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## EDITORIAL

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### A. T. STILL, THE FOUNDER OF OSTEOPATHY.

We have before us the Autobiography of Andrew T. Still, with a History of the Discovery and Development of the Science of Osteopathy. It will be noted that the claim is put forth that osteopathy is a *science*. Now, this is just what it is not; for it is the very antithesis of science. There is nothing scientific about osteopathy, unless it be in the fact that it is a means towards the making of money on the foundation of a most erroneous theory regarding diseases and their treatment. In his preface he asks us to read his story as he has written it, and not "the garbled account of some newspaper misrepresentative."

On page 322 of the Autobiography we are told that he was born 68 years ago, and as the date of the first edition was 1897, this would fix the date of his birth as 1829. He tells us that when five years of age he was taught by a teacher who occupied himself mainly in flogging the pupils from 7 a.m. to 6 p.m. This was in Virginia. In 1835 his father moved to Newmarket, in Tennessee, where young Still attended Holston College. In 1837 his father, who was both a doctor and a clergyman, was appointed to a mission field in Missouri. This ended his schooling till 1839. In the years 1839 and 1840, under a teacher engaged by about a dozen persons for their children. The father in 1840 moved to another district in Missouri, which interrupted young Still's education till 1842.

In the autumn of this year his father felled trees and built a log cabin 18 by 20 feet, and seven feet high, with mother earth for the floor. In this very primitive building, for the sum of two dollars a head, a teacher instructed the young folks, including Still. In the summer of 1843 there was a three months' course. In 1845 he went to school in La Plata, Missouri. In 1848 he went back to La Plata to attend a school devoted to the study of numbers, where he remained until he had mastered the cube and square root.

During these years we are told that he was fond of his gun, and was often in the woods with it and his dogs. We then have a lengthy account of his adventures in trapping minks, killing foxes, shooting deer, meeting Indians, being bucked by a ram, trying to drive a calf, having a severe headache, riding on horseback behind a judge, capturing some panthers, and snakes. In 1847 he tells us he caught the fever to join the army and go and fight the Mexicans, but he was too young.

On page 55 we read: "The schoolboy days, the days of youthful trials and sports, passed like vanishing joys, and I arrived at man's estate. I will omit my later schooling and *medical training*." Now, it has been shown that he could not have attended any medical college, as there were none for him to attend, and his time has been all accounted for; further, we are in the year 1849, when he married his first wife, at the age of 20. In an article written by A. T. Still for a book published by George V. Webster, we read on page 28: "My father, as a pioneer, was a farmer, a mill owner, a minister, and a doctor. I studied and practised medicine with him." So it seems that what medicine A. T. Still came to know he picked up from his father, and we may be quite sure that the latter's knowledge was not too great.

In an article written by Asa Willard for this book of Webster's we are told that "Dr. Still was a regular practising physician, and, during the war, was an army surgeon." Chapter V of this Autobiography tells about his army experiences. We learn that, in 1861, he enlisted in a Kansas cavalry company. He tells that this regiment was moved around to several points in the State; but that it never came into contact with the Confederates. In 1862 the battalion in which he was a member was disbanded. He then organized a company and became its captain. Later on he was transferred to another battalion and made a major. He mentions being in the battle of Lexington on 23rd October, 1864; and that "a bullet passed through the lapels of his vest." He mentions that osteopathy was in danger at that moment. On 27th October, 1864, he received orders to disband the regiment, and he went home. On page 186 he mentions that he was a surgeon under Fremont, but does not say where or when.

The war over, A. T. Still tells us how much he suffered and how his sleep left him thinking about the misery of those who were slaves to drugs and drink. He "found the cause to be the ignorance of our 'schools of medicine'." Thus we have much from A. T. Still about the folly and wrongness of given drugs. On page 85 he gives us this: "My science or discovery was born in Kansas under many trying circumstances. On the frontier while fighting the pro-slavery sentiment and snakes and badgers, then on through the Civil War, and after the Civil War, until

in June, 1874, like a burst of sunshine, the whole truth dawned on my mind, that I was gradually approaching a science by study, research and observation that would be a great benefit to the world."

Turn from this to page 177, and all the way through the chapter, we are informed how bad former systems of medicine are, and how excellent are the fruits of osteopathy. He states that he had been visited by visions in the night, and goes on to give an account of one of these. From this account we find, on page 181, that "nearly five hundred had been delivered without a single laceration, the use of forceps or a drug. And not a death, no case of labor lasting more than an hour." All this was done by osteopathy. Such visions are altogether too rare! Why does kind Providence not send such visions to others? They are sorely needed!

In 1853 we learn that he was with his father doctoring the Indians, who suffered from erysipelas, fever, flux, pneumonia and cholera. He tells us that the Indians made two holes in the ground and lay across these, vomiting into one and purging into the other; and that this "was not much more ridiculous than are some of the treatments used by some of the so-called scientific doctors of medicine."

On page 58 we come upon the following about his family: "She is now the mother of four children living—three boys and one girl. All are leaders in this division of one of the greatest wars ever known on earth—the war of truth under the banner of osteopathy." This would make the man without humor in his nature laugh.

During the time of the pro-slavery agitation he tells, on page 65, of the following incident: He was riding through the woods to visit a Mrs. Jones, when he came upon Captain Owens and his men. Capt. Owens spoke thus: "When you are sick, go for him; he saved my wife's life from an attack of cholera, and I know him to be *successful in any place* you have a mind to put him." This is by all means too modest even for an *autobiography*.

On page 87 we find an account of the death of three of his children from meningitis. After some questioning as to why they died in the midst of prayers and pills, he concludes thus: "Believing that a loving, intelligent Maker of man had deposited in his body in some place or throughout the whole system, drugs in abundance to cure all infirmities, on every voyage of exploration I have been able to bring back a cargo of indisputable truths that all the remedies necessary to health exist in the human body. They are administered by adjusting the body in such manner that the remedies may naturally associate themselves together, hear the cries, and relieve the afflicted. I have never failed to find all remedies in plain view on the front shelves and in the storehouse of the infinite—the human body."

One should note the profound ignorance of disease in the foregoing quotation, and the vastness of the boast that he had never failed to find all remedies in the body. Such a theory of diseases and their treatment is not one for criticism, but for despair; for it would be impossible to argue with one who holds to such views. According to A. T. Still there is a remedy in the body for every disease, and adjustment will set it free to act. This is illustrated on page 106, where he cured flux by manipulating the spine. Some would think that this looks like a dream (vision) of the night, already referred to.

But for something truly original let me quote this: "I have concluded, after twenty-five years of close observation and experiment, that there is no such disease as fever, flux, diphtheria, typhus, typhoid, lung fever, or any other fever classed under the common head of fever or rheumatism, sciatica, gout, colic, liver disease, nettlerash, or croup, on to the end of the list, they do not exist as diseases. All these separate and combined are only effects." One would like to know if this was also a vision; for it really looks like such. Again, one would like to know how he made his observations and experiments; and one does so regret that A. T. Still did not publish his methods in some learned transaction, or explain them before some scientific body. Does A. T. Still not see that if all diseases are only effects, then the effects become the things? His reasoning is similar to that of the Hindoo who supported the world on the back of an elephant, which, in turn, stood on a large turtle.

The following is so good that it should be often quoted: "God has no use for drugs in disease, and I can prove it by His works; I could twist a man one way and cure flux, fever, colds and the disease of the climate; shake a child and stop scarlet fever, croup, diphtheria and cure whooping-cough in three days by a wring of the child's neck, and so on." On page 97 he wails his fate that when he made these statements "all my good character was at once gone." No wonder. We have all visited institutions where each inmate recognized the foolish notions of all the others, but not his or her own. "A little learning is a dangerous thing," and the little learning A. T. Still picked up by studying bones fell far short of any real knowledge of disease. The foregoing quotation is ample proof of how terribly wrong the views of the osteopaths are; for they all follow Still.

