

# Dominion Medical Monthly

And Ontario Medical Journal

Vol. XLVII.

TORONTO, AUGUST, 1916

No. 2

## Original Articles

### DRUGS AND MEDICAL AGENTS CONSIDERED FROM THE PROFESSIONAL, ECONOMIC AND NATIONAL STANDPOINTS\*

BY A. D. BLACKADER, B.A., M.D.

Professor of Pharmacology and Therapeutics, McGill University, Montreal.

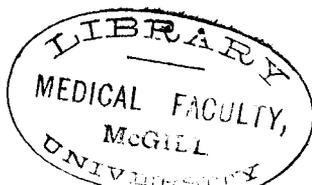
To talk on drugs and remedial agents is an old theme carrying us back in the vistas of our imagination to the days of Dioscorides and Galen, and very justly awakening the query, what are the special conditions in the practice of our profession to-day which have induced your esteemed President to consider a paper with the title which has just been announced as opportune, and perhaps interesting, at the present moment?

After some consideration I have deemed that the first and perhaps most outstanding fact in regard to drugs as a whole is the position which they at present hold in modern therapeutics. Years ago they were deemed to be of the first importance; without them there was no therapy. To-day, with the exception of the few which have a definite specific action on some of the discovered causes of disease, drugs in general have been relegated to a distinctly secondary place. For the cure of disease the physician to-day places more confidence in fresh air; on rest, either systemic or local; on a carefully arranged dietary which will afford a sufficient number of calories with the proper proportion of proteids, carbohydrates and fats to supply most perfectly the wants of the organism without unduly taxing any weakened or suffering organ, and on a rational application of the principles of hydrotherapy.

Certainly with the exception of the few diseases for which we have specific treatment, I know of none in which, if I had to make a choice between the use of these remedial measures and the use of drugs, I would not invariably choose the use of the former.

This pre-eminence of these remedial agents in our modern ideas of therapy, the profession owes in great measure to the almost

\*Address delivered before the Ontario Medical Association.



world-wide study of the conditions which influence the course of an infection by the tubercle bacilli in man and animals. No one advance in modern therapy has conferred so much benefit upon the sick and ailing as the recognition by the profession of the health-restoring properties of free, fresh, flowing air. I was much interested the other day when listening to an address by Dr. Frank Billings, of Chicago, on vaccine therapy, to hear him state that comparing the records of many hundreds of patients treated by the most carefully prepared autogenous vaccines, with the records of patients who received no vaccines but were placed under the most favorable hygienic conditions, with rest, abundance of fresh air and a carefully regulated dietary, he found that these latter with no specific vaccines had their defences aroused quite as quickly and as fully as those who received vaccines. On the other hand, in a few who received the vaccine treatment, but in whom no attention was paid to conditions of general hygiene and careful upbuilding of the strength, it was noted that the vaccines of themselves did not bring forth much of a response.

The importance of a dietary arranged to suit the digestive capabilities of the sick was recognized by Hippocrates, but it is only in recent years that physicians have appreciated the value of an estimation of the actual number of calories daily consumed by the patient in his food as compared with his actual requirements, and have recognized the benefits to be derived from such a modification of the amount of proteid, carbohydrate and fat as to supply efficiently these requirements without overtaxing any damaged or unduly fatigued organ. Still more recently they have been shown how much can be effected by a high caloric feeding on the one hand and by a brief starvation period on the other. Unquestionably this triad of fresh air, rest, and careful dietary should occupy the first place in our system of therapeutics at the present.

In the limited time at my disposal it is impossible to make more than a brief reference to vaccine and serum therapy, which now threatens to lessen yet further the need for drugs and thus to relegate them to a position of still minor importance in therapeutics. Two decades ago the profession hailed the introduction of this new method of treatment with the greatest optimism. It was hoped that by its means we should be able so to strengthen and hasten the development of the body's natural defences that we could promptly antagonize the causes of disease and combat infection with its own weapons. These natural defences, however, have proved much more complex and multiple than at first even the scientists reckoned upon, and progress has been difficult and slow. Unfortunately

while scientific medicine has been earnestly and perseveringly working at these most intricate problems, many commercial houses by the introduction of practices not in harmony either with the conditions demanded by the primary hypotheses or with the teachings of bacteriology, and also by the publication of extravagant statements founded on no scientific evidence, have misled many in the profession into the use of mixed vaccines and semi-secret unstandardizable mixtures of bacterial products.

