 11, 1918.

METHUSELAH AND LIFE IN THE OPEN.

V. Y. Bowditch, of Boston, makes a plea for the value of fresh air, in the July number of the *American Review of Tuberculosis*. The observation of the wholesome efficacy of fresh air goes back as far as Hippocrates and has persisted through the centuries despite much popular superstition to the contrary. Its place in the proper treatment of tuberculosis, however exaggerated at one time, is generally acknowledged. The immediate occasion of Bowditch's paper is the publication in a well-known New York periodical of an article on the "Superstition of Fresh Air," in which the author is quoted as advocating properly re-washed and re-circulated air, but resorts in the end, in case the elaborate and expensive ventilating machinery fails, to the admission of outside air through opened windows; in other words, contradicts his original position of pronouncing fresh air unnecessary. Bowditch traces the development of the fresh air treatment of tuberculosis and shows how great were the gains made by patients under the new regimen. Instances of improved physical and mental condition among school children when given sufficient fresh air are cited. A simple and efficacious ventilating system is described.

TREATMENT AND MISTREATMENT OF TUBERCULOSIS.

S. V. Wright, of Dallas, Texas, discusses the proper treatment of tuberculosis in the *American Review of Tuberculosis*, for July. When a case of tuberculosis is discovered the duty of the physician is not only toward the patient, but also toward the family. Immediate relatives and associates, especially young children, should be examined for tuberculosis and if clinically ill, or in the case of children, if undernourished, proper steps should be taken. Toward the patient the prime duty is to give him the proper education. As this is best achieved in an institution, steps should be taken for his admission to such a one suited to his case. The relative importance of continued treatment after arrest of symptoms should be insisted on. He should be taught the proper attitude toward this disease, to take it just seriously enough and not too much so. He should learn that he must continue to observe these principles for a long time if he is to be restored to usefulness.

The recognized effectual measures are "nature's processes"—rest, good food, fresh air and sunshine, and graduated exercise. Adjuvants are medicine, surgery and artificial pneumothorax.

PERSONAL AND NEWS ITEMS

PERSONAL AND NEWS ITEMS.

A deputation headed by Mr. J. I. Hartt, M.P.P. for East Simcoe, waited on Sir James Lougheed and Hon. W. D. McPherson at the Parliament Buildings. The deputation asked assistance in the erection of a memorial hospital for soldiers at Orillia. The proposal is to erect a hospital for general purposes. To make it of service to soldiers, it is proposed to give free medical and surgical treatment to any soldier who enlisted from, or ever lived in Orillia, as long as he lives. Some \$60,000 has been raised by private subscription and Orillia has granted \$25,000 and the adjacent township has promised \$5,000 toward maintenance. It is estimated that the institution will cost about \$100,000, so that \$40,000 would be required from the Government. Sympathetic consideration was promised.

A resume of the work undertaken by the Women's College Hospital was given at the annual meeting. The Superintendent, Mrs. H. M. Bowman, reported that more patients had been accommodated than any previous year. The cost of maintenance for each being \$1.84. Miss S. Warner, Treasurer, stated that there was a balance of \$132.80, that \$17,554.96 had been received and \$17,422.16 expended. The Building Fund account showed a balance of \$12,990.43, receipts \$58,667.50, and expenditures \$45,677.07. Miss M. Lowry, as Secretary, referred to the work of the institution in loaning the new wing to the city during the influenza epidemic, of the grant given by the city which amounted to \$33,000, and of the campaign which was launched to raise funds for completing building operations. Mrs. A. O. Rutherford presided. The meeting was held at the nurses' home, 149 Rusholme Road. The officers for the ensuing year are as follows: President, Mrs. A. O. Rutherford; Vice-President, Mrs. F. H. Torrington; Treasurer, Miss Sads Warner; Secretary, Miss Mary Lowrey.

Members of Essex County Medical Society, at a recent meeting, decided to revert once more to the practice of prescribing liquor "where needed" to the maximum amount of one quart permitted by the Act. This step was taken, it is stated, in order to prevent abuses now practised by some medical men, one of whom is said to have issued a thousand prescriptions for whiskey in one week.

Under the terms of the will, dated Aug. 28, 1906, of Dr. Philip Howard Spohn, physician, of Penetanguishene, who died on Nov. 14, 1918, his widow, Edith Sarah Spohn, is to receive the income during her life of his \$23,300 estate, consisting of real property in Penetanguishene,

\$4,600; timber interests in British Columbia, \$7,500; life insurance, \$11,000, and personal effects, \$200. On the death of testator's widow the corpus of the estate is to be equally divided between the children.