On page 98 we come upon what Still has to say about his brother, Rev. J. M. Still, and this is thrown in: "Hallelujah, Drew, you are right; there is money in it, and I want to study osteopathy." This is rich to perfection. "There is money in it." The whole make-up of osteopathy is "money," and a short-cut to make it.

On page 101 we come upon a conversation between Still and a lady.

The lady said: "I want you to tell me the honest truth; isn't this mostly hypnotism?" I said, "Yes, madam, I set seventeen hips in one day." The lady skipped, we are told. They must be rather fond of dislocating their hips in Missouri.

On page 182 we come upon the fundamental theory in osteopathy. Still states that: "In the year 1874 I proclaimed that a disturbed artery marked the beginning to an hour and a minute when disease began to sow its seeds of destruction in the human body." After some further remarks he states: "At an early day this philosophy solved to me the problem of malignant growths, and their removal by a restoration of the normal flow of arterial fluid." Then he states: "Fever, flux, headache, heart and lung troubles, measles, mumps and whooping-cough, and every disease met and treated since that time, have proven to my mind that there is no exception to this law."

On page 183 there are some remarks about the young osteopath who tries to improve upon Still's work, and then we find this fine sentence: "I made this discovery more than twenty-four years ago. Its application may be more thoroughly understood to-day, but the philosophy is eternally the same." This philosophy is that "the rule of the artery is absolute." If we turn back to page 94 we find this: "It appears perfectly reasonable to any person born above the condition of an idiot, who has familiarized himself with anatomy and its working with the machinery of life, that all diseases are mere effects, the cause being a partial or complete failure of the nerves to properly conduct the fluids of life." From this it would appear the rule of the nerve is absolute. It will also be news to learn that the "nerves conduct the fluids of the body." On page 104, 105 and 106 we find an account of a case of flux, where Still found the back hot and the front of the body cold. As he handled the child he "found rigid and loose places in the muscles and ligaments of the child's whole spine, while the lumbar region was in a very congested condition." Then he goes on to tell us: "I worked for a few minutes on that philosophy, and then told the mother to report to me the next day. She came early next morning with the news that her child was well." Now, we have a third rule that seems to be absolute, namely, "rigid and loose places in the spine." On page 97 he tells us he could "cure whooping-cough in three days by a wring of the child's neck." This is rather an amusing way of making the arteries do their work; but, then, it suits the osteopath.

On page 112 and following we have Still's views on drunkenness, and how to cure the habit. In the case of a drunken blacksmith he tells us that he pushed, and pulled, and rubbed, twisted the man's abdomen; and then worked his ribs and spine. He then put his elbows in the man's

back and pulle him backwards with force. The man never drank any more. Still then gives us his theory as to the cause of the drink habit thus: "I thought about it and reasoned that a failure of the pancreas, spleen, or liver to perform their natural functions and generate compounds in sufficient quantities to neutralize the fluids which by nature should be kept harmonious and satisfy that demand without alcohol was the cause." By twisting and punching the spine and working the ribs, these organs do their work properly, and, presto, the drink habit goes.

Beginning on page 134 we find an account of how Dr. Joshua vanquished pneumonia, diphtheria, scarlet fever, mumps and measles. Then on page 137 he tells us how he was called to treat a doctor's son ill with mumps. He at once "loosened the breaks which had stopped the lymphatics of the parotid gland." Then the mumps left the boy.

Perhaps one of the most maryellous of all things we read of in this book is found on pages 153 and 154. It is the account of a bald-headed doctor whose hair grew three inches long and was still growing. The doctor exclaims: "Lord! Lord! I want to keep as far away from osteopathy as I can, for they make hair grow, and I will have it pulled." The pulling was to be done by his wife, who was itching for the job.

For something really to take the breath from our physiologists the following may be quoted, from page 186: "He simply endows the corpuscles with mind, and in obedience to His law each one of these soldiers of life goes like a man in the army, with full instructions as to the duty he is to perform. It travels its beaten line without interfering with the work of others. Now you say I am going to get God into trouble by making a statement, claiming that each one of the five million corpuscles contained in a single drop of blood knows just what is expected of it. Is this blasphemy? No. As the troops of General Cook obey his commands unflinchingly, so God's infantry, imbued by Him with mentality, go forth to fulfil their appointed mission in unswerving obedience." Shades of Harvey and Borelli, who did so much work on the circulation, what do you say to this! Every blood corpuscle has a mind of its own that tells it where to go and what to do. A great poet, in speaking of dreams by night, said of them: "Visions less beguiling far than waking dreams of daylight are." Such a physiology should consign osteopathy to eternal oblivion. But turn to page 224 for Still's opinion about this so-called science of his. His words are: "Either God is God, or He is not. Osteopathy is God's law, and whoever can improve on God's law is superior to God Himself." This is quite equal to what we read in Revelation, where the Great Angel said: "I am the Alpha and the Omega, the first and the last." So that A. T. Still's teachings about the obstructed artery, the pressed nerve, the displaced spinal bone, the blood cor-

pulses with minds, make up osteopathy, which, in turn, is the law of God, "and whoever can improve on God's law is superior to God Himself"; and "osteopathy is God's law." We close this paragraph with the following from page 229: "We take up osteopathy. How old is it? Give me the age of God and I will give you the age of osteopathy. It is the law of mind, matter, and motion."

On page 249 we find these words: "We know it is a science founded on truth. It is a science of the law which can control fever, flux, diphtheria, or measles. It never goes into the battle to meet those foes under a flag of truce, but defiantly waves the black flag." One cannot believe that this is the boast of a mere boaster; it must be the serious statement of one who was wrong. No system of treatment can do battle with these diseases and not lose cases. But on the same page we find: "In this work we must depend upon the absolute law of Deity for results. If you object to that, all right; you may take guesswork if you choose, I will not lose my hold on Deity." On page 250 the author gives us this nugget: "And when they spoke so slightly of this science, which is backed by God, I did like the Dutchman when his wife died, 'I got so mad I bawled.'" So we again have the intimation that osteopathy is of divine origin, it "is backed by God." On page 254 we read: "God is the father of osteopathy."

If we turn to page 301 we find a lecture in which the author has much to say about the perfection of the human machine and how well it is supplied with all needed agents to its running in good order. With regard to osteopathy he states that "no human hand framed its laws; I ask no greater honor than to have discovered it." Then, again, he states that "You may be sure the Divine intelligence failed not to put into the machine of man a lever with which to control fever." This means that when man has a fever all you have to do is to pull or push on some bone and use it as a lever to correct a displacement, and the fever departs. Just here let us put a question to the osteopaths. If the human machine is so perfect as they contend it is, why is it going so often out of order? According to this cult every known ill is the result of some defect in the machine, or that it has gone wrong in some way. Their own theories prove too much. Their entire theory of disease and its treatment is wholly mechanical, and this is known to be absolutely erroneous. One can imagine A. T. Still clinging to these views, but that young men of the present generation, with the wide diffusion of learning, should accept such teachings is quite inconceivable. This, however, was not Still's opinion, for, speaking of himself on page 319, he says: "How did you happen to think of osteopathy, the most wonderful science in the world, the greatest blessing God has given to man?" And yet it is not a science at all, and instead of being a blessing, is a real curse to man.