While it may perhaps be said that clinical investigation indicates that some temporary benefit may follow the injection of many protein substances in chronic infections, the general results obtained under observation have been most unsatisfactory. "Fundamental principles demand that therapeutic vaccines be composed of bacteria as little different and as little removed as possible from the special strains of bacteria causing the infection against which the vaccine is to be used." (Hektoen.) Therefore autogenous vaccines alone are to be relied upon, and it would appear a simple matter in almost every case for such to be prepared at the same time that the bacteriological diagnosis is made. We may add that the physician who accepts the mixed vaccines of commerce without knowing the exact etiological factor of the infection treated, certainly abandons rational medicine and gropes in the dark.

Concerning the use of drugs in our therapy a second statement that can be made, and which appears to me of great importance, is that the profession as a whole, while using drugs freely, often too freely, gives too little study to our gradually increasing knowledge of the exact physiological action of drugs and too little study to the dosage in which they should be employed. Drugs are to-day often prescribed with an erroneous idea of their power to influence special conditions or symptoms, and are often used in unsuitable doses. As simple illustrations the following may be cited: It is now generally agreed that a digitalis action when demanded by the heart's condition is best obtained by the use of the drug in full doses till its effects become manifest. In many prescriptions that I have seen the amount given is too small to secure the greatest benefit. To obtain results from the use of strychnine as a respiratory stimulant larger doses than the 1-50th or 1-60th grain in which it is often prescribed, are necessary. The strength of tincture of nux vomica in the last edition of the *Pharmacopœia* was reduced 50 per cent. to make it correspond with the strength of this tincture in other countries. I have asked several druggists whether physicians had made any difference in the amount of this tincture ordered in their

prescriptions before and after the change went into effect and have been told that very few had done so. Physicians cannot expect that ten minims of the new tincture will have the same result as ten minims of the old. On the other hand the preparations of iron are generally prescribed in unnecessarily large doses and purgatives are ordered with a too lavish hand. As a consequence of this indifference, or ignorance, the physician fails to get results, and his confidence in the official drugs, and perhaps his confidence in himself as a prescriber, is impaired.

Associated with this imperfect knowledge of the exact action of drugs, and the indifference to the proper or necessary dosage in which they should be prescribed, an increasing tendency has been evinced by teachers in hospitals, by writers in many text-books, and often by consultants, to undervalue the use of our official drugs in the treatment and relief of symptoms. Very properly etiology, diagnosis and prognosis in disease are all important, but ailing patients demand some mitigation of their troubles and by means of our official drugs, properly employed in proper doses, we are able to give all possible relief. Psycho-therapy, the influence of one mind on another, moreover, is a welcome addition, and may undoubtedly be of much service; perhaps be all that is required, but its use demands tact and judgment.

Another fact which for many years has appeared to me as unfortunate, is that the list of drugs in our *Pharmacopœia* is such a long one. Even the last edition contains for each of us a large number which long ago we consigned to the dust-heap; such as most of our antispasmodics and of our astringents, many of our drastic purgatives, many of the so-called bitter tonics and stomachics; also the phosphates and hypophosphites so often vaunted to the general public as nerve food, and many other drugs of a problematical value which have been allowed to slide through our brain cells into the region of forgetfulness; and very properly so.

Shortly after I received the appointment of professor of therapeutics in McGill University, Sir William Osler—then to us simply "Osler"—on a visit to Montreal, came and congratulated me on my appointment. "Don't teach the students many drugs, eight or ten are all that is necessary, but teach them these thoroughly," he said. I did not agree with his limited number then, but year by year I am becoming more and more of his opinion. My list of valuable drugs lessens, and although I am not yet limited to ten, I yearly decrease the number of those taught to my students, and emphasize to them the greater importance of knowing

a few drugs thoroughly, rather than of knowing many drugs imperfectly.

Partly as a result of this relegation of drugs to a secondary place in the treatment of disease; partly as the result of a lessened confidence in the beneficial action to be obtained from the employment of our old official drugs; and partly also from a desire to exploit new drugs and new preparations, the physician to-day, I fear, is gradually using the drugs and preparations of the *Pharmacopœia* less and less, and in their place is prescribing the ready-to-hand formulæ of the manufacturing chemists, and not infrequently their proprietary preparations under patented names.