Although the Government's province-wide scheme of medical and dental inspection in the schools has not yet assumed definite shape, the Department of Education is now busy preparing the ground for it. Acting upon instructions from Hon. Dr. Cody, the county inspectors are undertaking educational work to induce the counties to take up medical and dental inspection. Reports received from the school inspectors show that medical inspection is now general in the larger centres, and that it is making headway in the rural districts as well. In Peel and Lincoln, medical inspection is being carried out, a doctor and a nurse being employed in each. In Dufferin County this week a number of meetings of trustees, inspectors and teachers are being held to arouse interest in the subject.

The will of the late Mrs. Anna Wilson of London, Ont., widow of the late Capt. Thompson Wilson, which has been entered for probate, leaves \$32,974 of a total estate of \$41,546, to the Barnardo Home, of London, England. The bequest, the will says, is made "In accordance with the divine command of God," and it is directed that if not valid the whole estate is to be divided among the nieces and nephews.

Col. H. S. Birkett, of Montreal, who recently went overseas to take up a short term of duty with the Medical Services, has, according to information received, been appointed Chief Assistant to the Director of Medical Services in the Canadian army.

After three years' service overseas as a member of the Medical Corps, Dr. Henry Crossweller, a well-known doctor of Windsor, has just reached home. A part of the time he was held a prisoner by the enemy in prison camps at Cologne and Hanover and saw much of the work of the Red Cross workers, of whom he speaks highly. At Lecateau, Capt. Crossweller worked in a German hospital among the wounded and observed many cases of ill-treatment of wounded. He also noted with surprise the almost daily increasing attitude of disrespect shown towards German officers by their own men.

A deputation from Queen's University, Kingston, laid plans before the Government for the extension of medical education in that institution. They desire the Government to give them financial assistance in enlarging the Kingston Hospital, to erect two additional wings to provide additional clinical accommodation for the University Faculty, and to modernize the hospital generally. Already \$100,000 has been subscribed for the purpose in Kingston. Dr. Bruce Taylor, Principal of Queen's University, and Dr. Kent, headed the deputation.

“With the enormous claims the life companies in every part of the United States are reporting, it begins to appear that early figures underestimated the probable cost the epidemic of influenza would be to insurance,” says the *Insurance Press*. Vice-President Lunger of the Equitable, in a recent address, gave it as his opinion that \$50,000,000 in claims due to the disease had already been incurred, and that the losses of industrial companies alone would be nearly \$30,000,000.

It is understood that the Dominion Government has given up the plan of constructing a military hospital centre on the old St. Andrew's College site, in view of the fact that the new system for handling returning soldiers, which is to be in operation early in the New Year, will relieve the threatened congestion in the hospitals and make it possible for all the veterans to be handled by the existing institutions.

Dr. Mobrauy Ishida, a Japanese, and a member of the medical staff of the Shephard-Pratt Hospital, Baltimore, shot and instantly killed Dr. Geo. B. Wolfe, another physician of the hospital, in the office of the institution on December 21.

Major Samuel Harvey McCoy, of Toronto, who has been attached to the C.A.M.C., and done excellent work in various capacities in England, is now reported ill. For a time in command of the Medical Records at the Canadian Record Office, he was also president of the Standing Medical Board in London. Later he was commandant at the Yarrow Hospital, and in March of this year was mentioned for valued services while O.C. of the G.O.D.E. Hospital in London. Major McCoy graduated at University College in 1889, taking his M.B.

Dr. Richard M. Bateman, 361 Danforth Avenue, has received word that his only son, Frederick Lloyd Bateman, had died at Cuisines, near Mons, Belgium, of Bronchial-pneumonia. Mr. Bateman enlisted from Montreal in the 7th Battery Canadian Garrison Artillery (McGill University) in May, 1916. He passed unhurt through the battle of Vimy Ridge and was constantly in France up to the signing of the armistice.

English-speaking soldiers returning home complain that the troop trains in the Maritime Provinces have only French-speaking doctors. It is said that if any of these soldiers took ill, they could not make their wants known.

Dr. W. B. M. Martin, Professor of Pathology in the South African College, died a few weeks ago. He had attained to a very high standing in his special work.

Sir Herman Weber, M.D., F.R.C.P., of London, died on 11th November, at the age of 95. He held many important positions, and was well known as an author.

Sir W. Henry Thomson, Professor of Physiology in the School of Physic, Ireland, and who was on the steamer Leinster when it was torpedoed, went down with the vessel.

Robert Brudenell Carter, F.R.C.S., the noted eye surgeon of London, died recently at the age of 90. His life was a very remarkable one.

The Pasteur Institute in New York has been closed, after an existence of about 30 years. Since 1910, there have been treated in it more than 10,000 cases, and eighty per cent. of these free of charge.

