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## Original Articles

### PRESIDENT'S ADDRESS\*

By H. A. McCallum, M.D., M.R.C.P. (LOND.).

If I had considered the high honor and responsibility awarded me by the Canadian Medical Association at our meeting in Edmonton last year, I should perhaps have declined the flattering tribute, as much from consciousness of my own inability to fulfill the distinguished position in a manner satisfactory to myself, as from a sense of what is eminently due to the scientific and high professional character of this national Association. However, inadequate as the discharge of my obligations of office may prove to be, I am emboldened by the support of my local colleagues, and the encouragement of numerous members throughout the Dominion, to rely upon your indulgence for whatever is stale and unimportant, or for whatever may be defective in the manner of my address to-night. It has been the practice of my predecessors in office to sweep the whole horizon of Canadian medicine for objects worthy of the attention of this Association. I plead for the liberty to say painful truth when dealing with matters that affect the honor of our profession, and it is not from love of wounding or pleasure of stinging that I am dealing boldly with professional defects and offences. I would rightly merit the contempt of you all did I pass these things by on the other side.

The first thing to challenge our attention is the relative indifference shown to this Association and what it represents by too many of the eight thousand doctors in the Dominion. The Association has had no mean part in removing narrow, provincial medical prejudices and in bringing about legislation that resulted in the accomplishment of Dominion registration. The splendid service of the British Medical Association to the profession of the

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British Isles, in dealing with the terms of Lloyd George's Insurance Bill, points out what an association can do for each individual member of the profession. The future outlook of Canadian medicine demands a strong association to confront legislation that would make us a despised arm of the civil service. It may be there are greater evils in store for us than being brought under the pay and direction of the Canadian civil service. If thereby the public were protected against its own "giant credulity" and our profession purged of its abuses, one could gladly welcome the change. So long as a nation can elect a demagogue to its legislative halls there is sure to arise the attempt. It may be in the very near future. Let us be armed to secure the most favorable terms. If four-fifths of the profession belonged to the Association, instead of one-fifth, as at present, no attempt could get under way to bring us into the service without our consent.

Previous to the inauguration of the *Association Journal* there were practically no permanent members of the Association, except its officers. The membership lasted only during the meeting, and its character changed from year to year. Since the appearance of the *Journal* the permanent membership has reached nearly fifteen hundred, and the attendance at the annual meetings has more than doubled. Two factors have created gigantic associations in the United States and Great Britain, viz., the unification of all city or county societies with the national association, and the establishment of a weekly journal. The national association should be the apex of the pyramid, whose base is the provincial societies built upon the city and county societies. At the suggestion of President Mackid, the Association last year directed the secretary to induce each provincial society to secure affiliation with itself of all the city, town and county societies.

The great bond between the national association and the individual in the profession is not the annual meeting, but the weekly journal. It is by way of a weekly journal that we can succeed in forcing this Association into greatness. It will require funds to put the *Association Journal* out as a weekly, but the difficulty of obtaining these funds is not insurmountable. One way is to canvass the profession for a membership on the basis of a weekly journal. A membership of one-half of the profession of this country would assure the continued existence of a weekly issue. Another way is to secure an endowment, the interest on which when no longer needed for the maintenance of the weekly journal, could be used for lectureships and research work under the Association's guidance.

The Association is greatly in need of funds for other reasons, one of which is to rescue our profession from being exploited by the commercial enterprise of certain drug houses. Abraham Flexner ("Medical Education in Europe," page 90), speaking of this evil under the head of medical education in Germany, pertinently remarks, "The critical pharmacologist has discredited the old wives' tales that kept up the traditional pharmacopeia. Meanwhile the manufacturer is spinning a new superstition; the chemical industry of Germany is aggressively and intelligently directed. Only a critical pharmacological sense can enable the practising physician to know when to doubt and how far to believe the sanguine and assertive claims made upon him by the manufacturing chemist." The American Medical Association, through a committee on pharmacy, has undertaken to investigate some vaunted claims of certain drug houses with beneficial results to the profession in general. May I ask, are all the medical publishing houses with their endless padded encyclopedias on every conceivable branch of medical science, not likewise guilty of exploiting our profession? Nothing can be done against these exploitations, unless we have paid, skilled and scientific censors. For this purpose, funds obtained through increased membership are urgently needed. Above all, we need the influence of all "the respectable and redeemable members of the medical profession in the remote districts as well as in the great centres of our Commonwealth," that they may have a hand in shaping all legislation affecting the future of our profession and the public health of our country.

The committee of this Association has been promised by the Right Hon. R. L. Borden that there will be created in the near future a portfolio of Public Health. Inasmuch as these changes take a long time in coming, it behooves us to keep urging the authorities. We cannot get a pure food law or federal control of vaccines, serums and drugs, such as has been in operation in the United States during the past ten years, without such cabinet appointment. There they have a fine of five hundred dollars or one year's imprisonment for conviction of adulteration.

Like several of my predecessors in office, I desire to refer to some phases of medical education. The Carnegie Foundation for the advancement of teaching medical education has done great service for medicine on this continent. Out of its criticisms has arisen, almost everywhere, improvement. Not the least valuable part of its contribution is this, that it gave support to that faction of every medical faculty desirous of being abreast of modern edu-

cation. The Carnegie Foundation authorities have, however, over-emphasized the laboratory side of medical instruction. The German method of medical education is to tie the medical student to a microscope, as opposed to the English method of cultivating knowledge through the unaided eye. In Germany the aim is to make scientists first and then doctors. Whereas the "primary purpose for which students learn sciences is to become physicians, not scientists." The literature of the several subjects that form the basis of medicine has become so extensive that no man can keep abreast of it. Physiology, which is easily the most essential of all primary studies, has become so elaborate that it has suffered subdivision into three or more departments or professorial chairs. There exist similar subdivisions in bacteriology, pathology, and anatomy. As each teacher declares himself incompetent to instruct outside his subdivision, how idle to attempt to make anatomists, physiologists, bacteriologists and pathologists, etc., of medical students. The time is not so very remote when a medical student could master all the primary branches of medicine. To-day it is not possible for him to master a single branch of the sciences that are connected with medicine, during his college course. The instruction given to medical students does not enable one student in a hundred, no matter how high the standing of the school may be, to say whether a throat culture is or is not diphtheria. For years American medical teaching has been dominated by the German plan of instruction. In certain quarters there is setting in a reaction. It is claimed that we have become guilty of a fetish-worship of laboratories in medical instruction and medical practice.

The great physician and surgeon must depend for his diagnosis upon the physical examination and the evidence he extracts, sifts, and weighs in the patient's history. Laboratory methods are of only occasional use, viz., to support or not support clinical findings. Within the last few years physiological and pathological chemistry have assumed increasing importance in medical instruction, and would appear to be rapidly pushing, and possibly rightly so, all the other laboratory subjects into the background. It is hopelessly futile to attempt anything more than the most elementary teaching in the primary subjects of medicine to-day. The tried-out subjects of the ages, anatomy, physiology, and chemistry, should have preference as to the length of instruction hours. A student's most precious possessions are his time, his vitality, and a clear mind at the age when the mind is most supple, its curiosity most alert, and its nature most impressionable. It is only by cutting down the

time allotted to laboratory subjects that we will be able to find a place to instruct students in all the physical, mental, and nutritional forms of healing. It is high time that there was a readjustment of the programme, and a place, if not a professorship, given to these important subjects. Starling, in his preface to his "Physiology," has rightly said, "Until doctors know more about the physiology of nutrition, quacks will thrive and food faddists abound. Ignorance of physiology tends to make a medical man as credulous as his patients, and as easily beguiled by the specious 'puffing of the advertising druggist.'" Some bold surgery is needed in the medical curriculum. At present it is clogged and strangled with too many subjects, and the malady is yearly increasing. This virtually amounts to a confiscation of the most plastic, receptive, and promising years of the student's life, by making him study subjects almost ulterior to the dominant purpose of his life. It is an academic crime to add more burden to the already overworked medical students, some of whom leave the college doors now with wrecked health. As the subjects become more intricate and complex the teaching should become correspondingly more elementary. Medicine has nursed many of the sciences from infants to giants. Now each one is able to set up a house of its own over which a full-time professor presides. They have emigrated into the land of pure sciences. In the reconstruction of the time-table, every hour added for a new subject should be cut off from the non-essential.

I am one of those who had the good fortune to serve, while a medical student, an apprenticeship under the guidance of an able practitioner, and I cannot get away from the thought that the time so spent was far more valuable to me than an internship in a hospital. The enormous increase in hospitals throughout the country makes it unnecessary for a recent graduate to be without an internship. However, there ought to be a choice between an internship and a year's apprenticeship with certain designated members of the profession.