Large manufacturing houses of limited liability and immense capital, employing a skilled and highly educated staff, have been certainly in many ways of much service to our profession. Their triturate tablets, hypodermic tablets, and compressed tablets; their sugar-coated and chocolate-coated pills; their delicately flavored and brightly-colored elixirs, and their sterile ampoules, have been of great assistance in our prescribing, and will be so long as the manufacturers are obliged to maintain a high standard of strength and purity. This, however, will require government supervision. Undoubtedly such preparations as I have mentioned tend to favor economy for the patient, and add greatly to the convenience of such physicians as are obliged to dispense their own prescriptions. Much caution, however, must be exercised, and an absolute veto be placed on the use of proprietary combinations with patented names, or on any preparations of which the formula is hidden or obscure.

The profession should speak on this matter in no uncertain tone, for to-day many of these manufacturing houses and many brazen-faced pharmacists have gone much further than to offer us our official drugs put up in form convenient for administration, or blended in special formulæ of their own devising, stated to be suitable for all constitutions and conditions. Many of them now attempt to give advice to physicians as to the latest treatment of disease and foist prescriptions upon us containing some so-called new chemical agent—otherwise a well-known drug under a new proprietary name. Still worse, in our own medical journals, which we are supposed to control, proprietary nostrums are ethically (!) so they state, offered only to the profession with highly exaggerated and totally unproven statements, claiming for their special combination all kinds of miraculous powers. Their agents, fresh from schools of plausible advertising, flood our shelves with their free samples and our desks with their blotters emblazoned with the

suggestive names of their special nostrums. Their literature arrives with every mail and is full of unwarranted statements loudly vaunting the virtues of their specifics; on every page flaunting ready-made prescriptions for the physician to copy, in which a valuable official drug is shown in combination with their wonderful elixir vitæ, thus salving the conscience of the physician, while the nostrum manufacturer exacts his heavy toll in the price paid.

May I ask this gathering whether they think a physician treats honestly a patient who consults him, when he prescribes a bottle of So-and-So's Compound Terpin Cough Mixture, or another So-and-So's Digestive Elixir, or a third quack's Wonderful Life Restoring Iron Tonic, when he knows little of what drugs are contained in them and nothing of the amount of the often powerful drugs he is actually giving when he prescribes such nostrums, and trusts implicitly in the statements of "Truthful James," the nostrum dealer? Can you afford me a better illustration of the blind physician leading the blind patient? You know the result.

All this nostrum and proprietary business depends upon secrecy, upon the zeal and assurance of the advertising proprietors, and upon the gullibility of the purchaser. Patent medicines, unless they contain some dope, are short-lived.

A very instructive story is that of Dr. Warburg, of Vienna. About the middle of last century Warburg's solution of quinine was very highly esteemed in many countries. The Austrian Imperial Health Board ordered it to be kept in all the pharmacies of the empire; English physicians in India averred that by it they effected cures they were unable to effect by the simple drug. But unfortunately for him sufficient pressure was brought to bear to induce him to divulge his recipe, and at once its sale fell off and shortly almost altogether ceased. Everybody said: "Oh, is that all—quinine with a little aloes and aromatics!" He died a comparatively poor man, and yet his combination had perhaps a certain amount of value. Compare him with Mr. Eno, of Eno's Fruit Salts, who died worth six million of dollars, or the self-dubbed Professor Holloway, vaunting the efficacy of his pills, and his ointment of turpentine and beeswax. He left money sufficient to found colleges for women and asylums for lunatics. Remember also Dr. Morrison and his pills of gamboge, colocynth, squills, cream of tartar and ginger—a pill such as my conscience and my knowledge of the action of drugs never would allow me to prescribe—and yet physicians, we are told, ordered them surreptitiously, and the English public swallowed them freely, believing his wild statement, "that all diseases arise from one cause

and therefore require but one medicine; it follows that if Morrison's pills do not cure no other medicine on earth will, and infallibility belongs to God." In his days pills and statements were not sugar-coated but were made strong. Our modern proprietary humbugs cover their chaff with a little wheat and take care that their nostrums please the eye, tickle the palate, and gently stimulate the imagination by some suggestive name or statement.