Col. G. F. Harrison, the noted specialist on gas in warfare, died recently. When the German army began the use of gas, he at once invented methods of defence. The enemy never devised a new gas that he was not able at once to cope with, and find the antidote.

The Rockefeller Foundation spent \$21,000,000 in war work. In the future its income will be used in fighting disease all over the world.

All the interests of the Province of Alberta have been placed under the control of Hon. A. G. MacKay, the Minister of Municipalities. Hon. A. G. MacKay has expressed a warning against the establishment of hospitals in areas too small to support them.

The General Hospital in Calgary has applied to the city for a grant of \$17,000 to meet its deficit.

Dr. J. Gordon Wright resigned the superintendency of the Kingston General Hospital to assume the management of the Regina Hospital.

OBITUARY

ROBERT McCLURE, M.D.

Dr. R. McClure died at his home in Port Elgin in the latter part of October, at the age of 88.

JOHN C. McCABE, M.D.

Dr. McCabe, a graduate of Trinity University of 1886, died at his home in Hamilton, 14th November, at the age of 63.

FRANK FAIRCHILD WESBROOK, M.D.

Dr. Wesbrook was a distinguished member of the medical profession, taking a keen interest in its scientific aspects. Latterly, he devoted himself to educational work and became president of the University of British Columbia. He was born in Brant County in 1868. He graduated from

the University of Manitoba in 1895, and for some time was professor of Pathology in his alma mater. He then filled a similar position in the University of Minnesota. He then went to British Columbia in 1913 to become president of the University of that province.

CAPT. ANDREW ROSS, M.B.

Dr. Ross graduated from the University of Toronto in 1915, and went overseas in 1917. He died abroad last November.

NEVILLE H. LITTLE, M.D.

Capt. Little graduated from the University of Toronto in 1916, and went overseas with the 13th Canadian Field Ambulance. He died of wounds in the early part of last November.

LIEUT. P. R. SHANNON, M.B.

When Dr. Shannon was a medical student he went overseas. He returned and graduated in 1916, after which he again crossed the ocean. He died of wounds received last November.

ARTHUR ALLAN PARKER, M.B.

Capt. Parker died of wounds received in the early days of November. He graduated in Toronto in 1914. He was awarded the M.C. for gallant conduct.

JOHN MACKENZIE, M.D.

Dr. John MacKenzie was well known in Pictou and surrounding country in Nova Scotia. He was Medical Officer of Health for Pictou, where he died last October of influenza.

CHARLES EDGAR HOLBROOK, M.D.

Dr. Holbrook was an esteemed member of the Montreal profession. He was born in Ogdensburg thirty-five years ago. After graduating from McGill, he did a good deal of post-graduate study, and was appointed to the staff of the Montreal General Hospital. Later on he became connected with the Royal Victoria Hospital. He was noted for his wide reading and sound judgment on medical subjects. His death was a great loss to the medical profession of Montreal.

BOOK REVIEWS

EQUILIBRIUM AND VERTIGO.

By Isaac H. Jones, M.A., M.D., Laryngologist, Philadelphia General Hospital; Instructor in Neuro-otology, University of Pennsylvania Medical School; Associate American Otological Society; Major, M.R.C., U.S. Army. With an analysis of pathologic cases by Lewis Fisher, M.D., Laryngologist and Otologist, Mt. Sinai Hospital, Philadelphia. Adopted as standard for Medical Division, Signal Corps, Aviation Section, by Surgeon-General and Chief Signal Officer, U.S. Army. With 130 illustrations. Philadelphia and London: J. B. Lippincott Company. Mr. Charles Roberts, 201 Unity Building, Montreal, Canadian representative. Price, cloth, \$5.00; 1918.

This is a highly scientific work. It is devoted to the study of neuro-otology, the ear and the general practitioner, the ear and aviation, the ear and seasickness, the ear and syphilis, the ear and the neurologist, the ear and the surgeon, the ear and the ophthalmologist, the internal ear and the otologist, the development of neuro-otology, anatomic and physiologic considerations, the medulla, pons and cerebellum, ceribellar localization, tracts of the auditory apparatus, vestibular mystagmus, vestibular vertigo, pointing tests of Barany, technic of examination, practical considerations, pathologic considerations, hypothetical cases, pathologic cures analyzed. This is a very good list of subjects for any author to take up for careful study. After a careful examination of the volume, we have no hesitation in stating that the author has handled each topic in a most painstaking and scholarly manner, and has given to the medical profession a very valuable work on vertigo, and one that can be followed as a sound guide upon what can be said upon this subject. The illustrations have been chosen with much skill, and add much to the value of the volume. They have been prepared specially for this volume, and are delightfully original. The publishers have spared no effort to get the book up in a most attractive style. We can recommend this work with every confidence that it will stand the test of the closest scrutiny.