A leading insurance company on this continent has found it profitable to pay its examiners a fee for an annual examination of each of its policyholders. The laity insure their barns, buildings, and their valuable stock against accident, and make periodic careful inspection and veterinary testing of these, and yet they will go from year to year without even thinking of subjecting themselves or their families to examination by a reputable physician, that incipency in ailment may be detected and remedied. Why should we resort to medical inspection of schools and neglect the yearly inspection of the adult citizens of the country? Let us try

to hasten the day when no man shall think of exercising the right to withhold himself or his family from a yearly physical examination by a reputable physician, to determine any tendency to disease or the presence of disease itself. I am not blind to the fact that this innovation can lead to abuses, for it is impossible to eliminate at once from our profession the alarmist, the surgical tinker, and the obsessed drug giver.

In common with the profession in the republic to the south of us there are problems here affecting the public no less than the profession. These demand solution. Already there has been inaugurated at Washington, during the past month, a movement to establish a non-teaching college analogous to the Royal College of Surgeons of England, with the aim of giving higher degrees in surgery. The bearer of such a degree will have, from competent authorities, the stamp of approval declaring him capable of doing good surgery. American surgery, recognizing that their evils are likewise our evils, has most kindly invited well-known, reputable Canadian surgeons to become founders with themselves of the projected college. Not only will this college demand of its graduates technical knowledge and operative skill, but, above all, honesty and unquestionable moral character. A movement of this kind is intended to abolish needless and abusive surgery together with its invariably associated dichotomous fee. To do this effectually, those holding such degree must have public support and sympathy. Is not the time ripe when we should receive higher degrees in Canada, not from Great Britain and the United States, but from a Canadian institution, founded by the Parliament of this Dominion preferably at Ottawa? The ambition of ninety-five per cent. of the recent graduates in medicine is to become surgeons, and in many cases life's efforts are directed to this end. Matters have come to such a pass that the recent graduate thinks of disease only in surgical terms, the medical side is "a despised weed." We need competent medical men and competent obstetricians just as badly as we need competent surgeons, that is, we need men in these departments who have the knowledge of specialists. There is too much tendency to accept mediocre attainment in the two former, and demand thorough attainment in the latter. Given a standard high degree in these subjects, along with publicity of their meaning, we would find plenty in the profession who would put forth continued efforts at self-education for their attainment. There is a dearth of competent men in many departments of medicine and an overcrowding of the profession with mediocre ability.

My duty to the profession and to the public would not be done did I not refer to the miserable medical fees common to some districts of this country. Once a fee becomes established in a community it is hard to raise it. In certain districts in England the twopence and threepence fees still persisting are relics of Henry the Eighth's time. A banker, stating tersely the altered value of money, said that in 1860 \$20,000 would yield in interest \$2,500 annually. This sum would go as far as \$6,000 for living expenses to-day; \$120,000 would be the amount of principal required to earn \$6,000 to-day. In other words, \$20,000 in 1860 yielded a living for which \$120,000 would be required to-day, one dollar being equal to six nowadays: "The laborer on the street has been quicker to grasp the altered value of money than your profession," said the banker, "and what is more, he has had, as a rule, the courage to demand his right to substantial increased wage." Through a failure to carry on a campaign of education in favor of better medical fees, there has arisen a disproportion between medical and surgical fees which is largely responsible for fee splitting. One general practitioner gave an illustration in this way. He said he took Jenny B. to a surgeon for appendicular operation between attacks; the father paid the fee of one hundred dollars. Six months thereafter, he protested a bill of twenty dollars for attendance on his other daughter for a severe and prolonged attack of pneumonia. So long as there are miserable medical fees and this disproportion between medical and surgical ones, the fee splitting cannot be stamped out. There must be a good living wage for honest medical service, or members of our profession will fall into dishonest practices, and sink into the mire of dishonor itself. The righteous course for our profession to pursue is, while not distressing the deserving poor, to be careful not to put a premium on mere stinginess.

Medicine has made contribution to every calling in life. It is our high duty to go further. We must not continue the silence of centuries any longer. We must educate the public in the scientific principles of medicine far enough to give them ground to judge in their true light the sophistries of the quack and the charlatan. The osteopathist, Christian scientist and chiropractor succeed with even the supposedly educated and intelligent, because they teach the public their theories of disease and healing. To tell a patient that his bile has become thickened and that the grooming he is about to receive will make the bile more limpid, is an explanation not above his comprehension. What we must do is to educate the public till such an explanation will not be entertained. The greatest publicity should be given to the achievements of regular medicine

since it became worthy of being a science. Should not every school-child know that through our profession the average length of human life has been doubled; that in the last twenty-five years, eight years have been added to the average length of life; that it is to our profession that every civilized nation looks to wipe out plagues and hold back and even arrest epidemics? We have given the widest publicity to vaccination against smallpox with happiest results. Why not give publicity to the equally valuable vaccination against typhoid fever? Our battle against tuberculosis has been a publicity campaign in which the laity has not only believed, but has actually joined with us in great force. The enlightenment of the public in this will render it impossible hereafter for the heartless quacks to thrive upon the ignorance of the consumptive victim. If the battle against cancer, the twin monster of tuberculosis, gains this publicity together with a similar sympathy and active support from the laity, our triumph over this disease is to be within the life of many in this room. Let us never grow tired of impressing the fact that it was the regular profession which discovered anesthetics, abolishing pain and agony off and on the operation table, and that it will not be in the power of the human race in the future to duplicate a boon to humanity like antiseptic surgery. In spite of the fact that serum has cut the fatalities of diphtheria in half, in addition to putting into our possession the most potent agent against the spread of this dread disease of childhood, that the Spanish American Main has been swept clear of the yellow fever scourge, and that we have not only the cure for malaria, but also the power to wipe it off the face of the land, yet there are, both among the ignorant and intellectual, those who declare that medicine has made no advancement in one hundred years, and all this because we have not given the widest publicity to our achievements. In the expressed opinion of Lord Salisbury, medicine is the most exact and advanced of all the true sciences. It has rendered tributary to itself the knowledge of every walk in life.

In conclusion, while I have unflinchingly probed these festering sores on the surface of our professional body, I hasten to declare the heart of it to be sound and flawless, jetting out from its valves a fountain stream of all that is splendid in the history of science and humanity; matchless in progress, matchless in achievement, and matchless in future outlook.



**ADVANCES IN MEDICINE**

BY DR. LEONARD KEENE HIRSHBERG, A.B., M.A., M.D.  
(JOHNS HOPKINS).

The lugubrious Descartes it was who maintained that the scientific forward movement is greatest where the opposition to such a movement is greatest. This gentleman was afterward confined in an asylum and died gloriously. But at the time he made the remark he spoke true, if bitter, words, and they were utterly and indubitably sane. If you don't believe it, consider for a moment the history of medicine.

When the healing art was sacred and impeccable—when the physician was half necromancer and half priest and a doubt of his skill was an impiety—people were dosed with golden elixirs and bled to death, and a prescription was esteemed in direct ratio to its antiquity, orthodoxy, and absurdity. To-day, with ten thousand vociferous foemen upon each flank, the doctors of the world are getting ahead. Every day they abandon some old method and invent a better one. Every day they save more human lives.

Christian Scientists, faith healers, devotees of the "new thought" (whatever that may be), and compounders of patent medicines—all of these enthusiastic faddists are doing the race a real service. In the first place, they are helping the law of natural selection to stamp out the unfit—which means the ignorant and credulous, and, in the second place, their incessant and telling criticism is ridding medicine of its barnacles. Their objection to every specific and lotion is the same: "But it doesn't cure!" When this objection happens to be true, it sends the embarrassed pathologists searching for something that does cure. When it is false, it does no harm—except to the critics themselves.

For this reason, an earnest lodge of anti-vaccinationists in a community often makes that community proof against smallpox. These persons refuse to be vaccinated. They publish pamphlets showing that vaccination causes leprosy, measles, and appendicitis. When the official vaccinator comes around they set their dogs on him. When they are haled into court they fight like fiends and go to jail like martyrs. Everyone else in the community submits to arm-scraping, but these rebels defy the law and emerge from jail with whole skins.