It is also in my opinion reprehensible, and I do not think this is too strong a word to use, for the physician to countenance proprietary preparations of even official drugs. For the pharmacist the fact that he is obliged to keep such an innumerable array of proprietary preparations on his shelves, together with the special tablets and pills of not one but many large manufacturing houses, must demand a large cash outlay; an outlay for which the pharmacist must recoup himself out of the pockets of our patients. Such recouping eventually reacts against the profession.

Personally I do not think it makes any difference to my patients whether the tablets I order be made by Messrs. Brown or Messrs. Smith, provided that both manufacturers are careful and honorable, and supply pure drugs. The pharmacist should be held responsible for the large houses whose goods he dispenses. Very seldom indeed should the physician append the name of any manufacturing house to his prescriptions.

Another important fact which has to be recognized to-day is the number of new synthetic drugs which have been introduced to the profession by German manufacturing houses. A few of these have proved of very definite value, replacing many of our older drugs; the great majority of them, however, have proved failures. For the most part they are the by-products in the manufacture of other chemicals, especially of the aniline dye industry, and their introduction to their profession has been due to the very energetic business methods of our German *friends!* A few, especially the earlier ones, have come to us with their value attested by really careful research work in the experimental laboratory and by the observations of careful clinicians in the large German hospitals. Of late years, however, much of this work has evidently been of the most superficial character and the numerous large chemical industries of Germany have competed with one another for priority rights in flooding the markets of the world with new drugs of almost no value. All of these have had some sounding proprietary name indicative of their supposed action, to which was attached a scientific name to indicate profound chemical research.

A few of these new drugs were definitely appropriated from the laboratories of both French and English chemists, the name given by the discoverer was changed and a newly coined one was patented and the medical profession paid the piper. You will remember that in 1894 hexamethylene-tetramine was synthetically made and its therapeutic value as an antiseptic announced by M. Albert Robin at the Academy of Medicine in Paris, under the name of formine. About ten years later, under the German name of urotropine, with German patents, the same drug was introduced to the profession and was received without questioning by English, French, and American physicians, and the price demanded was paid; five times the price for which it could be made in an ordinary chemical laboratory.

This is but one example out of many. How was it accomplished? The German houses bought up, or ruined by underselling, all the chemical industries in France and Great Britain that either opposed them or stood in the way of their schemes. For the few years immediately preceding the war this synthetic drug business represented in Germany a modern trust in its most vicious manifestations. There were large chemical factories thriving on the past bounties given by a fostering government, large hospitals in which so-called clinical experiments could be made, high professors with sounding titles who did not hesitate to stoop to give certificates, and well-paid medical journals which willingly published reports, long and many, calling attention to every new product.

The whole world still honors the perseverance and careful laboratory methods of Ehrlich in his research for a *therapia magna sterilisans* for syphilis. His 606 accomplished almost all, but yet not all that he claimed for it. It is far otherwise with many of the recent synthetic products which until the outbreak of the war were so sedulously brought to the notice of our profession in Canada and elsewhere. A short trial has shown that most of them are of little value and their introduction can only be regarded as a prostitution of laboratories, hospitals, and professors to commercial ends. Everywhere when science ceases to pursue truth for its own sake and becomes the poorly paid slave of commerce deterioration is, I fear, inevitable.

As I have mentioned, a number of these new synthetic drugs proved themselves of very definite value and replaced almost entirely many of our older drugs and their galenic preparations. Now, when our supply is cut short, we find ourselves in difficulty and appreciate how completely Germany in the chemical trade had

made herself master of the situation. At present it is against the law to order or make use of any German wares, and under this law falls the use of German-made drugs and German patent names. On the other hand it has been questioned whether a pharmacist is at liberty to replace a substance ordered under its fancy German name by the same substance sold under its true scientific name. It is perhaps debatable, but the remedy is in our own hands. To-day quite a number of these really useful synthetic drugs are manufactured in England, France and Switzerland, and a few in Canada and the States, and have been placed on the market under their chemical names. It behooves us in writing our prescriptions to avoid the use of all patented names and to use only the name given in the *British Pharmacopœia*, or the chemical name. For this reason in prescribing we should write,

Acetanilid, not antifebrin;  
Phenazone, not antipyrin;  
Acetyl-salicylic acid, not aspirin;  
Theobromine sodio-salicylate, not diuretin;  
Methyl sulphonal, not trional;  
Diacetyl-morphine, not heroin;  
Barbitonum, not veronal;—and so forth.