THE PREVENTION OF TUBERCULOSIS.

Fourteenth Report of the Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis. Published by the Henry Phipps Institute, Seventh and Lombard Streets, Philadelphia; 1918.

This report comes with the authority of the University of Pennsylvania. Among the subjects studied may be named: Pregnancy and pulmonary tuberculosis; chemotherapy in tuberculosis; the abiotic action of ultra violet light; bacterial fluorescence excited by X-rays, and others. The number is a valuable addition to recent work that has been done on tuberculosis.

CLINICAL MEDICINE FOR NURSES.

By Paul H. Ringer, A.B., M.D., member of staff of the Asheville Mission Hospital, Asheville, N.C., and of Biltmore Hospital, Biltmore, N.C. Illustrated. Philadelphia: F. A. Davis Company, publishers. English depot, Stanley Phillips, London. 1918. Price, cloth, \$2.00 net.

This neat volume, of almost 300 pages, takes up the diseases most commonly met with, and gives the essential features in diagnosis, pathology, and treatment. It is well written, and contains a number of useful cuts and illustrations. This book gives all that a nurse should know, and avoids the detail that overloads the ordinary text on medicine for the nurse's use. It is certainly an ideal book for the purposes.

GENITO-URINARY DISEASES AND SYPHILIS.

A Compend of Genito-Urinary Diseases and Syphilis, including their Surgery and Treatment, by Charles S. Hirsch, M.D., Urologist to the Jewish Hospital and Mt. Sinai Hospital, Philadelphia. Third edition, revised, with 59 illustrations. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. Price in cloth, \$1.50.

This is one of Blakiston's well-known quiz-compendes. In this volume of 350 pages will be found everything that is essential in field of surgery covered. Among the subjects discussed are the examination of the urine, urethral infections, affections of the penis, stricture of the urethra, diseases of the seminal vesicles, affections of the testis, affections of the prostate gland, surgical affections of the kidney, affections of the bladder, affections of ureters, newer aids to diagnosis, the chaneroid, syphilis, and a list of instruments. We are glad to state that each topic is handled in a skilful manner and the latest views set forth. The book is especially explicit on treatment and may be followed as a safe guide. Though not a large book, the author, by careful abbreviation, has succeeded in covering the diseases and surgery of the genito-urinary system in a most admirable manner.

MASSAGE AND SWEDISH MOVEMENTS.

Massage and the original Swedish movements, their application to various diseases of the body. Lectures before the training schools for nurses connected with the Hospital of the University of Pennsylvania, etc., etc., by Kurre W. Ostrom, from the Royal University of Upsala, Sweden. Eighth edition. Revised and enlarged, with one hundred and twenty-five illustrations. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. Cloth, \$1.00.

This is an excellent little book on massage and Swedish movements. The uses and limits of this method of treatment are clearly given. It would be well if every doctor paid some attention to this branch of therapeutics. We freely recommend this book.

MISCELLANEOUS

THE TREATMENT OF MENTAL CASES IN THE ARMY.

What can be done in the prevention of mental diseases, in their treatment, and hopes for future progress in the work of mental hygiene were clearly shown in the address of Major Frank E. Williams, of the Department of Neuro-psychiatry of the United States Army Medical Services, at a recent meeting of the Toronto Academy of Medicine.

No less than 56,000 men with various mental ailments were culled out of the United States forces before going overseas. The result of this prevention of not subjecting those mentally not up to normal to the strain of shellfire was that only 300 mental cases are to be returned to the United States.

The lecture, which was held under the auspices of the Canadian National Committee for Mental Hygiene, was opened by Sir Robert Falconer. The chairman stated that Major Williams had come from Washington to tell of the very extensive preventive and curative work undertaken in the United States in the province of neuro-psychiatry.

Major Williams, in opening, stated that a very great deal of the work in the United States was founded on the experience of the British doctors in the late war. He explained the huge scope of the work and stated that mental diseases were very prevalent and cost Massachusetts alone \$35,000,000 in the past five years.

"Mental diseases," stated Major Williams, "are as much diseases as any and no one should be ashamed of having them any more than of having measles."

Major Williams then went on to deal with mental diseases in the army, stating that every effort had been made to keep mentally deficient out of the army. To this end a staff of 750 neuro-psychiatrists and a large staff of nurses and attendants trained in the treatment of mental diseases was organized.

Overseas the same plan of prevention was carried out, continued the speaker, with special hospitals for nervous cases. The result was that at the battle of St. Mihiel, out of each hundred so-called shell shock cases, sixty-five returned to duty within three days; twenty returned to their units in ten days, and fourteen in thirty days. Only one became chronic, and had to be kept under treatment as mentally deficient.