For a theory of fever the following takes precedence over anything we have ever read. On page 344 there is the account of a dialogue between A. T. Still and his brother, a graduate in medicine from a Chicago University of Medicine. The brother asked, "How do you account for fever? How do you account for a cold head?" And A. T. Still replied: "In proportion to the velocity with which the heart brings the electricity that is generated in the brain, the temperature is high or low." This is so absurd that one can hardly imagine how such a cult can have any following, and the greed for money a good deal also.

On page 87 there is an account of the death of his three children in the year 1864, caused by meningitis, and the author speaks of the doctors giving medicine and the minister praying, but pills and prayers failed to drive the enemy away from Still's home. Then he goes on to state that this set him thinking, and he arrived at the conclusion that there was in the system a remedy 'to cure all infirmities.' If we turn to near the end of the book, at page 280, we find an account of the death of his son Fred, whose picture indicates that he would be about twenty years of age. By this time Still had matured his osteopathic methods of practice, but nevertheless Fred died. In this case, as in the cases ill with meningitis, the angel of death refused to be driven away. We are told in another part of the book that osteopathy never meets disease with a flag of truce. Judging by the number of wonderful cures recorded in Still's autobiography, it does seem strange that at the end of the book he has to record the death of his son Fred; and on page 38 we find this sentence, "Death has declaimed and proclaimed that its fiat changes not." This is a most remarkable admission from the founder of osteopathy, with its record of whooping-cough cured in a few days, of diphtheria and mumps in a few minutes, of flux in a night, of drunkenness by pushing the abdomen and twisting the back, of seventeen hips set in a day, of five hundred labors without a mishap, even of hair grown on a bald head.

The last thing we shall refer to is the story about four cranks, contributed by a friend, and given a place at the end of the book. The first crank was Columbus, with his theories about the ocean; the second was Watts, with his speculation on the power of steam; the third was Morse, with telegraphic visions; but the greatest crank of all was the fourth, namely, A. T. Still, who has given us osteopathy. Here is how the writer puts it: "But the first three cranks, and in fact, all cranks, waned into insignificance when an M.D., a student of anatomy and science, about the year 1870, threw away his pill-bags and declared that drugs were unnecessary. He declared that osteopathy was a science by which all diseases flesh is heir to could be cured." This writer forgot to mention the case of Fred, the son of A. T. Still.

On many occasions we have exposed osteopathy from the resognized writers and teachers of the cult, and from the latest announcements of their colleges. In this article we have exposed it by going to the autobiography of the founder. To osteopathy as a system of treatment we apply the words of Shakespeare:

Ill-faced, worse-bodied, shapeless everywhere;  
Stigmatical in making, worse in mind.

#### HEALTH INSURANCE.

Toronto was favored on the sixth of November by an address before the Academy of Medicine by Professor Irving Fisher, of Yale University, on the very timely and important subject of Health Insurance. Professor Fisher is a fluent, logical and forceful speaker, and has a thorough grasp upon his subject, as is made amply clear by a perusal of his work on vital statistics. Those who did not hear Professor Fisher suffered a distinct loss.

Professor Fisher is an ardent advocate of health insurance. He takes the position that where the income is only adequate to make expenses when there is no sickness, the occurrence of sickness is a very serious event. In the great majority of instances it puts these persons into debt that they are not able to liquidate, and, in this way, are forced into the poverty class. In future they are compelled to seek medical attendance as a charity.

This has a very bad effect. Professor Fisher went into the psychology of this condition, and pointed out how it destroyed men's pleasure in work and lowered their pride in self. They lose hope and ambition, and the next step is towards Socialism of an ignorant and unreasoned type, and antipathy towards their employers. They develop a very dangerous sort of class consciousness.

One of the remedies for this is to be found in health insurance. This scheme means that the employers contribute forty per cent. of the fund, the workmen contribute forty per cent., and the State contributes twenty per cent. of the fund. When a workman falls ill he has no hesitation to accept assistance, because he has paid into the fund. The employer takes a new interest in his workmen, because he is helping to maintain this benefit fund; and it is of prime importance to him that the conditions of his workmen be made as satisfactory as possible, as much sickness depletes the fund. He, therefore, takes steps to make his establishment healthy. The Government also becomes interested and it passes laws that make for the health of the working classes. Above all, the workman does not sink into debt through being ill.

Another very distinct boon is that the medical profession gains by such conditions. He is relieved of the necessity of attending people for

nothing. He is paid his fees. Institutions are relieved of the burden of much of the charity work they are now doing. All this has a unique levelling-up influence; whereas, the tendency without health insurance is towards a levelling downwards.

After a number of years of experience of this system in Britain, all seem to be satisfied with the results. Until the Act got into full working there were some difficulties; but these have been met in most instances and adjusted. Such would be the case in this country. After mature consideration, we have come to the conclusion that national health insurance is a good thing.

#### HOW TO CURE THE CULTS AND PATHIES.

The following item, taken from the *New York Medical Record*, giving the essence of the law in Montana, is worth reading. It will be seen that to practise osteopathy in that State the person must qualify. There is very little likelihood of any one following the follies of osteopathy if he is compelled to pass such an examination as will insure a fair standard of education. After this he is not likely to degenerate:

"The Montana statute, Rev. Codes Sections 1594-1606, provides that every person who practises osteopathy in the State must secure a license from the State Board of Examiners, and provides a penalty for violation of the statute. Section 1605 defines the practice of osteopathy, and subdivision "b" provides that nothing in this section shall restrain any legally licensed physician or surgeon in the practice of his profession. Section 1597 provides that the secretary of the Board of Osteopathy Examiners may, upon examination, grant a certificate to practise osteopathy until the next meeting of said board, when the temporary certificate shall expire. The practice of medicine and surgery is regulated by Sections 1585-1593. Section 1591 defines "practising medicine or surgery," and then provides that the section shall not be construed to restrict any legally licensed osteopathic practitioner practising under the laws of the State. In the prosecution under the statute for practising osteopathy without a license, it was held that the provision in Section 1591 does not permit an osteopathic practitioner to practise surgery without a certificate from the State Board of Medical Examiners, and the provision in Section 1605b does not exempt physicians or surgeons from the operation of the statute prohibiting the practice of osteopathy without the required license; and neither of the compensating provisions are "exceptions" within the meaning of that term as applied to statutory construction, as an "exception" takes out of an engagement or enactment something that would otherwise be a part of the subject-matter of it.—State vs. Wood, Montana Supreme Court, 165 Pac. 592."

### A GREAT EVENT FOR THE UNIVERSITY OF TORONTO.

On the 25th of October the Duke of Devonshire, Governor-General of Canada, opened the Connaught Laboratories of the Department of Hygiene of the University of Toronto. The laboratories are the gift of Col. Albert Gooderham. In connection with these laboratories is a farm of fifty acres of land, situated on the Vaughan Road, York townline, eight miles from St. Clair Avenue. Col. Gooderham handed to Sir Edmund Walker, chairman of the Board of University Trustees, the keys. With this went promises of support to the amount of \$25,000. This, with \$75,000 from the Province, which Sir William Hearst said would be given, will make an endowment fund.

The Duke of Devonshire remarked that the day was eventful, not only in the history of the university, but of the city. Having remarked that the world is getting more and more dependent on science, he said he had been associated with two English universities, one old Oxford, and the other new, Leeds, so he knew how valuable were such gifts as Col. Gooderham's to the whole community in which they were made. Thousands of our men's lives have already been saved by such discoveries as emanate from these laboratories of our universities.

Sir William Hearst, on behalf of the Government of Ontario, expressed their thanks to Col. and Mrs. Gooderham for their generosity. It was among the most valuable public gifts made in recent years, measured not merely by dollars and cents, but in its human usefulness. In the South African War there had been 8,000 deaths among the British from typhoid. In the present war there had been, thanks to such inventions as the serums made at the laboratories, only 167 cases in the British army, and only one death from that cause in the Canadian corps, and that was of a man who refused the inoculation. The Government would next session pass a bill for the appropriation of \$75,000 for the work to bring the endowment up to \$100,000.