The list is a long one.

Much more objectionable even than the patented names of new synthetic drugs are the proprietary names representing the semi-secret and patented preparations of many large manufacturing drug houses, American, Canadian, and English. To these I have already referred, but desire to make one more protest against the prescribing of such nostrums by any well-educated and right-thinking physician. All use of such prescriptions I regard as unethical, tending not to the honor but to the dishonor of our profession, and not to the advancement of true knowledge, but to the benumbing of research and as a retrogression towards the therapeutics of the dark ages.

When the war is over there is little doubt but that Germany will again make the attempt to dump large quantities of these drugs and chemicals in every civilized country with the hope of again ruining the chemical laboratories which to-day are trying to supply us with the synthetic drugs of which we stand in need. I must appeal to the patriotism of every physician to favor either the home-made or the British-made product. And to our government we would say that no industry is more important for our

country than the development in all directions of its great resources by chemical research and no manufacturing houses are in greater need at the present of governmental protection than those which attempt to do for the development of Canada what large chemical laboratories and factories have done for the advancement and development of Germany.

---

### CHARLIE ROBERTS' CONSERVATION

---

By A. C. E.

---

In a way, it was a momentous day to William Roberts and his eldest boy, Charlie, as they stepped out of their cottage home. Charlie was buoyant, happy, expectant as though going to enjoy a match between the leaders of the two great Leagues. Where is the boy who would not be so, with a holiday before him and the knowledge he was to be told that day how he was to become a man? It was his twelfth birthday—and why should not every boy have a holiday on his twelfth birthday, especially when the occasion is so important?

“I’m taking you to the hospital doctor, Charlie, because the card I got from the State Board of Health says if the father, mother, or guardian cannot afford to pay a fee to a qualified physician, the child may be taken for examination and instruction to a hospital physician. It is the law of the State that every boy, on coming to the age of twelve years, must be examined and instructed on those matters concerning men and women which relate to the begetting of children. A doctor of medicine must make the examination and instruct you accordingly. Every girl must be examined and instructed by a trained nurse or woman physician. Your mother will have to take Maggie in a couple of years. As the object is mainly to prevent vicious habits and prevent disease, it has been decided the examination and instruction can be best done and given by physicians and trained nurses to boys and girls respectively.”

“I don’t know exactly what you mean, daddy, but why can’t we go to Dr. Browne who attended Maggie with the scarlet fever—and all of us when we are sick?” and the blue-eyed, curly-haired, manly little fellow sought his father’s sober-looking face as though sensing some deception.

“You being the eldest, Charlie, you are the first I have had to take to the doctor in this way. It is because of the hard times

and not having much carpentering to do this year, that I am taking you to the hospital doctor this year. I do not have to pay there—many hospital patients are kept and treated for nothing. I need the little money I have to buy food and clothing, and pay the rent—and there are seven of us altogether.”

“But am I to be made into a man all at once to-day, daddy, by the doctor?” questioned Charlie, now quite resigned to the strange hospital physician.

“Oh no, indeed not,” laughed the father. “He just measures and weighs you, I am told, examines your heart and lungs—has you take off your clothes, and sees you are all right. Then he will tell you how to take care of yourself, teach you how it is best always to keep clean, and instruct you how you will grow day by day and year by year into a man. But here is the hospital! We shall soon see and hear what he does and says. Don’t be one bit afraid, for he will not hurt you in any way,” and taking his boy by the hand he led him into the waiting room of the out-door department of the hospital.

Telling Charlie to seat himself in this vestibule where he was to await the opening of the door leading to the new life, William Roberts crossed to the admitting clerk. An honest man, plain, straight as his carpenter’s rule, square in his dealings with his fellow man, William Roberts believed in doing what was right in complying explicitly with the requirements of the law. Whilst he was arranging the preliminaries for his son’s examination, Charlie sat down quietly enough, but soon became a little uneasy concerning the outcome of his examination. Boylike, however, his eyes roamed about the room. He saw other boys there of his own age, and other ages, but, of course, did not know whether they were there in health or sickness. Quite a number of patients were waiting, and every once in a while a door, of which there were several in different directions, opened, and some one would come out and pass through the waiting-room to the street door. By-and-by he noticed each door bore a sign on it—Medicine, Surgery, Eye, Ear, Nose, Boys, Girls, etc. He was gazing at “Boys” when his father returned, remarking they would have to wait perhaps a half-hour.