The care of mentally diseased is now practically finished in the United States army except for three hundred cases who are requiring treatment, having been found unable to adjust themselves to ordinary daily life.

"One cannot help wondering," said Major Williams, "what would have happened to the fifty-six thousand if they had got to the front. Doubtless their exclusion bettered the morale and made the units better fighting machines."

Major Williams stated that he considered the time not far distant when a neuro-psychiatrist would be attached to schools, universities and such institutions to look after mental hygiene. He will be an adviser to those just beginning to slip from the normal walks of life, he said.

The speaker concluded by saying that bad mental habits learnt in the homes, schools and universities unfitted the individual for readily adjusting himself to the conditions he would meet in everyday life. From these misfits juvenile delinquency, crime and all social problems add to their ranks. Uplift and prayer does not strike at the root of the problem. This can only be reached by dealing with each case as an individual, not as a class.

Dr. Clarke and Dr. Hastings also spoke, thanking the speaker and expressing admiration of the wonderful work the States had done in preventive neuro-psychiatry, and deploring the fact that Ontario had not been the first to take up seriously the work of mental hygiene.

FLU KILLED SIX MILLION.

The Times medical correspondent says that it seems reasonable to believe that about six million persons perished from influenza-pneumonia during the past twelve weeks. It has been estimated that the war caused the death of twenty million persons in four and a half years. Thus, the correspondent points out, influenza has proved itself five times deadlier than war, because, in the same period, at its epidemic rate, influenza would have killed 100,000,000.

Never since the black death has such a plague swept over the world. The need of a new survey of public health measures has never been more forcibly illustrated.

GRANTS TO CHARITIES.

At the last meeting of the Toronto Civic Council for the year the following grants were made: \$16,000 to the Home for Incurables to cover its deficit until the end of the financial year, and \$4,800 to Grace Hospital for similar purposes. Owing to the strong opposition of Finance Commissioner Bradshaw and Dr. Hastings, Medical Officer of Health, the request of the management of the Toronto General Hospital for a grant of \$41,000 towards the deficit incurred by that institution was not entertained. It will, however, come up again next year.

DEATH RATE STILL HIGH.

The general death rate is still high, owing to mortality due to influenza. Dr. Hastings reported to the Local Board of Health that in November it was 19.7 per 1,000 of the population, as compared with 11.3 in the same month last year.

The following figures show the cases reported and the deaths as against the number in November last year:—

Communicable Diseases.	Cases reported.		Deaths registered.	
	Nov. 1918.	Nov. 1917.	Nov. 1918.	Nov. 1917.
Typhoid fever (total).....	2	5	1	0
Infected outside city.....	1	4	..	..
Scarlet fever	41	64	2	0
Diphtheria.....	115	173	9	7
Smallpox.....	0	0	0	0
Measles.....	9	347	0	0
Whooping cough	36	40	8	2
Group total.....	204	529	20	9
Mumps.....	5	78	0	0
Cerebro-spinal meningitis.....	2	4	1	3
Infantile paralysis.....	1	0	0	0
Erysipelas.....	1	2	0	3
Tuberculosis.....	40	47	29	26

There was an increase in infant mortality last month, 114 babies under the age of one year dying, as compared with 73 in the same month last year.

BEQUESTS FOR "HOMES."

A hundred thousand dollar estate was left by the late Dr. A. Orr Hastings, \$30,000 going to hospitals, missionary societies, benevolent institutions and for educational purposes. The list follows:

To the Hospital for Sick Children, College Street, the sum of \$4,000 to endow two cots in memory of his late wife, Clara Louise Hastings, and himself.

To the Home for Incurable Children, Bloor Street East, Toronto, the sum of \$3,000.

To the Infant's Home and Infirmary, St. Mary's Street, Toronto, the sum of \$2,000.

To Grace Hospital, corner College and Huron Streets, \$1,000, to be used in the equipment of the obstetrical department of the hospital.

To the superannuation fund of the Methodist Church, the sum of \$2,000.

To the Missionary Society of the Methodist Church the sum of \$3,000.
To the Educational Society of the Methodist Church the sum of \$3,000.

To the Methodist Union of Toronto the sum of \$3,000, to be applied and used in connection with and for the benefit of the City Mission and Social Service Department.

Between \$11,000 and \$12,000 for educational purposes.

The balance of the estate is divided among relatives and friends of the deceased.

VITAL STATISTICS.

Uniformity in the collection of vital statistics by the different Provinces of Canada is provided for in a model bill which has been agreed to by most of the Provinces, in a conference with the Dominion Statistician, which has just closed here. The methods in vogue heretofore of recording births, marriages and deaths have been most defective.