The row is forgotten and a couple of years go by. Then one day a sailor comes ashore from an East Indiaman with certain

nasty-looking pustules all over his body. He visits twenty saloons, parades the crowded streets, and sleeps in a room with fifteen other men. Of the citizens vaccinated one-hundredth of one per cent. take the disease and one-thousandth of one per cent. die of it. Of the valiant anti-vaccinationists fifty per cent. are laid low and seventy-five per cent. of the fifty per cent. die. Thereafter, in that community at least, the anti-vaccination crusade languishes and the official vaccinators, when they make their rounds, are no longer denounced, barred out, and deluged with hot water.

And so it goes. The more vigorous the opposition, the better. When it is vigorous the general public becomes aware of it, and is forced, willy nilly, to observe its results. If it ends in the overthrow of some outgrown scheme of medication, well and good. If, on the contrary, it ends in proof positive that some new scheme of medication is efficacious (no matter what the cost to the dissenters), well and good, again. For the fact that smallpox is almost unknown to-day in civilized communities we have to thank the Rev. Edward Massey, the Abbe Filiatrault, and other theologians who combated prevention, and the dupes who died in following them, as well as Lady Montague and Dr. Jenner, who fought the first battle for vaccination. The same war was made upon anesthetics, and it is being made to-day upon the diphtheria antitoxin—and the result always has been, is to-day; and always will be, the same.

The history of medicine's final defeat of diphtheria, when it comes to be written, will be more dramatic and impressive than the story of any of Napoleon's campaigns. Fourteen years ago diphtheria was a universal and terrible plague. It killed hundreds of thousands of children every year, in all countries, and the doctors were helpless before it. It had been raging in the world for twenty-five centuries—the ancient Egyptians knew its heavy hand, and the Greeks called it Egyptian ulcer, but no progress whatever had been made in combating it. The average mortality was seventy-five per cent., and in some epidemics it reached nearly one hundred per cent. Gargles, applications, sprays and internal druggings were useless. Of the hundred "cures" and thousand theories, not one was worth the time it would take to describe it. The cause of the disease, the tiny bacillus diphtheria, had been discovered as far back as 1883 by a German named Klebs—but no one knew how to kill it. Then, one day in 1893, a man named Behring invented the diphtheria antitoxin, and the death rate dropped from seventy-five per cent. to less than ten per cent.

It is rather difficult to make the tremendous result of this discovery plain, because the figures showing the number of cases of

diphtheria in the United States each year are by no means reliable. In one State, however, fairly accurate reports are made, and from these we may gather much of interest. This State is Pennsylvania, which has an enlightened health board, and has been distributing antitoxin, free of charge, since the fall of 1905. Diphtheria used to be a fearful scourge in rural Pennsylvania, and it was common for an epidemic to close the schools of an entire township. The number of cases ranged from three thousand to six thousand a year, and placing the death rate at the moderate average of fifty per cent., this meant the death of from 1,500 to 3,000 children every twelvemonth.

Then came the antitoxin. During its first three months of use it reduced the death rate to about fourteen per cent. During the ensuing year it worked a further reduction to about eleven per cent. During the year following, 1907, it brought the rate down to 7.13 per cent., and among the 3,304 cases—three-fourths of the total number—treated on the first day—to 4.59 per cent.! In other words, the effect of this free distribution of antitoxin has been to save the lives of from 1,200 to 2,500 Pennsylvania children a year! Isn't that cheap enough for sound human beings—boys who may live to do honor to their country, girls who may become the mothers of Lincolns, Pasteurs, and Lazears?

The returns from the country in general are wonderfully inadequate, since, in more than half of the States, infectious diseases are not reported accurately and there is no intelligent war upon epidemics. But it is safe to say, I think, that there are 100,000 cases of diphtheria in the land each year and that antitoxin is used in the treatment of half of them. This means, at a fair estimate, the saving of 25,000 young lives a year, or about five hundred a week. Without the antitoxin, these children would die.

All such figures by no means represent the entire value to the nation of the antitoxin, for, in addition to its curative powers, it is also invaluable as a preventive. In the old days, when one case of diphtheria appeared in a house, it was common for all the other children under the same roof to take it too. All that is now a thing of the past. Immediately after he finishes injecting antitoxin into the veins of his little patient, the physician of to-day proceeds to give immunizing doses to the other children, and as a result they escape entirely. This, it is plain, has the effect of greatly reducing the number of cases, and so the malady is being combated in two ways, and in each way very vigorously and efficiently. Were the use of the antitoxin made compulsory in all

cases, diphtheria would disappear entirely from the United States in ten years.

As it is, the days of the disease are numbered. Opposition to the use of antitoxin lingers among the ignorant and transcendental, and even among certain "old-school" physicians, but every now and then the public is made acquainted with the sad fate of some faith curist's child, who, denied the aid of one of medicine's triumphs, dies in lingering agony. A paragraph of that sort, floating through the newspapers, makes people think, and when people begin to think they are very apt to be impressed by figures.

Two other maladies that have seen their best day are cerebrospinal meningitis and tetanus (lockjaw). The former seems to be a native of America, for it was unknown to physicians until first noted in this country in 1805. Since then it has spread to Europe, and under the name of spotted fever and other cognomens is widely epidemic. In our own country it has been as common, at times, as typhoid. Often it is mild, but sometimes, during a bad epidemic, the death rate has reached ninety per cent. But this last will never be recorded again. The general death rate has been reduced from eighty per cent. to sixteen per cent. by an American, Dr. Simon Flexner, of the Rockefeller Institute of Medical Research.

Dr. Flexner's specific is an antiserum much like that for diphtheria. It is prepared by accustoming a horse, which has a high natural power of resistance to meningitis, to increasing doses of the germs and their toxins. In the end the horse's blood acquires such a power of resisting the germs that they no longer inconvenience the animal. Then some of this horse blood is drawn off and injected into the veins of a human patient. Here it continues its war on the germs and their toxins, and in about five cases out of six routs and neutralizes them.

The meningitis antiserum is still in its early stages, and so it is not nearly so certain in its effects as the antitoxin for diphtheria. But experience will improve it, and in a few years meningitis will pass into the limbo of terrors that were, but are not.

The lockjaw antitoxin is brother to that of diphtheria and a cousin to that of meningitis. It neutralizes and makes harmless the virulent poisons secreted by the lockjaw germs. As everyone knows, lockjaw is an exceedingly dangerous disease. It is caused by a bacillus discovered by Nicolaier in 1885 and is a common sequel to small injuries, particularly the ragged, contused cuts, bruises and burns caused by fireworks, nails, and farm implements. The bacillus lurks in street dirt and so reaches the hands. So long as the

skin is unbroken it can do no harm, but when an exploding fire-cracker, for example, forces it down into the flesh, it begins to increase and multiply, and in the course of time convulsions and spasmodic contractions of the muscles follow, and death is not far away. The antitoxin, if injected at the time of injury, i.e., before the lockjaw develops, battles with the poisons given off by the germs, and so saves the patient's life, for the poisons and not the germs themselves cause death.

Tetanus antitoxin is very expensive and its value is not generally appreciated, even among physicians. In consequence there are many cases in which it is employed too late or not at all, and so the death rate continues to rise a bit each year just after the Fourth of July. But where its uses are known, it has demonstrated its value most dramatically. In Baltimore, for example, every recurring Fourth of July was once followed by the appearance of many cases of tetanus in the death returns; but after that holiday in 1908 there was not a single case! This result, true enough, was partly due to a police war upon fireworks, but it was also partly due, and no doubt in greater part, to the general use of the antitoxin immediately the injury occurred. I have had twelve cases of rusty nail injuries, without a case of lockjaw, because of the free use of antitoxin.

The fact that every American city cannot show a similar clean sheet is a sad commentary upon public and professional ignorance and prejudice. An injection of antitoxin, within a few hours after injury, is a practically certain preventive of lockjaw, and even if it is not used until a day later it materially reduces the violence of the convulsions, and in consequence decreases the chances of death. But if it is not employed until the patient's jaws are actually "locked" it labors under crushing handicaps, and requires the highest degree of skill in the physician to prove its usefulness.

Promptness, in truth, is an essential in the use of all antitoxins. That for diphtheria, for instance, is just about ten times as valuable on the first day as it is on the sixth day. The Pennsylvania returns show that among children immunized within twenty-four hours after diagnosis but four and a half per cent. die. On the second day the death rate rises to nearly nine per cent., on the third day to nearly fourteen per cent., on the fourth day to nearly twenty-four per cent., and on the sixth day to nearly twenty-four per cent., and on the sixth day to forty per cent.