It was a little longer when the door for “boys” opened, and the admitting clerk signed to William Roberts he was next. At this door they were met by an attendant who informed the father he could go in with his son or return to wait in the outer room. William Roberts chose the former alternative. They were then

conducted to one of several doors upon which was affixed the name of Dr. Macdonald.

The hospital doctor was seated at a small desk, writing. He immediately arose and came towards his visitors with a freedom of manner and a welcoming smile which brought assurance to Charlie Roberts. Without any preliminary questioning—for all parties understood what the boy was there for—the doctor asked him to remove his garments. Nothing loth, Charlie complied. Weight, height, chest, and abdominal measurements were taken, each being inscribed upon a white card. Then the external organs were inspected, palpated, and their condition written down. This concluded the physical examination. When he had resumed his clothing, Charlie thought this was not so bad after all.

The doctor had given a book to William Roberts to read while he examined the son, thus serving the double purpose of enlightening the father as to the education of his son, and relieving the son of any embarrassment he might experience in disrobing and being examined by a stranger. Upon the fly-leaf the father read:

*Issued by and under the sole authority of the State Board of Health, as a concise and uniform exposition of the phenomenon of sex, and containing the necessary information all boys should know of the function and uses of their generative organs, as well as the care of the same during the whole period of their lives.*

Having read the book, he laid it on the table. He had ascertained it had been prepared by the State Board of Health, and had been sanctioned with the approval of the State Medical Society. He was thus assured the best medical thought, observation, and experience of practical and scientific men in every department of medicine had been brought to bear upon the proper care, training, and education of the adolescent boy between the ages of twelve and sixteen years. He now fully believed the doctor was the right person to take his boy and conduct him into and through the new life, upon the threshold of which he loitered. Scarcely had he laid the book down when the doctor, having finished the physical examination, returned to his desk, motioning the boy to a seat by its side.

“I’m going to read this little book to you now, my boy, and explain it to you, but before doing so I want you to promise me you will not read anything else upon the subject that you might see in newspaper and magazine advertisements, or which might be given or sent you by any other person—will you promise?”

The doctor seemed so earnest and kindly in his manner that Charlie readily responded and gave his promise.

Then for ten minutes the doctor read and explained the uses and functions of the male generative organs, and he had an attentive listener.

"Promise me now," as he concluded and replaced the book upon the table, "if you want to know anything about what I have been reading, you will ask your father about it?"

"I promise."

"And if a boy younger than yourself or of your own age asks you what you know about these matters, you will tell him the truth, so far as you know it?"

"I promise."

Then turning to William Roberts the hospital doctor thus addressed him:

"The law of the State enjoins you to take your boy to a doctor again at thirteen, then at fourteen, and again at fifteen. It is with this as with registering a birth, or issuing a death certificate—the same as reporting a case of diphtheria, scarlet fever, etc. It is compulsory. If during the year the boy asks you a simple question of a sexual nature, answer it in a straightforward way. Never lose an opportunity of preaching this gospel to your intimate friends. See that he participates in outdoor sports and exercises, and teach him temperance in all things. Remember that a clean mind in a clean body points to health. Let the teachers and the preachers inculcate morals and religion; but do you take the doctor's advice and guard your boy's health in all ways. That is all."

"May I ask what you do with that card?" queried William Roberts.

"Yes. I forward it to the State Board of Health at the Capital, where it is filed with his birth registration card. Next year, I, or some other doctor, will enlighten him and you further."