Among those present were: Sir John Hendrie, Sir Robert and Lady Falconer, Sir James Grant, Sir William and Lady Hearst, Lieut.-Col. Ryerson, Col. McCullough, Col. R. W. Leonard (St. Catharines), Dr. Montezamfert (Ottawa), Col. Albert and Mrs. Gooderham, Major Todd, Dr. F. Torrance (Ottawa), Dr. Simon Flexner (Rockefeller Institute, New York), Prof. V. A. Moore (Cornell University, Ithaca, N.Y.), the Bishop of Toronto, Rev. Dr. Sweeny, Col. Wilson, Col. Hardy, Professors Squair, Keyes, Mavor, Baker, Alexander, McIver, McMurrich, and Capt. Kenyon-Slaney, aide-de-camp to the Duke of Devonshire.

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### WHAT SCIENCE IS DOING FOR SURGERY AND MEDICINE.

The visit of Dr. Simon Flexner, of the Rockefeller Institute of Research, on 25th October, was an occasion of more than usual interest.

In his address in Convocation Hall he touched upon a number of points of rare interest.

In the first place he said that the gas bacillus had been discovered in 1892 by Dr. Dakin, but there had only been observed about 200 cases of this infection prior to the present war, and, therefore, almost no research work had been done upon it.

When the war commenced there soon were very many cases, and the results were most serious. France and Belgium were old and highly fertilized soils and full of the organism. This explained many instances of infection. It was also an organism that had marked resistance, and not always destroyed by the processes cloth was put through in its preparation. In this way the wounded soldier had a likely chance of infection.

Dr. Alexis Carrel discovered that freely flushing of wounds with a compound of chlorine and boric acid was most valuable in preventing infection and in controlling it when it had occurred. This treatment had removed much of the terror of gaseous gangrene.

More recently Dr. Bull had been working at the Rockefeller Institute on cultures of the bacillus obtained from virulently infected wounds. As the result of the experiments on pigeons and certain animals, an anti-toxin had been secured that had marked immunizing power and also curative value for animals. A supply of this was now being furnished for the army.

Col. G. G. Nasmith, C.M.G., LL.D., of the Health Department of Ontario, gave an address recently before the Royal Canadian Institute. He pointed out how completely contagious diseases had been brought under control. The chlorination and filtration of the water, and the employment of inoculation had banished typhoid and paratyphoid fevers from the army.

By the taking of proper precautions smallpox, typhus, dysentery, cholera and tetanus did not occur; and very much had been accomplished in the way of controlling tuberculosis. These examples of progress are so astounding that one is amazed that some schools of thought still reject the value of experimental medicine.

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#### ORGANIZATION.

One word on organization. Each city and county should lose no time in forming an active association. This association should have two objects in view—the professional and the business. The latter of these for the present is the more important. These associations should explain to the member of the Legislature representing the various constituencies the true views of the medical profession on the need for a high standard of medical education.

## ORIGINAL CONTRIBUTIONS

## BLOOD PRESSURE IN ITS PRACTICAL ASPECTS.

BY JOHN FERGUSON, M.A., M.D., Toronto.

THERE are few subjects at the present moment that are attracting more attention than the physiology and the pathology of the vascular system. One of the means at our disposal for the determining of some of the features of the working of the heart and blood-vessels in health and disease is the study of blood pressure. It throws not only a vast amount of light upon these organs, but it also throws much needed light upon the condition of other organs. It will be seen, however, as we proceed that there is still considerable diversity of opinion. The more I study the subject the more am I convinced that we must accept the three readings of systolic, diastolic and pulse pressure with the utmost care; and, in the main, only regard them as confirmatory of other findings.

W. D. Halliburton in his work on physiology states that the systolic pressure in the carotid of an adult man should be 140 m.m. Hg., and in the radial 110 m.m. Hg. He does not state how much the diastolic should fall below this.

If we turn to the physiology by W. H. Howell, Professor of Physiology in Johns Hopkins, we note some important statements. He gives the average systolic at 110 m.m. Hg., and the diastolic at 80 m.m. Hg., and the mean as 95 m.m. Hg. He also states that the systolic may be 168 mm. Hg., while the diastolic is only 100 mm. Hg. In men, he says, the systolic may be taken in round figures to be 110 to 116 mm. Hg., and the diastolic at 65 to 75 mm. Hg. The difference is the pulse pressure. He then goes on to show that the average pulse pressure is 45 mm. Hg. in the healthy adult man. It would appear from this that as the systolic varies, so should the diastolic. But this rule is found to constantly break down under daily practical tests.

J. Erlanger, Johns Hopkins, gives the systolic, when the psychic element is excluded, at 110 mm. Hg. for the adult of 25 years, and the diastolic at 65 mm. Hg. Von Racklinhausen gave 116 and 73 for a person of the same age, a very marked difference. Erlanger gives the pulse pressure as 30 to 45.

But to show how markedly writers differ, let me quote the figures of M. Potain. For age 25, healthy male adults, he gives the systolic at 170 mm. Hg., and at age 40, about 190 mm. Hg.

John C. DaCosta, who writes a good deal on physical diagnosis, lays the rule down thus: "The systolic, in the healthy adult, ranges between 120 and 140 mm., and the diastolic normally about 90 to 110 mm., or about 30 points lower than the systolic pressure." This sort of thing begins to take one's breath, as it shows again how much experts differ.

But let us go on, and this time take a look into the pages of Albert S. Morrow, of the New York Polyclinic. He states that normally the adult systolic pressure ranges from 90 to 145 mm. Hg., and the pulse pressure normally registers 25 to 40 mm. This would give the diastolic pressure to range normally from 65 to 105 mm. Hg. It will be seen that he is not following very closely the teachings of any other writer of the medical books.

Let us now take a peep at what G. R. Butler, a noted New York and Brooklyn man, has to tell us. The systolic for young adults should be from 100 to 130 mm., and for older adults it should be 110 to 145 mm. The diastolic normally should be 25 to 40 lower. This would give for these older men a diastolic varying from 85 to 105 mm. It will be seen that both Morrow and Butler do not regard 105 mm. diastolic as at all abnormal.

John H. Musser, in his work on medical diagnosis, states that "most authorities agree that a blood pressure below 120 and above 160 mm., when the patient is, at rest, must be regarded as pathological." Here there is a wide play of figures. If one takes the upper figure of 160 as the limit of health, and deduct say 50 mm. for pulse pressure, we have 110 as a normal diastolic according to this writer.

Robert Hutchinson, of London Hospital, in a work on Applied Physiology, states that, "The normal systolic pressure, in a healthy young adult, is about 120 mm. Hg., and the diastolic pressure about 100." Now, note that he gives only 20 mm. Hg. as the difference between the two, while others run all the way from 25 to 50. He also gives the normal diastolic at 100, while many are quite contented when they get it up to 65 to 80 mm. Hg. How the gods do differ!

A. Rendle Short has been doing a good deal of writing of recent years, and among other things has given us a book on Physiology in Surgical and General Practice. Here is what he has to say: "An average reading for the maximum or systolic pressure is 110 to 120 mm. Hg.; for the diastolic pressure a little less." This is magnificent! A lower systolic than most men find, and then a diastolic pressure "a little less"; may be 10 or 20, and so we have, as a guess, his idea of the diastolic pressure as about 100, and the pulse pressure as maybe 20. In this he agrees with Lyle, the physiologist.