And even when, despite tardiness, the patient pulls through, the complications which follow in the train of most infectious diseases

and impede convalescence are aggravated by every hour's delay. In diphtheria a very common complication is paralysis. If the antitoxin is used on the first day, this paralysis occurs in but three per cent. of the cases, but if it is not used until the second day there is a jump to twelve per cent. If, finally, immunization is put off until the third day, one patient out of every five will be paralyzed. It may be set down, indeed, as a general rule that the more liberally antitoxin is used, and the earlier, the less chance there will be of distressing consequences. Most antitoxins are expensive and their administration is often painful, but it is extremely dangerous to take such consideration into account.

So far the pathologists have perfected few antitoxins of value beyond the three described. But the good work is going on apace, and we are plainly on the brink of marvellous advances. Pasteur said truly, "It is in the power of man to drive infectious diseases from the earth." Pneumonia is one of the maladies that will be conquered, I believe, before long. Now that the death rate in tuberculosis is fast declining, this other and more terrible malady of the lungs is gaining the dubious honor of being the principal cause of death in the United States. But we are no longer fighting it in the dark, for the germ which causes it is now known to every student, and success in stamping it out is only a matter of time. Several pneumonia antisera and vaccines have been put forward, but as yet it would be hazardous to attempt to determine their value. Meanwhile all the old "cures" for pneumonia are being thrown overboard and fresh air is nature's only ally.

That fresh air is no inconsiderable remedy, and that the discovery of its value is not the least of medicine's achievements in recent years—these things are well demonstrated by the world-wide war upon tuberculosis now in progress. Twenty, or even ten years ago, the unfortunate person who developed the more visible symptoms of consumption was doomed to almost certain death. The medicinal standbys were cod liver oil and alcohol—one a nauseous food and the other a poison. To-day the consumptive knows nothing of either. Instead he is fed upon meat, vegetables, milk, and eggs, and sent into the open air. He takes no medicine whatever—not even a dose of camomile tea or a gill of sweet spirits of nitre. A year or so of this treatment and he is a new man. Pure air and nourishing food have given him rich, healthy blood, and this blood has fought and conquered the germs in his lungs.

It is always blood that does the work. In the child suffering from diphtheria or lockjaw or meningitis, it is the horse's blood. In tuberculosis, pneumonia, and typhoid it is the blood of the

patient himself. Healthy blood is the most certain and vigorous of all germicides. Its white corpuscles, floating about among their red brothers, are engaged in a ceaseless hunt for the organisms of disease. When a white corpuscle encounters a germ, it tries to swallow the invader, and so put an end to its baleful activity. Ninety-nine times out of a hundred it succeeds, but the hundredth time the germ is too strong, the corpuscle is too weak, or there are too many germs or too few corpuscles—and the host of both grows ill.

In all infectious diseases modern medicine tries to aid the corpuscles, either by feeding them new serum and so making them strong, by directly attacking the germs, or by neutralizing the poisons secreted by the germs. These poisons do more harm than the germs themselves, for they attack the heart, the brain, and all the other organs, and so by interfering with the natural operation of the bodily machinery, deplete the blood and handicap the white corpuscles in their good work. Thus the germs wage their war upon health—by attacking the corpuscles directly and by attacking them circuitously and from the rear.

Now, the blood of the average healthy man is more than a match for the germs of tuberculosis. If a few of them happen to invade his body, his blood quickly pounces upon them and puts them to death. But if the invasion is made by tuberculosis germs in extraordinary number, or if the man happens to be exhausted, underfed, or otherwise out of form, his blood loses—and he is a consumptive. He may get out of form by working too much, by breathing bad air, by overindulging in alcohol, by eating impure food, or by suffering an attack of pneumonia, malaria, or influenza. Or he may be a born weakling, and foreordained to lose his battles with germs. Again, he may take in an extraordinary lot of germs by sleeping with a consumptive, by breathing infected street dust, or by drinking from a public water glass. If any of these things happen the invading germs find lodgement in the man's lungs, or in some other organ, and the man himself begins to lose weight and appetite and to have a fever.

What is to be done? Nothing could be more simple! The man must be transformed from a weakling into a man of strength. He must take clean air into his lungs, to ferret out and paralyze the germs and to aereate and invigorate the blood. He must take plenty of simple, nourishing food into his stomach, to make blood, sinew, and fat. He must keep himself clean. He must rest. He must put aside all cares and worry. If he does these things he will note an improvement almost immediately. His fever and cough

will disappear. His weight will begin to increase. He will begin to feel fit and vigorous. Exercise will no longer exhaust him. He will eat with relish, and his stomach will digest his food without protest. He will lose his old despair and see hope ahead. In the end he will be well.

It may be argued by the unthinking that all this is not medicine—that the physician who puts a consumptive upon such a routine is merely confessing that medicine can do nothing for him. But this argument is fallacious, for the open-air treatment of tuberculosis was devised, not by laymen, but by physicians, and as it stands to-day it represents the results of long years of experiment and inquiry in laboratory and hospital.

But this open-air treatment is not the last word. It cures thousands, but it is always lengthy and tedious, and it is by no means mathematically certain. Already plans to aid or supplant it with something better are under way. This something better, it is probable, will take the form of a tuberculosis serum—a serum that will be the direct descendant of the tuberculin of Dr. Koch. Experiments with various modifications of tuberculin are now in progress in every civilized country in the world, and the results are beginning to show promise. In certain forms of tuberculosis it seems to be a true specific, and in tuberculosis of the lungs it is proving more and more effective every day. Ten years from now—who knows?—a case of consumption may be cured absolutely and permanently in—six months—maybe in three!

And this is the supreme achievement of modern medicine. It has cast aside guesswork forever. Its business to-day is to discover the cause of each and every malady, and, having found this cause, to devise a cure—not by haphazard groping in the dark, but by a cool, scientific application of known principles. The antitoxin for diphtheria opened the way for antitoxins for lockjaw and meningitis. The open-air treatment of tuberculosis opened the way for the rational treatment of pneumonia and typhoid. In a few years we will have specifics for all of these diseases. And when that time comes the world will not forget the men who are working in a thousand laboratories to-day—working for the good of the human race, quietly and unrewarded, while fools laugh.



## THERAPEUTIC NOTES

**Incomplete Abortion.**—Edward Anderson (*Maryland Medical Journal*) considers ergot unsatisfactory in cases of incomplete abortion because it causes as forcible contractions of the cervix as any other portion of the uterus. Quinine acts chiefly on the fundus. He first administers six grains of quinine at once and then three grains every hour until the womb is completely emptied, which he has never found to fail to occur in a few hours. This practice Anderson has constantly followed for seven years. A compound cathartic pill will aid in the expulsion of retained products of conception. He has always found this treatment successful.

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**Ataxia.**—The *Medical Press and Circular* says the most modern treatment of locomotor ataxia is that of Lortal-Jacob, and consists in dilatation of the urethra. Lesions have been found in the urethra of ataxic patients who had urinary trouble, but also gastric and rectal lesions which provoked, by irritation, similar attacks. Treatment of these lesions will improve the general condition by suppressing the irritating effect of these reflexes and the patient will experience much relief. The relief is obtained by dilating the urethra, the rectum, or the pylorus. Lesions of the urethra are particularly observed in cachectic persons, who walk with great difficulty, and who have been afflicted for a number of years.

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**Cough in Advanced Pulmonary Tuberculosis.**—J. Douglas Blackwood (*J.A.M.A.*) had his attention called by a patient to the fact that when he took aspirin in the evening his cough was much relieved and he passed a more comfortable night. Trial was then made on several other cases, and in every case the patients reported favorable results. Dr. Blackwood gives 5 or 10 grains about 8 p.m., when there is excessive cough at night, and the smaller dose is often sufficient and not so liable to cause a night sweat.

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**Bronchial Asthma.**—A. Latham (*Practitioner*) says that light cauterization of the nerve of the septum, in suitable cases, adequately carried out, produces great relief in a large proportion of cases. Whilst it does not cure it may give relief for several years. In any case of asthma inquiry should be made as to the possibility of dust being a contributing factor. The nose should always be carefully examined.

**Profuse Kidney Hemorrhage.**—Herman L. Kretschmer (*J.A.M.A.*) reports remarkable results by treating a case of profuse, painless hematuria with injections of epinephrin (adrenalin, P. D. & Co.) directly into the pelvis of the kidney through the ureteral catheter. Five c.c. of a solution consisting of fifty per cent. adrenalin and fifty per cent. salt solution were injected in the case treated, and the patient put to bed. The next day the hematuria had indirectly diminished. Three days later a similar amount was injected with a resulting marked diminution in the amount of blood in the urine. Four days later, as there was still some blood, a similar injection was administered. The next day the urine was perfectly clear to the naked eye. Hugh H. Young, of Baltimore, has reported a somewhat similar case.