The first year has passed away and William Roberts, deeply interested in his boy's life, finds himself in somewhat better circumstances. He decides this year he can afford to take him to Dr. Browne, his regular family physician. Not once during the year had Charlie broached the subject of sex and reproduction to him; and he had never considered it advisable to question the boy as to any knowledge of the subject he had retained from his initial instruction. The doctor's book had warned against talks

upon the subject. The sexual appetite had to be governed like the primitive appetites of thirst and hunger. Whether Charlie had received any further information from older boys, or had imbibed other ideas from clandestine reading, he knew not. He had carried out his part of the contract by periodic talks upon cleanliness in both body and mind, temperance in eating and drinking, as well as in play and in sports. He had, in a way of his own, run the gamut of didactic morals from his thumb to his little finger: 1, Tell no lies; 2, say no bad words; 3, do no bad things; 4, do as you're told; 5, always be good. He believed the mother, the teacher, the minister were doing their part in the training of the embryo man.

Dr. Browne went through a similar procedure to the hospital physician, recording age, height, weight, etc., upon another card. He took up the book of instructions and also requested the father to read it carefully whilst he conducted the physical examination. Then the catechism began. William Roberts was delighted that Charlie was able to answer most of the simple questions intelligently. Those he could not answer were still further explained to him. At the end of a half-hour the boy was dismissed and returned home alone, the father following in a short time.

"How is it that you didn't come to me the first examination, Roberts?" interrogated Dr. Browne, who had been the family physician for a number of years.

"It was this way," returned the father. "Business was bad last year—no work at my trade to be got. I simply couldn't spare the fee. Now I believe it is well worth the money, and more, not only to me but to the boy particularly."

"But you need not have bothered about the fee. We're not much of a profession if we are to have a fee for all the good work we do for the community. We don't get, nor expect, nor yet want, a fee for registering a birth, writing a death certificate, or reporting a case of communicable disease. Of course, this takes time and a little different from those, but yet, when a man tells us honestly he can't pay, we do not mind so much. If he can pay, however, it's different."

"I don't mind the fee now a bit—it's money well spent."

"Yes, I think it is myself," replied Dr. Browne. I believe this is one of the greatest measures for the good of humankind that has come amongst us for a century. It is working smoothly, and next year when you bring Charlie again you will appreciate additional evidence of its value. I send this card to the State Board of Health, where it is filed along with his birth registra-

tion and first examination card. We'll have specialists in this line of work soon, and the people, now beginning to appreciate its possibilities for good, will readily pay an even higher fee. After all it is not much for your boy's welfare in life. It's the best value to be had for the money anyway. No man should begrudge it for his child—and it is even better as it goes along. Many a man will fritter away anywhere from fifteen to fifty dollars a year in tobacco. Why cavil at improving the race?"

Misfortune, in the image of tuberculosis, stalked into the home of William Roberts ere another year had closed on the boyhood life of his son, Charlie. Maggie, the pretty and only daughter, fell into the clutches of that dreaded disease, although, thanks to the skill of Dr. Browne, it had early been detected. William Roberts decided to take his doctor's advice and move to the country to secure for Maggie fresh eggs, milk and meat, as well as good, pure, country air. The question of work, however, for himself, had to be considered. Dr. Browne had a brother, a builder, owning a sash and door factory, in a small town up-State, and with this man steady employment was secured.

When Charlie's fourteenth birthday arrived, William Roberts took his son to a crusty, old, rough-and-ready, tear-off-the-bandage-in-a-hurry physician of the town. He snorted contemptuously when the father stated his mission—pooh-poohed—called the whole proceeding a woman's fad—a pitiful rigmarole—hadn't time to bother with such nonsense—the fee was not large enough for the time spent—life insurance examinations paid much better. When, however, William Roberts quietly replied he had the money with him to pay the fee, Dr. Crabbe got out a white card from his desk, a tape measure, and proceeded in the usual examination.

"Your instructions this time will be different and more to the point—really worth while," he blurted out. "I have here a book prepared by the State Board of Health, and I shall read and explain to both of you the diseases a man is liable to contract like unto the other diseases, infectious and contagious, you now know some little about—smallpox, diphtheria, typhoid, etc. These are the private or social diseases as they are now called; and if either of you ever contract one of these diseases, the doctor who attends you, or the druggist if you are foolish enough to go to one, must report your case to the medical officer of health of your district or community. That official in turn reports to

the State Board of Health at the Capital, so you see, your life history, in fact, the life history of every boy, girl, man, or woman, is kept on file in the State Department of Health. Now you see the dangers you run if you step from the path of sexual rectitude. These are real dangers to yourselves, your children, your families, and sometimes to your associates and friends, yes, even sometimes to utter strangers. Come back in a year for your final examination and instruction."