Thomas D. Savill, of London, in his *Clinical Medicine*, states that the systolic pressure for a healthy adult under fifty should run from 120 to 130 mm. Hg., and after fifty from 130 to 145 mm. Hg. This is difference enough to upset some of the other blood-pressure charts, and spill their figures in the mud.

Anders and Boston, in their big book on *Medical Diagnosis*, state that "the normal pulse pressure is said to range from 25 to 45 mm. Hg. Then they give this example:

Systolic pressure .....	150 mm. Hg.
Diastolic pressure .....	110 mm. Hg.
	2 260 mm. Hg.
Mean pressure .....	130 mm. Hg.

Clearly they wish the reader to infer that 110 diastolic pressure is not a bad state of affairs, where the systolic is 150.

W. S. Thayer, of Johns Hopkins, states that his experiments gave him the following figures: 20 to 30, 137 mm. Hg.; 30 to 40, 141 mm. Hg.; from 40 to 50, 142 mm. Hg.; from 50 to 60, 155 mm. Hg.; and from 60 to 70, 180 mm. Hg. Deducting about 45 from these will give the diastolic, and for a man of 50 this would be about 105 mm. Hg.

George W. Norris, of the University of Pennsylvania, gives the usual pressure for a man of 20, as, systolic, from 105 to 140 mm. Hg., and diastolic from 80 to 110 mm. Hg. In discussing pulse pressure, he mentions where it was 70 "as contrasted with the normal pulse pressure of about 30." When the arteries are normal for the person's age, and there are no cardiac lesions, the diastolic blood pressure is obtained by taking, say 35 from the systolic pressure. This corresponds fairly well with my own investigations on this subject, made on many persons, ranging in age from 20 to 30; and in a lesser number of older adults following very varied occupations. My own observations confirm Norris in the statement that 70 or 80 per cent. of the systolic gives the diastolic. But I have found so many variations with different instruments and on a varied assortment of persons, under different conditions of work, rest, and food, that I have completely abandoned the idea of being dogmatic about blood pressure findings. This rule would give a diastolic of 105 for a systolic of 140 mm. Hg. in a normal vascular system. One thing I wish to insist on is that the average diastolic readings are too low. In a normal condition there is, in my judgment, never a pulse pressure of 50 mm. Hg.

Burney Yeo, in his work on *Physiology*, which is quoted approvingly in Albert P. Brubaker's work on *physiology*, states that the blood pressure near the heart is 160 mm. Hg., and gradually falls to 130 at the arterioles, and to 20 in the capillaries. In an artery the size of the



brachial, the pressure would be, according to these authorities, 140 to 150 mm. Hg. From this anywhere from 30 to 45 for pulse pressure would yield about 105 to 110 mm. Hg. for the diastolic.

Sir Lander Brunton did much good work on this subject, and the following are his words: "Diastolic pressure, under normal conditions, is to systolic pressure as 3 to 4, or, in other words, pulse pressure is one-fourth of the systolic." By this rule a man with a systolic pressure of 144 mm. Hg. would have a diastolic pressure of 108 mm. Hg.

With regard to what the normal pulse pressure should be the following eminent authorities may be quoted: Erlanger gives it as 30 to 40 mm. Hg.; Hirschfelder puts it at 30 to 45 mm. Hg.; and Young records his observations as yielding 25 to 30 mm. Hg. These figures, subtracted from the usual systolic pressure, would give a higher systolic pressure than is generally set down.

Many of the largest life insurance companies have found that the diastolic pressure is so faultily taken that they do not now ask for it. If the systolic is in conformity with the average, and the candidate all right in other respects, it is assumed that the diastolic would be satisfactory. Van Wageningen's insurance figures for 4,400 accepted risks between the ages of 14 and 70 were from 115 to 137 systolic, and yielding an average of 128. Mackenzie's statistics of 18,637 risks accepted by the Prudential from the ages of 19 to 66 gave an average systolic of 125. The very interesting fact is brought out by him that from 19 to 39 the average pulse pressure was 28, and from 40 to 66 it was 30. In the ages 35 to 40 the systolic was 126 and the pulse pressure 35.

The findings of Mackenzie, of the Prudential, are most important. By his records the pulse pressure for ages from 40 to 66 averaged 30. This so closely corresponds with my observations on healthy males that I accept it as correct. Another thing that I have satisfied myself upon is that the pulse pressure keeps very closely this ratio to the systolic pressure in healthy persons. In other words, the average systolic from ages 40 to 66 was 133, and this gave an average pulse pressure of 30. Now, if the systolic becomes 150 and the person in perfect health, the pulse pressure should be about 35. I have known perfectly healthy persons of about 50 to carry a constant systolic of 145 to 155 mm. Hg. Practically one-fourth of the systolic is the pulse pressure.

Thomas E. Sutterthwaite, of New York, gives the formula 3, 2, 1, as setting forth the ratios between the systolic, diastolic and pulse pressures. This I do not accept. Take the case of a perfectly healthy young man of the age of 20, and with a normal systolic pressure of 120. According to the foregoing formula his diastolic pressure would be 80, and the pulse pressure 40. If one takes a healthy man of 40 years, with a

normal systolic of 130, we would find, according to the above rule, a diastolic of 86 2-3, and a pulse pressure of 43 1-3. I am fully convinced that a much more accurate formula is 4, 3, 1, which, in the foregoing cases, would give 120, 90, 30, and 130, 97½, 32½ for the three pressures. No formula is of value in pathological conditions.

Ludolph Krehl, of Heidelberg, has a very able work on Clinical Pathology, which Sir W. Osler speaks highly of. In it he states that a pulse pressure under 30 mm. Hg. is low, and one above 50 mm. Hg. is high. This gives a mean average of 40 mm. Hg. He also states that "for young adults the systolic pressure should be 100 to 130, and for older adults from 130 to 145." It will be seen that this author gives a higher pulse pressure than Erlanger, Hirschfelder and Young. This is unsettling, because these names stand high, and yet they do not agree. They must, as a consequence, differ on the diastolic pressure. Krehl speaks of vessel cramps by which he means sudden rises in vascular tone and increase in diastolic pressure. These he thinks may be of nervous origin.

Dr. Charles F. Martin, of Montreal, in a paper read at the 22nd meeting of the American Medical Directors, contends that "a high blood pressure is often a most salutary incident in a man's life, and is protective. The older we grow, the less pervious do our finer arteries become, and the greater is the need of a high pressure to nourish the tissues. Hypertension, then, should not be regarded as a disease, but often as a distinct benefit." Then, again, he said: "The great fallacy seems to be this, we take the systolic blood pressure and learn that it is high, say 180, and regard this observation as symptomatic of a shortened life, and a serious prognosis. But is this true, and is such an observation accurate? I think not. Many individuals may live for years with a high tension pulse, and the mere recognition of a single numerical sign does not apply equally to every individual." Further on Dr. Martin remarks: "Great variations in the technique of blood pressure estimation, the ever increasing types of new appliances and the never-ending discussion as to its significance, demonstrate how far from complete is the present status of our knowledge of the subject. Inaccuracy of greater or less degree seems possible in a remarkable variety of ways. The temporary influence of psychic and vasomotor conditions upon blood pressure is too well known to call for more than a passing comment. The slighter inaccuracies associated with the nature of the vessel, its position, and the character and amount of the surrounding tissues, are all important factors in passing judgment upon." Once more let us quote this: "The maximum blood pressure is but the expression of the intra-ventricular force, while the minimum indicates the degree of peripheral

resistance, including not only the condition of the arterioles, but also the viscosity of the blood, the friction incurred, etc. And the difference between the two alone gives an idea of the cardiac power. Of chief importance remains the great fact that *blood pressure is merely a subordinate phenomenon*, while the subjective symptoms are of far greater importance to prognosis."