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**Nephritis.**—Milton Goldsmith (*J.A.M.A.*), says all cases of nephritis may be classified as tubular, vascular or azotemic, and this classification is valuable from the point of treatment. Whilst cases may be encountered in which a combination of types exists, one type will predominate and indicate the special line of treatment. This treatment should aim to spare that part which is incapacitated. In tubular nephritis, the chloride should be excluded, nitrogenous foods in the azotemic variety, fluids restricted or excluded in the vascular form.

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**Moist Dermatoses.**—C. J. White (*Jour. Cutaneous Dis.*) believes in the great value of bland, antiseptic, absorbent powders, such as borated talc, for external use in treating certain moist dermatoses. The patient is put to bed in the acute stages, on an air cushion, if dorsal lesions, and kept recumbent all the time, even during defecation, urination and eating, which is insisted upon until the moist surfaces have ceased to appear. Every lesion on the body is thoroughly sifted with powder as often as any moisture shows itself, and, if the disease affects the scalp, the hair must be sacrificed. The patient should be naked in bed, the sheet and blankets supported on a frame, so that nothing touches his body. Surfaces should not be allowed to touch each other, much powder being dusted between them. If crusts heap up they must be removed and the drying process instituted again. By this method of treatment bacterial growth is inhibited, the object being to prevent heat and moisture for their development.

**Ingrown Toe-Nail.**—T. L. Deavor (*Am. Jour. Surgery*) for some time has been removing the entire nail with complete destruction of the matrix, so that the return of the nail is impossible. The results have been excellent. Cocaine may be satisfactory, ether better. Chloroform cautiously, as disasters in such a simple operation leave lasting impressions. First he excises a V-shaped section from the region of the root, and the soft parts turned back in all directions, exposing the limitations of the nail. The nail is then removed, and by cutting and scraping the nail bed is cleared of all tissue down to the periosteum so that every vestige of the root and matrix, with the transition cells about the nail bed are destroyed. The toe is dressed antiseptically and allowed to heal. By appropriate lateral incisions about the phalanx, and tight bandaging, the soft parts may be brought together so that when healing is complete, the area formerly occupied by the nail will be greatly reduced in size. The nail bed finally develops a fibrous covering which has all the protective qualities of a nail, without tendency to irritation. A mild amount of suppuration is to be looked for in most cases, but there should be no sequel.

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**Syphilis of the Nose.**—Edward L. Ginsburgh (*Int. Jour. Surgery*) arrives at the following conclusions as regards the treatment of syphilis of the nose: In the primary stage of syphilis, salvarsan or neosalvarsan is the most valuable remedy, and repeated intravenous injections may abort the disease. The treatment is more effective when a combination of salvarsan or neosalvarsan with mercury is employed. We must retain mercury because its usefulness is not diminished by salvarsan or neosalvarsan, as it can be employed when their use is difficult. The local treatment, by means of cleansing solutions and powders, is very important and should be very thorough.

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**Cold Abscesses.**—F. Pohl (*Zentra. für Chir.*) uses phenol and camphor as follows: Thirty parts phenol, sixty parts triturated camphor and ten parts alcohol. This mixture is injected directly into the cold abscess, as well as into old rebellious effusions and destructive inflammatory processes in joints, and recurring rheumatic joint affections displaying a tendency to develop into arthritis deformans. The camphor seems to annul the corroding action of the phenol. He has given the injections at intervals of two, four or eight days, never going above the dose of two to five c.c. There have never been any by-effects excepting slight carboluria.

**Proctoclysis.**—Geo. H. Tuttle (*Int. Jour. Surgery*) thus describes a new method which will maintain the solution at body temperature for hours continuously. The device consists in placing a two-quart heating bag near the patient's rectum, through which the salt solution pipe passes, as in a hot water bath, overcomes the injurious effect of stasis and prevents the great loss of heat from the pipe, as in other methods. In this method the temperature of the saline as it enters the rectum, at first, when the heating bag has just been filled, is about 108 degrees F., from which it drops gradually in an hour and a half to 98 degrees, when the heating bag is refilled at 140 degrees F., and the rectal temperature returns to 108 degrees F. The results have been proved for six hour periods in four separate trials. This apparatus has been tried in some great hospitals, and the good results verified.

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**Radium in Surgery.**—Howard A. Kelly says radium is destined to cure 96 per cent. of skin cancer, recurrent uterine cancers if taken early, as well as some cases of rectal cancers. It also acts most favorably upon parotid growths. Some cancers of the lip and tongue and breast may also be cured by it. There is a positive action on sarcomas, and on other fibrous and epithelial growths, on the surface of the body. One of its best effects is seen in curing angiomas, even large vascular growths which cannot be treated surgically. It stops uterine hemorrhage, checks fibrous growths, cures obstinate pruritus of vulva and anus and relieves some forms of pelvic inflammation. It is destined to have a definite field of usefulness in exophthalmic goitre.

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**Morphinism.**—Maurice Page (*Bull. Médicale*) lays stress on the psychic distress in the withdrawal of morphine from an isolated patient. To avoid this, the patient should be kept in ignorance of the rapidity of the withdrawal of the drug. He cannot tell himself. In this way most patients can be brought down to sterile injections of sterile water, without knowing it, in from three to four days. The period, however, varies with different cases. In thirty cases treated by him, Page states the minimal time was four days, the maximal thirty-one days. Of these, twenty-two had taken the drug for two years. Twenty-five took more than ten grains daily, and fourteen took other drugs as well. Eighteen, two years after treatment, had not returned to morphine.

**Narcotic Addiction.**—Alexander Lambert (*J. A. M. A.*) says the alcoholic or morphinist is a man acutely or chemically poisoned and that these patients smoke to excess. Their only chance is to stop tobacco and then they must be unpoisoned. The treatment briefly is the persistent administration of belladonna mixture in small doses and thorough elimination by some form of mercury. The mixture is as follows:

In making the mixture a 15 per cent. tincture belladonna must be used.

In Lambert's personal experience about 75 per cent. remain free from further addiction.

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**Fracture of Neck of Femur.**—Royal Whitman (*Med. Record*) gives an exposition of the abduction treatment of fracture of the neck of the femur. This should be adapted to the anatomy of the part. As one has no control over the inner fragment, adjustment can be assured only by contact of the outer fragment to it. In complete fracture of the neck of the femur, the patient is anesthetized and lifted to a sacral support, with the shoulders resting on a box of equal height, while the extended limbs are supported by two assistants. The assistant holding the injured limb then abducted it to the anatomical limit (normal inclination of the head of the femur of about 130 degrees permitted a range of abduction of the hip about 40 to 50 degrees, a movement directly checked by contact of the upper border of the neck with the projecting rim of the acetabulum) to illustrate the normal range, which varies in different individuals and at different ages, and indirectly to fix the pelvis by direct bony contact. The operator first flexed the thigh to disengage the fragments. The assistant then extended the limb, and by natural traction overcame the shortening, as demonstrated by the relation of the trochanter to Nelaton's line, and by measurement. He then, under traction, abducted it to the normal limit, the operator meanwhile lifting the thigh from beneath. Inspection should now show absolute correspondence between the extended limbs, as to abduction, rotation, length and position of the trochanters. In this attitude the injured part was securely fixed by a plaster spica, extending from the nipples to the toes. The sequence in manipulation is as follows: (1) Disengagement of the fragments. (2) Complete reduction of shortening by traction in the line of the body. (3) Abduction to a degree that should make the capsule tense. (4) Fixation in complete extension. So-called impacted fractures might be treated in the manner described.

## Reviews

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**Periodicals**—The attention of our readers is called to the advertisements of *Graphic*, *Daily Graphic*, *Bystander*, *Punch*, *Spectator*, *Illustrated English Magazine* and *Scientific American*.

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**The First Signs of Insanity.** Their Prevention and Treatment.

By BERNARD HOLLANDER, M.D., Author of "The Mental Functions of the Brain," etc., etc. New York: Funk & Wagnalls Co.

The point of view from which this book has been written is not that of the special alienist inside the hospital for the insane, but the general practitioner, who first comes into contact with the early phases of mental disorder. Most men will appreciate nowadays that it is not necessary to await the verification of insanity in a patient to commence treatment, but rather to commence from the time the first symptoms manifest themselves. The first part of this book, therefore, deals with the various mental powers making up mind and character, their activities, under normal conditions as well as under diseased conditions. Part two deals with causes, such as heredity, disposition, mental and moral causes, inebriety, toxins, etc. Part three concerns itself with the treatment of mental infirmity and disease, while part four considers signs and symptoms, which should prove of the utmost value to general students and practitioners. To the medical practitioner, psychologist, sociologist and general student alike, the book should appeal as an interesting subject, dealing with the most far-reaching and dreaded of maladies. Now that the time is ripe for setting about preventive remedies in insanity, the book is a timely one.