R. H. Coats, Director of Census and Statistics, has long been aiming to bring about a new system by the co-operation of Federal and Provincial authorities, and results are now in prospect. Nova Scotia, New Brunswick, Saskatchewan and Alberta are to enact the model bill this year, and Ontario has something along the same line in view.

NURSES' HOME FOR GALT HOSPITAL.

Mr. R. O. McCulloch, Vice-President and Secretary-Treasurer of the Goldie & McCulloch Company, Limited, announced recently, on behalf of his sister, Mrs. Jessie Shearson, of Toronto, and himself, that they were prepared to build a new nurses' cottage and present it to the Galt Hospital Board as a memorial of their father, the late Hugh McCulloch. The building will be known as the Hugh McCulloch Nurses' Home, and it is understood will cost in the neighborhood of \$30,000. The site on which the hospital stands was a gift from the Goldie & McCulloch Company, Limited, in 1888.

THE LOUSE IN THE WAR.

Of the insects responsible for the death or disablement of hundreds of thousands in the war zone, the louse is declared authoritatively to have been one of the most deadly and to have accounted for at least a million persons.

That, however, is only a rough estimate, and the probability is that the toll was infinitely higher, for in Serbia alone typhus, a louse-born disease, infected nearly one million persons and killed 500 a day in the little city of Jassy, while 200 of 1,200 medical officers in the country died

from the disease. This disease spread over Russia, Austria, Germany and the Balkans generally.

These figures are vouched for in a publication prepared by Lieut. Lloyd, who was chief entomologist in Northern Rhodesia. He says:

“Typhus, one of the most dreaded epidemic diseases of man, is entirely due to the activities of lice. The same remark applies to relapsing fever over the greater portion of the world. Still a third disease, trench fever, has been placed to the credit of the louse, and possibly even now the full extent of its guilt is not known.”

Lieut. Lloyd, in discussing the typhus outbreak at the notorious Wittenberg Camp in Germany, from which the German doctors fled, makes the statement:

“The Germans know, as we do, that typhus is spread by lice, and that the epidemic could have been cut short and stamped out a week after its commencement by the disinfection of all prisoners. One of the few good points about insect-born diseases is that they are entirely preventable, if preventive measures are taken in time and carried out in a thorough manner.”

TUBERCULOSIS SPREADS.

The reports of the local Board of Health show a gratifying decrease in the number of deaths from all communicable disease for December, excepting tuberculosis. The comparative figures for the month are:

Diseases.	—1918—		—1917—	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox.....	5	..	..	..
Scarlet fever.....	194	4	304	6
Diphtheria.....	278	24	369	29
Measles.....	18	3	667	3
Whooping cough.....	57	5	357	6
Typhoid fever.....	18	3	143	11
Tuberculosis.....	161	138	113	76
Infantile paralysis.....	..	..	2	1
Cerebro spinal meningitis...	7	6	7	5
Totals.....	740	183	2,027	137

JAPANESE SCIENTIST MASTERS YELLOW FEVER.

Reports from Ecuador indicate that Dr. Noguchi, the famous Japanese scientist, who is at present in that country, has prepared an anti-serum conferring immunity on those exposed to the disease. The discovery is being tried out on Ecuadorean troops in the fever interior.

The conquest of yellow fever is one of the important achievements. In the Canal Zone the first steps were taken; the fever was banished by sanitation. But proper sanitation is an extensive process and is impracticable in sparsely-settled regions. So Dr. Noguchi's discovery comes to give a needful coup de grace to the old villain, yellow fever.

INFLUENZA IN THE NORTH COUNTRY.

The influenza epidemic has struck Elk Lake, Gowganda and Kirkland Lake districts with much vigor during the past week, and while a number of deaths have occurred among the white population of these districts, the greatest number of deaths have occurred among the Indian residents of Elk Lake, where, out of a population of about two dozen, ten have died. Dr. James, of Mattawa, was sent up by the Indian Department to visit the Indians, but owing to a misunderstanding, he did not arrive until eight had died, and two have died since.

SEVEN THOUSAND DEATHS.

There were 7,606 deaths in the city of Toronto in 1918. In 1917 there were 5,597 deaths. The influenza epidemic took a toll of 2,067 lives, the figures showing that the death rate would have been considerably lower than last year had there been no epidemic.

The following table gives the death per month since the outbreak of influenza in October:

	Influenza.	Pneumonia.	Total.
October.	953	424	1,377
November.	261	171	432
December.	152	80	232
January 2.	17	9	26
	<hr/>	<hr/>	<hr/>
	1,383	684	2,067

INFLUENZA DEATHS IN ONTARIO.