The statements just quoted from Dr. Martin will command the respect of most readers. They give the key to the situation in well-defined terms. We concur with him that high blood pressure alone is not necessarily ominous. Of course, in this there is a limit; and we place this about 160. It is, however, of great importance in directing one's attention to a condition of hardening of the arteries, kidney disease, or some obscure intoxication of the blood stream. We also concur in the view that the subjective symptoms are of the utmost importance. The real figure of weight is the pulse pressure.

There are few more careful writers on the whole topic of arteriosclerosis than Louis M. Warfield, of the medical department of Washington University, St. Louis, Mo. He gives the brachial systolic pressure in the young adult as 130 mm. Hg., and this rises with advance in age. He also gives the pulse pressure for the same vessel as 45, and consequently the diastolic would be 85. It will be seen, however, that Warfield does not agree with many writers, and differs widely from some. It must be noted that he makes his diastolic pressure only 65 per cent. of the systolic, and this, without doubt, is too low a figure. It should not be placed under 75 per cent. From this there are many departures in disease.

Percival Nicholson has done much work on this subject. He lays down the general figures thus: Adults under mid-life give systolic of 120 to 130, and after mid-life the systolic should average 130 to 146, and a pulse pressure of 35 per cent. of this. This would give a diastolic pressure, after mid-life, of about 95, according to the variations in the pulse pressure. But the essential point is that he reaches findings that yield higher diastolic figures than is usually recorded, though not as high as some others.

Dr. Nicholson lays down some categorical rules. "If the pulse is slowed more time is allowed for the blood to run through the arterial system during diastole, and the diastolic pressure will be lowered and the pulse pressure increased. The reverse also applies." "Low systolic pressure and high pulse pressure indicate a good heart, with dilated vessels." "Low systolic pressure and low pulse pressure point to a weak heart." "A high systolic pressure and a *high diastolic* pressure indicate good cardiac compensation."

Theodore C. Janeway, formerly of New York, and now of Johns Hopkins, has been a very close student of blood pressure. The main feature of Janeway's investigations is that the intra-vascular pressure is fairly accurately represented by a blood pressure indicated by a blood pressure instrument. I shall show presently that this position is erroneous, and has been responsible for many blunders. On the main, Janeway and Nicholson agree as to what constitutes normal systolic and diastolic pressure, the tendency being to give higher readings for the diastolic than was formerly the practice.

Professor Janeway gives the following figures as the average of normal subjects:

For adult males under mid-life: Systolic, 100 to 130; pulse pressure, 25 to 40; diastolic pressure, 75 to 90.

For adult males after mid-life: Systolic, 130 to 145; pulse pressure, 25 to 40; diastolic pressure, 100 to 105.

I now come to a very well-known author, I namely, Sir James MacKenzie. He says that to attempt to secure the blood pressure by noting the oscillations in the column of mercury as the artery is being compressed will lead to serious errors, and "is little better than guess-work." He gives his reasons in a lucid manner. He also shows that the intra-vascular pressure is not at all necessarily the same as that indicated by the instrument, as much of the pressure exerted by the cuff may be consumed in overcoming the rigid wall of a sclerosed artery. Thus, the instrument might read 160 mm. Hg., whereas real blood pressure due to ventricular action was only 145 mm. Hg. This has been corroborated in an able manner by Russell. I had a case recently where the ventricular action was weak, due to myocardial degeneration, and, owing to the extreme degree of sclerosis, it took a pressure of 200 mm. Hg. to arrest the pulse wave. The main work of the instrument was to flatten a rigid artery, and not in overcoming the blood pressure.

Sir James MacKenzie's words are: "It is supposed to represent the systolic blood pressure. Now, it does nothing of the sort, for the figure obtained by the use of the armlet differs from that obtained from the pressure taken directly from the artery." And, again, he says: "I never take the blood pressure alone as a guide to an opinion, but consider also the state of the arteries, the size and efficiency of the heart, and the state of the kidneys." Here we have the conservative opinion of an eminent authority.

Sir Clifford Allbutt, in his elaborate work on the vascular system, tells us that "roughly speaking, the diastolic pressure should be to the systolic about 3 to 4, and the pulse pressure to the systolic about 1 to 4." In pathological conditions there may be marked variations from these

ratios, and Sir Clifford Allbutt states that in a case of Stokes-Adams affection the systolic was 180, and the diastolic 90. In cases of aortic regurgitation the difference between the systolic and diastolic may be as great as 105 mm. to 210 mm. He also says that in old age we may have a systolic of 160 mm. and a diastolic of only 80 mm. The important point is that in normal conditions Allbutt gives a pulse pressure of one-fourth of the systolic.

Dr. Louis Hamman, writing in *The Medical Clinics of North America*, for July, 1917, gives some very excellent observations. He mentions one case of albuminuria with systolic of 150 and diastolic of 80. Another case with albumin in the urine gave systolic 180 and diastolic 135. A third case with albumin in the urine gave systolic 190 and diastolic 120. Still another example with much albumin present gave a systolic of 230 and a diastolic of 135. There was another case with a slight amount of albumin and a systolic of 280 and a diastolic of 160. The author then goes on to state that systolic pressure constantly up to or over 135 up to mid-life, and 150 or over after mid-life is pathological; and a diastolic pressure constantly up to 80 or 90 up to mid-life and 100 or over after mid-life is also pathological. But these readings must be persistent. But there may be temporary hypertension from intracranial pressure, asphyxia, intoxications as eclampsia, lead, or anuria, and nervous disorders. He says: "Normally the diastolic pressure equals, roughly, two-thirds of the systolic." This, it has been shown, will give too low a diastolic.

Frederick Taylor, in his work on the Practice of Medicine, gives the average systolic blood pressure from 21 to 65 years as 120 to 135 mm. Hg. After 65 years of age it will vary from 135 to 150 mm. Hg. But the all important part of his statement is that he gives the average pulse pressure as 25 to 30 mm. Hg. This would make the diastolic blood pressure run about 95 to 105 mm. Hg., for all ages under 65.

J. W. Fisher, on a basis of 19,339 persons, from the age of 15 to 60, found the average systolic blood pressure to be 129. This corresponds very well with what Taylor found. But when we turn to the diastolic we find them differ widely; for Fisher states that the diastolic pressure may vary from 70 to 90. This would give a pulse pressure running all the way from 59 to 39, whereas Taylor gives it at 25 to 30. Disagreements like this perplex one.

Now let us take two high authorities and compare their findings. Richard C. Cabot, in his work on Physical Diagnosis, tells us that in healthy adult males the systolic pressure will vary from 110 to 135, and the diastolic pressure will be from 60 to 90. This would give a pulse pressure of 45 to 50. He states the average pulse pressure runs from

30 to 60. Further, he states that the diastolic pressure is not of much value, except in some morbid conditions as aortic regurgitation. Now let us see what H. Willoughby Lyle in his work on Physiology has to say. His figures completely differ from those of Cabot, for he gives the normal systolic pressure in man as 120, and the diastolic as 100 mm. Hg. This would give the average pulse pressure as 20. Those with any experience in taking the blood pressure of healthy males will certainly regard Cabot's pulse pressure as too high and Lyle's as too low; but the disagreement is nevertheless unsettling.