But William Roberts and Charlie did not go back in a year. Instead, the urgency of Maggie's state of health demanded complete outdoor, country life. A small market garden was rented some ten miles from a large city, and thither William Roberts removed his family. By this change all the members of the family benefited. Charlie, the mother, and the second boy, now going on twelve, helped in the garden, while Maggie roamed about the place or rested at will.

On his fifteenth birthday, Charlie went himself, on his father's advice, to a young doctor in the neighboring village, two miles distant from their home. Here, although the physician did not have many patients to treat with social diseases, he was again examined and grounded in the dangers of promiscuous cohabitation. His fourth card was made out and despatched to lie in company with the previous three, and his birth registration. Charlie was now a strong, lusty lad; and, looking around for a vocation for his son in life, William Roberts decided upon telegraphy, which the boy could learn at the wayside station near his home. From this, after two years, he was appointed to a clerkship in the office of the district passenger agent in the nearby city. Promotion succeeded promotion until Charlie became assistant to the district agent. From that position he was advanced, by the time he had reached twenty-four years of age, to the position of assistant general passenger agent of the great railway system, at a salary of \$5,000 per annum. Then he fell in love.

William Roberts still cultivated, but now owned, the respectable market garden which had by this time grown to such substantial proportions that it was the finest market garden in that section of the State. Maggie had completely recovered from her incipient attack of tuberculosis, and was happily married to the young doctor in the village. One day a letter came from Charlie

stationed in the big railway centre, in a neighboring State, announcing his engagement to a very beautiful and charming girl. Of course, it gave many particulars as to her age, address, name, name and business of her father, as well as the usual fulsome praise of her many virtues. This was followed soon after by another letter which showed the father his son was in the depths of despair. The father of Charlie's affianced wife now refused sanction to their engagement on the ground that, through the medium of the State Board of Health of his native State, it had been ascertained Charlie's sister had been a consumptive. What was to be done? There was no denying the fact Maggie had had tuberculosis, but as she was now cured of the disease and was, indeed, married to a physician, surely no man would let that interfere in the happiness of his daughter. William Roberts wrote Charlie that, as his prospective father-in-law had invoked the records in his daughter's behalf, he should do likewise. For what had he paid for Charlie's upbringing!

Obsessed with the fear that he might find out something he should not like to know, Charlie cogitated as he read his father's letter. Love was strong within him, but it was repugnant to him to take this seemingly unfair and altogether unnecessary step. He would rather persuade her father from his tuberculosis doubts. Still, one thought would not be dissipated from his mind: "The records are there for you as for her." Finally, he resolved to go in person to read for himself his betrothed's life history. He was horrified to discover recorded against her, some three years before, one of the dangerous diseases of which he had been warned.

Of course, he could not tell her. It was all over. Would it have made any difference had he known she had innocently contracted the dread disease through a brother's kiss?

## News Items

---

Dr. Dakin has returned from active service and has resumed his duties as medical superintendent of the Regina General Hospital.

Dr. C. C. Fissette, Brantford, Ontario, has received an appointment in the Royal Army Medical Corps and has left for England.

Lieutenant-Colonel Alexander Primrose has returned to Toronto from Saloniki, where he was with the University Base Hospital as chief surgeon.

Major R. K. Kilborn, Kingston, Ontario, has resigned as medical officer of the Royal Military College, after occupying the post for sixteen years.

Dr. G. S. Graham, formerly pathologist and bacteriologist to the City Hospital, Boston, Mass., has been appointed chief of the laboratories at the Vancouver General Hospital, British Columbia.

Dr. G. T. Wilson has been appointed medical officer of health at New Westminster, B.C., in succession to Dr. A. L. McQuarrie, who has gone overseas. Dr. R. Eden Walker has been appointed coroner.

Congratulations are in order to Dr. Frederick Montizambert, Director-General Public Health, Ottawa, and Past-President of the Canadian Medical Association, on the distinction C.M.G. bestowed by His Majesty.

The Hon. Dr. Young, formerly Minister of Education and Provincial Secretary in British Columbia, has been appointed chief medical officer of health of that province. Dr. C. J. Fagan, who held the position with pronounced success for many years, died about two years ago.