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**Headache.** Its Varieties, Their Nature, Recognition and Treatment. A Theoretical and Practical Treatise for Students and Practitioners. By DR. SIEGMUND AUERBACH, Chief of the Polyclinic for Nervous Diseases in Frankfurt. Translated by Ernest Playfair, M.R.C.P. One of the Oxford Medical Manuals, 208 pages (1913). Price, \$1.50. Toronto: D. T. McAinsh & Co.

This volume will assist practitioners in arriving at a clear differential diagnosis of the individual varieties of headache and enable them to apply the proper mode of treatment. Teachers, and consequently students, are all too prone to pass over minor mala-

dies, especially as encountered in a well-organized outdoor clinic. More attention to outdoor clinical study would better qualify most young practitioners to enter upon practice, as there are minor malady can be best studied and the treatment of these patients better watched. This book, therefore, can be recommended to medical students primarily and to practitioners secondarily.

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**Text-Book of Ophthalmology.** In the form of Clinical Lectures.

By DR. PAUL ROEMER, Professor of Ophthalmology at Greifswald. Translated by Matthias Lanckton Foster. With 186 illustrations in the text and 13 colored plates. Volume III. Price, \$2.50 net. New York: Rebman Co.

This work is a most excellent one and appeals directly to the oculist, whilst to general practitioners who, from their location, are compelled to do a certain amount of eye work, it can be heartily commended. It is thorough and complete, the illustrations being especially beautiful, whilst the text is comprehensive and compelling.

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**Neurasthenia.** By GILBERT BAILLET, of the Faculty of Medicine, Paris. Translated from the Third French Edition by P. Campbell Smith, M.D. Third Edition. Illustrated with seven figures. Toronto: The Macmillan Company of Canada.

The third edition of this excellent book on a vexed subject has been rendered more complete on certain points and some new sections have been added. Some necessary additions have been made to the chapters on psychotherapeutics as well as on the dietetic regime of neurasthenics. Whilst not to be considered exhaustive, the book sets forth clearly and concisely those rules and facts essential to guide the physician in practice.

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**The Narcotic Drug Diseases and Allied Ailments.** Pathology, Pathogenesis and Treatment. By GEO. E. PETTEY, M.D., Memphis, Tenn. Illustrated. Price, \$5.00. Philadelphia: F. A. Davis Co.

The author considers that drug habitués are blameless victims of disease, and as such entitled to as rational and skilful treatment as others with physical ailments, and with this all will agree. Indeed, one might go farther and say, even more so. The vital and

essential treatment advocated is elimination, in which, of course, there is nothing new. A feature of the book is the amount of space devoted to the treatment of acute ailments occurring in narcotic and alcoholic habitués, to the withdrawal after prolonged use during acute ailments, the management of infants born of drug-using mothers, the treatment of delirium tremens, and "sobering-up" the victims of acute alcoholism. We hope the book will prove of undoubted value to the profession, as all are aware of the vexatious trouble in handling these cases.

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**Diseases of the Eye.** By GEORGE E. DE SCHWEINITZ, M.D., Professor of Ophthalmology in the University of Pennsylvania. Seventh edition; thoroughly revised. Octavo of 979 pages; 360 text illustrations, and seven lithographic plates. Philadelphia and London: W. B. Saunders Company. 1913. Cloth, \$5 net; half-morocco, \$6 net. The J. F. Hartz Co., Ltd., Toronto, sole Canadian agents.

This is the seventh edition of one of the best works published on ophthalmology. As usual with new editions of the most important books, the various chapters show careful revision, and new matter added to keep the book abreast of the advances in ophthalmology. It embraces reference to recent uses of vaccine therapy, indications for the use of salvarsan. Indeed, it has been the aim to embrace all the important advances in the past three years. Students, general practitioners and oculists will do well to possess a copy of this most excellent book.

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**Therapeutics of the Gastro-Intestinal Tract.** By CARL WEGELE, M.D. Adapted and edited by MAURICE H. GROSS, M.D., and J. W. HELD, M.D., of the Har Moriah Hospital. With 52 illustrations in the text and 2 figures in colors on one plate. New York: Rebman Company.

In this book will be found, in addition to the therapy of the stomach and gastro-intestinal tract, additions on the diagnosis of the diseases of the oesophagus; diagnosis of the diseases of the gastro-intestinal tract; duodenal tube and its uses; diseases of the pancreas; X-ray examinations of the gastro-intestinal tract. There is also an especially good chapter for dietetic purposes. It is written in a neat, concise style, shorn of superfluous matter.



**Sterility in the Male and Female, and Its Treatment.** By MAX HUNNER, M.D., New York; Chief, Genito-Urinary Department, Harlem Hospital Dispensary, etc., etc. New York: Rebman Company.

The material for this book has been gathered from the genito-urinary clinics of Harlem and Bellevue Hospitals, but mainly from the gynecological clinic of Mount Sinai Hospital Dispensary. As the book is the result of many years' original research and experimentation in the study of sterility of the male and female, it may be counted on to be a production of considerable value upon this subject. The detailed, yet concise, histories of individual cases adds much to its value.

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**Sex—Its Origin and Determination.** A study of the metabolic cycle and its influence in the origin and determination of sex. The course of acute disease. Parturition, etc. By THOMAS E. REED, M.D., Middletown, Ohio, U.S.A. New York: Rebman Company.

It is not often a general practitioner writes a book upon medical subjects. We generally have to look for most of our knowledge to the specialists. For upwards of forty years, however, Dr. Reed has interested himself in the determination of sex, and has evolved the theory of the active and passive phases manifested during the progress of labor. The book is decidedly well written, and most interesting; particularly so as far as the author's own discovery goes. That he has kept abreast of the times upon the sex question is also quite evident. The book will be interesting not alone to scientists and obstetricians, but to all.

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**Applied Bacteriology for Nurses.** By CHARLES F. BOLDUAN, M.D., Assistant to the General Medical Officer, Department of Health, City of New York, and MARIE GRUND, M.D., Bacteriologist, Department of Health, City of New York. 12mo of 166 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1913. Cloth, \$1.25 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

In the art of nursing, bacteriology plays its part, and for a correct understanding of it the nurse will find this book adapted to the purpose. It is general in its scope, and in nowise anything but what is required for the nursing profession. Suggestions for demonstrations are added to each chapter.

- A Reference Hand-Book of Gynecology for Nurses.** By CATHARINE MACFARLANE, M.D., Gynecologist to the Woman's Hospital, of Philadelphia. Second edition; thoroughly revised. 32mo of 156 pages, with original line-drawings. Philadelphia and London: W. B. Saunders Company. 1913. Flexible leather, \$1.25 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

In the second edition of this compact practical manual for nurses upon gynecology, the principal changes to be noted are details in technic, such as dry sterilization of gloves, iodine preparation of the skin, preparation for and after-care of major gynecological operations. There are additions on cancer of the uterus, vagino-fixation, acute gastro-dilatation. The book is the outcome of a series of lectures on gynecology delivered by the author each year at the Woman's Hospital, Philadelphia.

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- A Course in Normal Histology.** By RUDOLF KRAUSE, A. O. Professor of Anatomy at the University of Berlin. Translation by Phillip J. R. SCHMAHL, M.D., New York. Part I. New York: Rebman Company.

In this work there are 30 illustrations in text and 208 colored pictures, arranged on 98 plates after the original drawings by the author. It is issued in two parts, Part I. being a guide to the technique of microscopy, fitted for both teacher and student alike. Part II. deals exclusively with histology pertaining to medicine. Either part may be obtained separately.

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- A Course in Normal Histology.** A Guide for Practical Instruction in Histology and Microscopic Anatomy. By RUDOLF KRAUSE, A. O. Professor of Anatomy at the University of Berlin. Translation by PHILIP J. R. SCHMAHL, M.D., New York. Part II.

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# Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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## COMMENT FROM MONTH TO MONTH

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**Prospective Medical Students,** whether in the noonday languor of the harvest, the restful vacation from pedagogic duties, the cooling environment of a drug shop dispensary, or the shady verandah of some summer resort boarding-house, are giving consideration to the commencement of medical careers at the fall openings.

It would be well for them all, in choosing the practice of medicine as a vocation, if they could have placed before them some ice-box facts as to the status of that profession in the present day and its prospects in the immediate as well as the more distant future. It would be well for them all to understand first that success in the practice of medicine spells a strenuous life, which only comes to a few; that non-success means loss of time, money and physical energy which can never be brought back.