During the last three months influenza and pneumonia took a toll of 7,158 lives in the Province. In October the death rate was the highest, 3,105 persons succumbing to the malady. In November the number fell to 2,608, while last month there was a further decrease to 1,568, which was only a little over one-half the number reported in October.

"The continued prevalence in some localities would indicate a recurrence of the epidemic," says the monthly report of the Provincial Board of Health, which was issued recently. The cities and towns reporting the greatest number of deaths, including some late returns for November, are as follows: Toronto, 232; Hamilton, 183; London, 26; Sault Ste. Marie,

28; Ottawa, 15; Windsor, 38; Kingston, 13; St. Catharines, 39; Peterboro, 32; Port Arthur, 23; Fort William, 39; Niagara Falls, 11; Guelph, 27; Welland, 21; Sarnia, 11; Sudbury town, 77; Kitchener, 12; Wallaceburg, 43; Uxbridge, 19; Huntsville, 15; Midland, 11; Collingwood, 12; Hespeler, 11; Fort Frances, 16; Rainy River, 8; Dunnville, 11; Dundas, 8; Kenora, 9; Trenton, 8, and Pembroke, 8. The statistics are compiled from the returns of the undertakers.

INCREASE IN DEATHS.

The report of the Board of Health for 1918 shows that there was an increase in the number of deaths resulting from each of the communicable diseases, as against 1917. The comparative figures are:

Diseases.	—1918—		—1917—	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox.	435	2	225	0
Scarlet fever	2,900	70	2,027	38
Diphtheria.	3,193	267	3,590	223
Measles.	9,431	88	7,795	31
Whooping cough.	2,372	133	1,670	54
Typhoid.	797	142	825	83
Tuberculosis.	2,122	1,350	1,707	819
Infantile paralysis.	34	11	102	11
Cerebro-spinal meningitis.	118	80	113	66

The monthly returns include only deaths from pulmonary tuberculosis or consumption, and not other tubercular diseases.

The act making it compulsory on local Medical Officers of Health to report cases of venereal disease became effective in the middle of July last. From that date up until the end of the year 425 cases of syphilis were reported, 1,012 cases of gonorrhoea, and 29 cases of chancroid.

There was an alarming increase for the month in the number of cases of venereal disease reported, as compared with November. The figures are:—

Syphilis—December, 64; November, 17.

Gonorrhoea—December, 110; November, 75.

Chancroid—December, 4; November, 2.

One death resulted from syphilis.

FOOTWEAR AND HEALTH.

Disraeli said many years ago: "Public health is the foundation on which reposes the happiness of the people and the power of the country."

When we realize the value to our country of individuals with well-balanced and normally developed bodies, it becomes a duty to inform

ourselves upon the functions of the body in order to keep it healthy. The foot has, through lack of information, been neglected and its functions abused, although it is an important part of the body—as finely constructed and adapted to its particular function as the hand, the eye or the ear.

What do we do to our feet?

We raise them upon heels of such a height that they cannot balance the body as they are made to do, and we cramp them into such narrow boots that the muscles and joints are unable to have free play for carrying and moving the body.

Not only do we prevent the natural use of the foot, but by the present-day fashions we create disturbances of general health and many pains and discomforts.

Narrow-pointed boots and high heels are the authors of hammer toes, bunions, corns, weak muscles, falling arches, many of the back aches from which women suffer, and much of the eye strain and nervous irritability.

The Paris (France) Academy of Medicine is so impressed by the ill effects of high heels upon the health of women that it has made an appeal to the public to end this injurious fashion.

On the grounds of safety, high heels also are an evil, as is proved by reports from the United States stating that during the year 1916, 1,149 people were killed and over 4,000 crippled from falling downstairs while wearing high-heeled shoes.

National efficiency and security have also been affected. According to one authority, "Sufficient men were rejected among the Canadian forces to form several battalions, on account of bad feet," while the American Museum of Safety states that 90% of the civilian population have feet more or less deformed, resulting in lessened efficiency, and one child in every five in the high schools in New York was found to suffer with weak arches, practically all due to tight shoes.

On the other hand, it has been shown that the feet of all non-shoe-wearing races are perfectly normal and symptomless.

The fact of the matter is, that while we cannot do without shoes in this country, we can at least see to it that our shoes do not cause injury to health. We have got this foot matter all wrong and our shoes are of wrong shape. They offend nature, they torture us, they cripple us.

A little thought will convince anyone that strong and useful feet are absolutely essential to good health and active life, and a determination to have shoes which will fit the natural foot will result.

If the public will demand a sensible shoe, then the manufacturers will supply it.

CONSTANCE E. HAMILTON.

DEVELOPMENTS IN THE LONDON MEDICAL COLLEGE.