A. D. Hirschfelder in his very full and carefully written work on the heart, under the subject of blood pressure refers to the work of Erlanger, and quotes his pressure figures, and then states that "in the experience of the writer (Hirschfelder) a maximal (systolic) pressure of 115 to 120 mm., with a minimal (diastolic) of 75 to 85 mm., and pulse pressure of 30 to 40, is more correct. He lays down the conclusion that "the minimal arterial blood pressure therefore represents the peripheral resistance (vasomotor changes), while the maximal pressure approximates the intraventricular pressure." Also he states that minimal pressure rises and pulse pressure falls as pulse rate increases." Then also this is stated: "Vasodilation brings about fall in minimal pressure, rise in pulse pressure; vasoconstriction brings about rise in minimal pressure and a fall in pulse pressure."

H. P. Woley, from tests on 1,000 cases, came to the conclusion that the following figures give the systolic blood pressure. For ages 15 to 30 it is 123; for ages 31 to 40 it is 127; for ages 41 to 50 it is 130; and for ages 51 to 60 it is 132. Accepting the rule laid down by Norris that in healthy males the diastolic pressure is 75 per cent. of the systolic, the figures corresponding to the foregoing would be 91.5, 95.25, 97.5, and 99. A departure from the average systolic pressure of health to the extent of 15 mm. above or below constitutes the limit of high and low pressures. Thus for ages 41 to 50, blood pressures above 145 or below 115 demand special care and consideration. While there may be some examples of hypertension and hypotension without disease, Dr. Woley's experience should not be lightly turned aside.

According to a report on blood pressure submitted to the 22nd annual meeting of medical directors, the average systolic for ages 15—39 was 125; for 40—44, 128; for 45—49, 130; for 50—54, 132; for 55—60, 134, and the grand average was 130. When the body weight was 20 per cent. above normal, the blood pressure rose about 4 mm. Hg. When the systolic blood pressure goes above 150 the mortality rises rapidly. In a group of 356 persons with an average blood pressure of 171.7, the following impairments were found: Arterio-sclerosis, 53; heart murmurs,

69; heart hypertrophy, 17; albumin and sugar, 10; albumin, 110; sugar, 14; albumin and casts, 10; casts, 6; nervous symptoms, 21; prostatic disease, 5; and miscellaneous, 41.

In a group of 366 persons with an average systolic blood pressure of 170.36, there was an increased mortality of 38 per cent. In this group the following impairments subsequently developed: Arterio-sclerosis, 6; heart murmurs, 9; heart hypertrophy, 4; albumin and sugar, 2; albumin, 13; sugar, 5; albumin and casts, 33; casts, 13; nervous symptoms, 6; miscellaneous, 10. Though these persons at the time of examination revealed no disease, yet it is very interesting to note the large number who afterwards became victims to some sort of kidney disease. This goes to establish the view that there are conditions of the kidney that up to a certain point are only brought out by the blood pressure; but later on will show true renal changes.

From what has been deduced from the writings of a number of outstanding men, there is no doubt but that there is a very considerable variation in their findings. I quite agree with Sir James MacKenzie when he says that if we find a high arterial reading in a general way it points to high arterial tension, but it cannot be accepted as the statement of the true intravascular pressure.

There is one point also that stands out as very important, namely, if the diastolic pressure approaches too near that of the systolic pressure the condition is unfavorable. This means too low a pulse pressure and an impending failure in circulation. On this aspect of the case, however, practically most authors are agreed that a pulse pressure ranging from 30 to 45 mm. Hg. is a safe condition, and one that will maintain the circulation in a person free from organic disease.

Now, there is one point upon which I lay the utmost stress, and that is the manner of taking the diastolic pressure. The record should be noted when the second thumping sound becomes dull. If one does not take the record until the sound disappears, he will be from 5 to 10 mm. Hg. too low in normal cases, and from 8 to 16 too low in high tension cases. Many make their record at the point when the sound has disappeared, and, for the diastolic pressure, this is wrong to the extent just given.

I am absolutely satisfied, after long and painstaking study and experimentation on all classes and ages of persons in health and disease, that psychic influences may distinctly vary the diastolic blood pressure, by raising it several points. The arteriole contraction occurs, while the heart has not changed. If this condition lasts the ventricular pressure will rise. Until it does, there is a lowering of the pulse pressure. On this point L. F. Barker is quite emphatic that mental effort and nervous stimulation raise the minimal (diastolic) pressure and quickens the heart

action. Norris holds that this influence raises the systolic more than the diastolic.

Another matter on which I have no doubts is that the diastolic blood pressure is usually given at too low a figure. It was not uncommon a few years ago to have reports that the systolic was 130 and the diastolic 80. Such a condition is very rare, and should be good cause for further investigation. The outcome of my own work is that in the vast majority of healthy male adults the pulse pressure varies between 30 and 40 mm. Hg., and this constitutes the heart "load". Erlanger and Hooker are both agreed that standing raises the diastolic pressure and per contra lowers the pulse pressure. Records taken with the person recumbent will differ by yielding a lower diastolic. Moderate exercise lowers diastolic pressure, but severer exercise raises it and entrenches upon the pulse pressure..

There is another matter of much moment from the practical side of the question. Eating raises the systolic blood pressure, and, of course, must raise the pulse pressure with it, as the taking of food does not modify diastolic pressure. This may cause the difference between the diastolic and systolic pressures to the extent of 10 mm. Hg., and would raise a pulse pressure from 40 to 50, and lead one to suspect some pathological condition, whereas none exists. This bearing of the taking of food has not received the attention it merits, especially when since blood pressure has come of late to play such an important rôle in the selection of risks for life insurance. This is the very opposite to psychic influences which raise the diastolic pressure and lower the pulse pressure, and might lead one to suspect such conditions as arterio-sclerosis and a failing myocardium.

Altogether too little attention has been given to atmospheric humidity, temperature and barometric pressure. When the humidity and temperature fall, both the systolic and diastolic pressures rise, and vice versa. A sufficient number of observations have not yet been made to justify the making of any deductions. Altitude does affect the body in some important directions, but how far it modifies blood pressure and mortality cannot yet be stated.

From an insurance point of view it may be said that for ages 20 to 65 and rise of systolic blood pressure above the averages for these of 120 to 135 mm. means a distinct rise in mortality. A pressure of 170 or over will treble the death rate. Pressures below the average are also objectionable. High pressures point to renal disease, while low pressures predispose to tuberculosis.

From my own personal experience and from a careful study of the most recent and, therefore, the most reliable literature, an account of better methods, I am fully satisfied that in health the diastolic should



be about 75 per cent. of the systolic. This will also hold good in cases of hypertension where there is not a diseased condition present to account for this hypertension. Thus in a case of a healthy man of 55 years of age with systolic blood pressure of 150, it would be a satisfactory state to find his diastolic run anywhere about 110 mm. Hg. I would much prefer to find the diastolic run over 100 and thus keep in reasonable proximity to the systolic when this rises, than to see the pulse pressure rise to 50 and go above this figure. Too high a pulse pressure is always serious.

In all cases, if there be any reason to suspect a nervous element in the case, the record should be taken again, or even several times, and the figures that approach most nearly the normal are those that ought to be accepted; for the reason that they are uninfluenced by any psychic condition, or organic disease of any kind, the effects of which would be constant. If there still be any doubt the pressures should be taken lying, sitting and standing, with the view of ascertaining if the usual vascular tone is present; and also after some brisk exercise to determine the vigor of the myocardium.

I desire to remark further that, if the pulse pressure is low, owing to a fall in the systolic pressure and due in any way to a failing action of the heart, the condition is very ominous. A fairly high diastolic and a small pulse pressure points to a weak myocardium. To make this clear let me mention the case of a young man of 20 years with a diastolic of 85 mm. Hg., and a systolic of 105 mm. Hg. Here we have the usual diastolic for the age, but the pulse pressure is down, also the systolic. Great care must be exercised in such cases, as they belong to the group of weak hearts, that will break down when placed under strain.