Let them study or be made aware of these facts from England and see the drift of the profession in the home country:

In the year 1891 the total number of medical students registered in Great Britain was 2,405; in 1912, 1,232. Wherefore this great falling off? First, medicine is an expensive calling. For five years the medical student has practically no earning capacity. In these five years many young men can lay a good foundation of a successful business career. At graduation the medical student begins, and in town or city it is long years—generally six to ten years in the latter, four or five in the former—before he has established himself.

Medicine is not a highly-paid profession. There is often much loss. There are no chances, as in business life. It is up hill and down dale, and plod, plod, plod.

With uncompromising bluntness the prospective medical students needs to be told that the practise of the profession no longer lures its votaries as of yore.

The rapid advancement of public health is cutting wide swaths in the professional income. Practice is beset upon all sides by all sorts of fakirs—not in the country, of course. There is more money and ease in city and town.

As a whole the medical profession is in a precarious condition—and in Ontario, reform (whatever that may mean) is in the air. The present is a good time to keep out.

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**Insanity** steadily increases year by year in Ontario. Indeed, for that matter, an inspection of the statistics for the various provinces would probably show that it was increasing all over the Dominion. In a generation the number of insane has doubled in Ontario.

There is much talk and work in connection with the prevention of other diseases, but in this, the most lamentable of all diseases, there is practically nothing done in the way of prevention.

Scanning the causes in the report on another page, a goodly number is ascribed to moral causes, which, through proper understanding and education, might be prevented. The large number of 890 inherited a predisposition.

Marriage restrictions might be able to do good work here. Probably the time will come when preventive officers will bring within the public health domain the work which should be inaugurated in preventing insanity.

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**Spasmophilia.**—Blühdorn (*Ber. Klin. Wochen.*) says that if lime be given in spasmophilia in nurslings in the hope of securing rapid action it should be administered in very large doses. The best salt is the uncrystallized chloride. Its action is prompt but transitory. In acute manifestations its action is valuable, but in convulsions one cannot dispense with chloral. It can be given over long periods and dieting need not be carried out to the usual extent.

## Editorial Notes

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### CANCER KILLED 44,024 IN 1911

Cancer, which term includes malignant neoplasms of all kinds, caused 44,024 deaths in the registration area in 1911. The death rate, 74.3 per 100,000, was slightly lower than that for 1910, 76.2, but higher than that for any earlier year for which records are available. The highest crude death rate from cancer among the registration States was for Vermont, 101 per 100,000 population, a condition due to the relatively high age distribution of the population and the negligible amount of immigration. Other States with high rates were: Maine, 98.6; New Hampshire, 96.8; Massachusetts, 94.4; and Rhode Island, 88; while the lowest rates are shown for: Montana, 40; Kentucky, 42.7; Washington, 46.1; Utah, 51.9; and North Carolina municipalities, 54.8.

Among the cities of 100,000 population and over in 1910, in which many deaths from cancer occur in hospitals of patients brought there for operation, those having the highest death rates from this disease were: Albany, 122.8; Boston, 111.2; San Francisco, 110.6; Oakland, 105.3, and Cambridge, 104.1; those with the lowest rates were: Memphis, 51.9; Seattle, 57.4; Atlanta, 61.2; Detroit, 65.1; and Jersey City, 65.5.—*The Medical Times*.

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### ANNUAL REPORT HOSPITALS FOR THE INSANE, ONTARIO

The report on the operations of the Hospitals for the Insane in Ontario for the past year shows that insanity is costing Ontario practically a million dollars a year.

The total number of insane in the Provincial institutions is 5,726, of whom 2,769 are male and 2,957 female, a net increase of 86 for the year. The daily average for the year was 5,682, an increase of 90. The admissions for the year totalled 1,247, an increase of 103. There were 460 deaths, an increase of 45, and 570 discharged, an increase of 28 over the previous year.

#### DEPORTATIONS HEAVY.

The number of deportations shows an increase of 32, with a total of 258. Of these 66 were insane, 49 criminal, and 48 who were likely to become a charge upon the community.

There has been a steady growth in the revenue from the Hospitals for the Insane under the present Government, and the in-

creased income aggregates \$8,626. The total for the year was \$312,325, as against \$303,698 for the previous year.

#### BETTER FACILITIES.

Greater facilities for the care of the insane have resulted in improvements everywhere. An additional hundred acres have been purchased at Brockville, making 320 acres, and with the 640 acres at the new asylum at Whitby the needs of the hospitals will be largely supplied by the work of the patients. Manual and health work has been found to be most beneficial in lessening mental degeneracy, and under the direction of Superintendent Edwin R. Rogers, who has carried out the directions of the Minister in the Hospitals for the Insane, a high standard has been reached that is being adopted in many of the institutions of the United States and Europe.

#### WHAT INSANITY COSTS.

The cost of running the several Hospitals for the Insane for the past year was as follows: Brockville, \$123,426; Cobourg, \$25,813; Hamilton, \$194,756; Kingston, \$117,691; London, \$170,404; Mimico, \$110,883; Penetang, \$57,413; Toronto, \$163,378.

#### SALARY CHARGES.

The greater portion of the cost of these hospitals is the amount paid in salaries, as follows: Brockville, \$41,425; Cobourg, \$12,476; Hamilton, \$62,107; Kingston, \$43,699; London, \$60,741; Mimico, \$40,867; Penetang, \$23,913; Toronto, \$54,094.

#### GROWTH IN INSANITY.

There has been a steady increase in the number of cases of insanity. In the cycle of five years the average has been this:

1882 to 1886.....	2,775
1887 to 1891.....	3,201
1892 to 1895.....	3,865
1897 to 1901.....	4,604
1902 to 1906.....	4,933
1907 to 1912.....	5,517

#### WHY PEOPLE GO CRAZY.

The causes for insanity are numerous. In one year 41 men and 25 women were driven crazy in Ontario through business troubles or loss of friends; mental strain and overwork, 56 men and 81 women; religious excitement, 8 men and 9 women; love affairs, 7 men and 19 women; fright and nervous shock, 9 men and 13

women. The above are called "moral" causes and quite distinct from the physical causes. In the latter category 61 men and 9 women went insane from alcoholism; 21 men and 4 women from venereal diseases; 10 men from self-abuse; 27 men and 16 women from privation and overwork; 17 men and 12 women from epilepsy; 65 men and 57 women from senility; 5 men and 5 women from the drug habit, and 18 men and 15 women from bodily disease. There are a number of causes to swell the ranks of the female insane to which the male sex are not subject. Of the 1,247 cases admitted to asylums during the year, 890 inherited a predisposition.

#### NATIONALITY OF INSANE.

Of those admitted to the Provincial institutions, 849 were Canadian born, 180 English, 54 Irish, 56 Scotch, 20 Russian, 32 American, 6 Italian, 2 Assyrians, 8 Austrians, 14 Germans, 6 Japanese, 2 French, 4 Finlanders, 1 Hollander, 2 Hungarians, 1 Roumanian, 1 Norwegian, 3 from the West Indies, and 2 Bulgarians. There is an over-population of 126 in the Hospitals for the Insane in Ontario.

#### WHERE DEMENTED COME FROM.

York County supplied 361 of the inmates admitted last year, Middlesex 49, Lambton 34, Carleton 55, Wentworth 90, Renfrew 26, Hastings 26, Leeds 28, Waterloo 22, Simcoe 31. There seems to be an increase in the insane from the parts that are sparsely settled and where the comforts of life are not easily obtained.

Since the hospitals of the Province were opened there have been admitted 35,275 patients, of whom 17,276 were female and 17,999 male.

#### METHODISTS LEAD THE LIST.

In the matter of religion, the admissions for the year total 49 Baptists, 7 Congregationalists, 267 Church of England, 280 Methodists, 250 Presbyterians, 235 Roman Catholics, 51 other denominations, while 62 had no religious persuasion.

In the total of 35,275 there have been admitted 1,476 Baptists, 267 Congregationalists, 7,690 Church of England, 7,885 Methodists, 6,962 Presbyterians, 2,393 Roman Catholics and 3,506 other denominations.

Of the admissions of the year 653 were men and 594 women, of whom 543 were single, 587 married, 116 widowed and 1 divorced.