London ratepayers at the municipal elections to-day took a bold stroke for the elevation of Western University to the plane of a first-class university, when a by-law authorizing the issuance of \$100,000 debentures for the establishment of an efficient medical school carried by a vote of 2,764 to 1,003.

Work will be commenced as early as circumstances will permit on the erection of a building that will cost a quarter of a million dollars, the difference having already been insured from Provincial Government grants and the pledged contributions of a number of private citizens. A \$35,000 site has been donated. Though London has held a university charter for 40 years, the institution has never before received municipal assistance, but plans for a million-dollar plant which have been held in abeyance during the war are now to be proceeded with. The campus for the arts department was acquired more than a year ago, and plans for the development of that branch, contingent upon the success of the Medical School by-law, have been carefully matured.

KILLED IN ACTION.

British.	706,726
French.	1,071,300
American.	58,478
Russian.	1,700,000
Austrian.	800,000
German.	1,600,000
Italian.	200,000
Canadian.	36,000
Roumanian.	50,000
Serbian.	100,000
Bulgarian.	50,000
Grecian.	25,000
Australian.	33,000

These figures do not include those who died of wounds or disease.

PHYSICIANS ENGAGED IN INDUSTRIAL PRACTICE.

By request, the following is published:

“Will you kindly call attention, in the next issue of your journal, to the fact that Dr. Francis D. Patterson, Chief, Division of Industrial Hygiene and Engineering, Department of Labor and Industry, Harrisburg, Pa., is desirous of obtaining a complete list of all physicians engaged in the practice of industrial medicine?”

"It has been the practice of this Department to hold semi-annual conferences of industrial physicians and surgeons for several years. These conferences are well attended, and a great deal of valuable matter is presented in the discussions. In order to reach all physicians interested, it is desirable to have their names upon our mailing list. The next conference will be held early in 1919, and it is, therefore, essential that the names and addresses of all industrial physicians and surgeons be in my hands as soon as possible after January 1st.

"Expressing to you my deep appreciation for your courtesy in calling this matter to the attention of your readers, I am

"Very sincerely yours,

"FRANCIS D. PATTERSON,

"Chief, Division of Hygiene."

SUDDEN AND VIOLENT DEATHS IN TORONTO.

Sudden or violent deaths occurring during last year in Toronto were as follows:

Suddenly stricken or found dead.....	86
Gas.	46
Autos.	39
Drownings.	24
Burns.	23
Railways.	16
Airplanes.	14
Falls.	14
Street cars	8
Elevators.	6
Electrocuted.	6
Machinery.	5
Methylated spirits	4
Hangings.	4
Waggons.	3
Murders.	3
Acid.	2
Shot.	2
Crushed.	2
Convulsions.	1
Lightning.	1
Poisoning.	1
Total.	309

Deaths from asphyxiation numbered no less than 46, an increase of 10 over 1917 and of 32 over 1916. About one-quarter of the total number

were either found dead in their homes or dropped dead on the streets. Last year the number was 86, compared with 68 in 1917.

Motor cars were responsible for 39 deaths, mostly among children, an increase of 11 over 1917 and of 14 over 1916.

Four persons met death from alcoholic poisoning or methylated spirits, compared with 6 in 1917. Four persons hanged themselves and 1 died of drinking poison.

Four murders occurred during the year. 1 being a city detective, shot while making an arrest.

CANADIAN ARMY CASUALTIES.

Casualties in the Canadian forces, corrected to date, reported December 31, 1918, are as follows:

	Officers.	Other ranks.	Total.
Killed in action.....	1,842	33,824	35,666
Died of wounds.....	614	11,806	12,420
Died of disease.....	220	5,185	5,405
Wounded.....	7,130	148,669	155,799
Prisoners of war.....	.....	.....	3,575
Presumed dead.....	148	4,529	4,671
Missing.....	41	384	425
Deaths in Canada.....	.....	.....	2,221
Totals.....	9,989	204,297	220,182

Total deaths, 60,383.

Two thousand five hundred and eight prisoners have been repatriated, escaped or died whilst prisoners of war.

MEDICAL PREPARATIONS

IMPORTANT ANNOUNCEMENT BY THE ANGLO-FRENCH DRUG CO., LTD.

Owing to the numerous complaints from medical men of the difficulty and delay in procuring their preparations, The Anglo-French Drug Co., Ltd., has now established a depot at Dandurand Bldg., Montreal. Henceforth all requests by 'phone, letter or messenger will receive their immediate attention.

They especially draw attention to their preparation, Ampsalvs, in the treatment of syphilis. This is a brand of neoarsphenamine. The apparatus is extremely ingenious, absolutely precludes asepsis, and is both effective and safe. Full information and literature will be supplied by the firm on request.