### CANCER IN CANADA

It is not unlikely that an effort may be made in Canada to educate the general public with regard to the early symptoms of this disease on similar lines to those in the campaign against malignant maladies recently initiated by an influential section of the medical profession in the United States. The reasons for this supposition lie in the fact that Dr. Thomas R. Cullen, of Johns Hopkins University, in delivering the address in gynecology at the meeting of the Canadian Medical Association on June 25, made the propaganda for popular education as to the detection of cancer which is now being energetically carried on in this country a text for his discourse. Indeed, the address was more of a review of the proceedings in this direction in the United States than one on gynecology. Dr. Cullen, however, was well advised to impress the necessity for checking the inroads of malignant disease on a Canadian medical audience, and to point out how this could be brought about and was being brought about by the measures decided upon by the committee of eminent American surgeons appointed for the purpose as a result of the discussion at the Clinical Congress of Surgeons of North America, held in New York in November last.

In the first instance, Dr. Cullen drew attention to the fact that, contrary to common belief, cancer was not a disease of the blood, nor was it incurable. In their early stages these malignant growths could be removed with safety, and the life of the patient saved. The difficulty was that the average man or woman paid no attention to the early symptoms, and allowed the case to drift until it was too late.

It was in order, of course, to enlighten the community with respect to the early symptoms of the malady that the decision was come to, to make use of the lay press, magazines, and popular literature generally, as the most certain means of achieving this object. A most interesting account was given of the campaign that has been thus waged in the United States during the past few months, and, what is more to the point, Doctor Cullen vouched for the success of the campaign. Physicians from all parts of the country have reported that large numbers have come to them for treatment, urged to the cause by articles in the lay press and magazines describing the early symptoms of cancer in various parts of the body. The speaker wisely pointed out that if the women could be brought to recognize the necessity for having cancer cases diagnosticated early the men would readily follow suit. The woman is the health guardian of the home.



It goes without saying that a very large proportion of those suffering from cancer seek medical advice only when the disease has gained a firm foothold, and it is equally obvious that had the malady been diagnosed in its early stages, the mortality from the disease would have been greatly lessened. The argument, then, is logical and reasonable that if people, and especially women, were cognizant of the nature of the early symptoms they would seek skilled advice ere the time for successful treatment had passed. Even if some nervous individuals imagine that they have the disease when they are free from the taint, and seek professional advice when they have no cause for alarm, this drawback will be more than counterbalanced by the saving of health and life which will result from the successful treatment of those who were right in their surmise that their symptoms were those of malignant disease.

Viewed from this standpoint, the propaganda for educating the public as to the early symptoms of cancer appear to be justified. At any rate, the most eminent surgeons of the country are of this opinion. Doctor Cullen, at the end of his address, made an earnest plea that the Canadian Medical Association should inaugurate a campaign against cancer on lines similar to these in vogue on this side of the border.—Edit. in *N. Y. M. J.*

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### HEALTH OF VANCOUVER IN 1912

In the annual report of the Medical Officers of Health of Vancouver for 1912—Dr. Underhill still styles himself Medical Health Officer, although many in Eastern Canada employ the better English designation, "Medical Officer of Health," but then Health men, whilst enthusiasts, are yet conservative, as many are still found employing "unsanitary" for insanitary—there is much valuable information and a very considerable volume of important statistical data. The report complains of the manner in which tenement houses are being built, and, as well, the too great tendency to crowd buildings upon small space. Tenements, Dr. Underhill blames for the increase in still-births. Apparently, there are numerous accidents from bad gas-fitting, as it is suggested that power should be given for the inspection of all installations and a permit issued before gas is allowed turned on. Particularly interesting are the figures as regards typhoid fever. Vancouver has a population over 111,000, and is quite proud of her water

supply. In 1912 there were 163 cases of typhoid reported, of which number 64 occurred amongst residents, 99 having been imported. Refuse removal is not in a satisfactory condition. Residents are expected to pay for removal, and if they do not do so, then they must remove it themselves. A modern city like Vancouver should understand the very great importance of proper waste removal. Dr. Underhill advocates the formation of a branch of the Royal Sanitary Institute in Vancouver.

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### FURTHER CONTRIBUTIONS TO OUR KNOWLEDGE OF THE PERNICIOUS VOMITING OF PREGNANCY

Williams in the *Glasgow Medical Journal* for December, 1912, reaches these conclusions:

1. The underlying factor in all cases of vomiting of pregnancy is probably an imperfect reaction on the part of the mother to the growing ovum.

2. In most cases this is only a predisposing cause, while a reflex or neurotic influence is the exciting factor, and cure usually follows its removal.

3. Williams still holds to the classification of reflex, neurotic, and toxemic vomiting. Of these, the neurotic is the most and the reflex the least frequent type, while the toxemic is the most serious.

4. Pronounced toxemic vomiting is accompanied by characteristic lesions and profound changes in metabolism.

5. The significance of a high ammonia coefficient is not specific. It may be a manifestation of toxemic vomiting, of starvation, following neurotic vomiting, or of an acidosis due to various causes.

6. It should be regarded merely as a danger-signal, while the differentiation between the various types is possible only after careful clinical observation. If improvement does not promptly follow appropriate treatment, the existence of toxemic vomiting should be assumed, and abortion promptly induced.

7. In the absence of genital lesions, a low ammonia coefficient indicates neurotic vomiting, which can be cured by suggestion and dietetic treatment, no matter how ill the patient may appear.

8. In primiparous women vaginal hysterotomy is the most conservative method of emptying the uterus. Nitrous oxide gas or ether should be used in preference to chloroform for anesthesia.—*Therapeutic Gazette.*

## News Items

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Dr. Lockhart, Montreal, is spending August at Little Bic.

Dr. W. R. Coles has returned from London, England, to Regina.

The Saskatchewan Medical Association met in Regina, July 18th, 19th and 20th.

Dr. Maud Abbott, Montreal, has gone to attend the International Medical Congress.

Dr. Fred Parker, Milverton, Ont., has disposed of his practice to his partner, Dr. Tye.

Drs. J. T. Fotheringham, Helen MacMurchy and J. W. S. McCullough, Toronto, are in England.

Dr. N. T. MacEachern, Montreal, has been appointed Superintendent of the Vancouver General Hospital.

Drs. W. H. B. Aikins, H. A. Bruce, H. J. Hamilton, T. F. McMahon, and J. M. Cotton, Toronto, have gone to England.

The Canadian Public Health Association will meet in its third annual convention in Regina on September 18th, 19th and 20th.

Dr. J. W. MacNeill, of Hanley, Sask., has been appointed Superintendent of the Provincial Hospital for the Insane, at Battleford.

The death is announced of Dr. E. E. Hyde, for many years assistant to the editor of the *Journal of the American Medical Association*.

Lord Stratheona has donated \$100,000 towards a site for a drill hall for McGill University students. The Dominion Government will erect the building.

Dr. F. J. Shepherd, Montreal, has sailed for England.

Dr. G. C. Van Wart, Fredericton, has been elected President of the New Brunswick Medical Association.

D. T. McAinsh & Co. are now settled in their new premises, 4 College Street, Toronto.

Dr. A. T. Watt, Victoria, Superintendent of the William Head Quarantine Station, in an attack of melancholia, jumped from a third-storey window of St. Joseph's Hospital and was instantly killed, on the morning of Sunday, the 27th of July.

Dr. Fred. Fenton, Toronto, one of the leading practitioners of the younger generation, died of obstruction of the bowels, following an operation for appendicitis, on the 27th of July. The late Dr. Fenton was a graduate of Trinity Medical College of the class of 1892; served for a year as house surgeon in the Toronto General Hospital, and at the time of his death was senior obstetrician at St. Michael's Hospital. He was a lieutenant-colonel of the Army Medical Service. Dr. Fenton enjoyed the confidence of his fellow-practitioners in a marked degree, and was an able practitioner, obstetrician and surgeon. He was 43 years of age.

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**Ulcer of the Bladder.**—L. Buerger (*J. A. M. A.*) states solitary ulcer of the bladder is very rare. Where there is vesical hematuria a careful search should be made for the presence of a simple solitary ulcer. In the treatment of this condition, as well as in tuberculous ulcer, after nephrectomy, the fulguration method should be tried, and failing, mercurial injections should be given.

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**Exophthalmic Goitre.**—Scheslinger (*Ber. Klin. Wochen.*) reviews his twenty cases, and his experiences convince him that the sudden fatalities after operative treatment are due to absorption of thyroid secretions. This may be reduced to the minimum by reducing the raw surfaces. An extensive operation is not necessary to accomplish the desired result. It is better to err on the side of operating too soon than too late. Of the twenty patients, three were entirely cured, four immeasurably improved, and seven much improved. In two the affection returned to a slight extent, but then yielded to medical measures.