There are some other important features that I shall not enter upon, such as a firm muscular arm as compared with a soft, fatty one, one who has been occupied at some fairly heavy work and has thicker artery walls as compared with one who has lived a sedentary life, and the nervous as compared with the stolid.

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### DREDGING THE CANALS OF THE ABDOMINAL NERVOUS SYSTEM BY ELECTRICITY TO INCREASE BLOOD FORMATION AND PROLONG LIFE.

BY SIR JAMES GRANT, F.R.C.P., K.C.M.G.,  
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**A**T no period in this century has the influence of electricity as a powerful curative agent in many forms of disease been more attractive than in the present day. For some years my attention has been

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carefully directed to abnormal manifestations of blood formation, lessening vitality, and rendering life very doubtful and precarious. In 1909 I was invited by Prof. Jacobi, of New York, to attend a meeting of the American Medical Association at Atlantic City, and to deliver an address upon my research work on the abdominal nervous system particularly. In June, 1909, I addressed the American Medical Association on certain conditions of disturbed nutrition, arising from clefts in the axis cylinder of the nervous system, and on my return to Ottawa received a motion of thanks by the Association on the result of investigation in abdominal digestive power and blood formation.

During the past twenty-five years marked progress has been made in the study of nervous disease by Sir Victor Horsley, Ferrier, Mott, Sherrington, Macdonald, of Sheffield, and others, and a wide field remains open in pathogenesis, etiology and pathological anatomy. *Punch* remarked, "You never know what these creatures of nerves can accomplish." Nerve is a remarkable structure, which regulates and coordinates organic functions. Nerve block and heart block are serious problems which have a wide range in the system, and in a marked manner interrupt reflex functional activity, a result of irregularity in the performance of normal functions of the system. Defective digestion, the product of retarded food assimilation, is well known to extend to the alimentary canal, resulting in the formation of poisonous gases, a centre of auto-intoxication and chronic intestinal toxemia, ballooning the colon and sapping general vitality.

Sherrington, of Cambridge, and Macdonald, of Sheffield, after many years of scientific research, defined the constituents of the axiscylinders of nerve tissue to contain salts of sodium and potassium, contributing in a marked manner to perfect reflex action and functional nervous activity as a whole.

In the treatment of cases of nervous debility and brain overstrain I have detected sections of the body, particularly on the limbs, in which the sense of feeling was markedly reduced and frequently entirely absent on the application of a neurotone, charged by a dry electric cell. After several tests thus made, of the instrument, sensation frequently suddenly developed to a high degree. Abnormal insensibility so completely restored to an acute state of feeling, aroused in my mind the presence of obstructive constituents in the axis cylinder of the nerve. How to account for such was an interesting problem. Sir Michael Foster, of Cambridge, many years ago, in his elaborate work on physiology, drew attention to clefts in the axiscylinder, but left them entirely unexplained, as, owing to failing health, he was unable to complete his observations.

On careful consideration, I feel confident that the noxious gases in the alimentary canal, the outcome of imperfect assimilation of food products, not only produce a distended colon, but also a change in the condition of the chemical constituents of the axiscylinder.

Appreciating the importance of the nervous system in imparting strength, energy and normal activity, I feel confident, after most practical results in treatment by electrical massage of debilitated states of the system from nerve block, that the same therapeutic agency is worthy of the most careful investigation in various forms of debility, and that thus many valuable lives can undoubtedly be prolonged into a good old age.

In such conditions the chief centre of nerve block is the abdominal cavity, in close proximity to the distended colon, developing slowly and gradually, and sapping vitality through marked defective blood supply. Remarkable results follow the direct electrical current, the outcome of massage, in gastric and intestinal indigestion, resulting in a marked general vitality and rapid reduction of the ballooned colon, all the outcome of liberated blocked reflex action and re-established normal reflex nerve power. The direct application of the neurotone current to the extremities is two-fold—to remove all nerve block, and arouse increased reflex activity of the terminals of the sciatic and saphenous nerves, accessories to the histogenetic abdominal ganglia, as well as to the remarkable cerebro-spinal fluid and nervous centres in close contact therewith: all of which contribute in a remarkable degree towards the elaboration of blood, the pabulum of life.

Electric massage should be carried out two hours at least before or after meals, and avoided in all cases of paralysis, owing to the fact that electricity, as a method of treatment, is inadvisable when well-defined organic change is present in the nervous system of the patient.

The most frequent period of occurrence of this condition of the system is between the fortieth and fiftieth years. Dredging out the drains of the axiscylinders in nerve structure in the histogenetic elaborating blood centres imparts new life and vitality by supply of fresh blood to prolong life to the ninetieth of ninety-fifth year. I am now in my eighty-seventh year, and evidence of the influence of electricity. Memory perfect; walk a mile with ease and comfort every day; rest well at night; digestion vigorous; write letters frequently without glasses; and functions of the system generally as vigorous as in my fiftieth year.

An important fact in electrical abdominal massage is the increased absorbing power of the system in administration of medicinal agents for relief of disease. In the poisoned condition of absorbing structures,

produced by auto-intoxication, therapeutic power is undoubtedly reduced, owing to escape from the system unchanged of medicine administered. The power and potency of Salvarsan as a remedial agent in syphilis will add greatly to its curative influence under such circumstances by abdominal electric neurotone massage. In many other diseases like beneficial results will follow the electric stimulus to therapeutic action.

The diagnosis of the exact state of the system, under such circumstances, is most important, as the presence of organic disease would preclude entirely electrical treatment. It is urgent to fortify the system by the promotion of normal reflexes, internal and external, chiefly through that important covering of the body, the skin, which should be vigorously stimulated, and cleansed, night and morning, with a flesh brush, in ordinary water, to remove the tear and wear from escape of food products, of which as great a part pass through the skin in twenty-four hours as escape from the body by the alimentary canal. Reflex action thus established reaches the interior of the body completely and promotes a balance of reflex power between the inside and the outside of the body truly remarkable. Sponging the head night and morning is most important. The vessels of the scalp communicate with those of the interior leading to brain centres, and in the active duties of life the protection of brain power thus established is a perfect life insurance. According to Sir Burdon Sanderson, of Oxford, the amount of water in the human body of 135 pounds' weight is fully 111 pounds, and such should be as free from impurity as possible to avoid development of disease. More deaths take place from excess of food than of alcohol. To guard and protect the nervous system the problem of diet is most important. Simplicity and moderation are golden principles which apply most directly in obstructed nerve centres.

The chief diagnostic indications of nerve block are:

1. Ex-sanguine state of the system generally.
2. Slight œdema of extremities, not result of cardiac, renal or hepatic complications.
3. Dilatation of the colon, result of abdominal auto-intoxication and gas production.
4. Flabby state of muscular system generally, result of lessened blood supply.
5. Corkscrew condition of small blood vessels of sclerotic coat of eye.
6. Coldness of body, result of lessened heat-producing power of the system from defective decomposition of the hydro-carbons.

The discoveries of recent years, and the novelties of modern science, have aroused both interest and thoughtful scrutiny. Human knowledge

is rapidly widening out in different lines of observation, and in the midst of diligent endeavor, we occasionally detect a corner somewhat neglected and worthy of closer scrutiny. After many years of student life in electrical science, I conceived the idea of arousing increased functional activity in absorbing power of special tissues, by electrical abdominal massage, which method of stimulation I found of marked benefit in perfecting the assimilation of food products in the alimentary canal, thus assisting most markedly the increased formation of blood. Syphilis, as a disease, is now considered more fatal than tuberculosis by Sir William Osler. Under such circumstances no effort should be spared where there is even a shade of prospect of benefit in rendering relief. Physiological absorption, the outcome of functional activity of certain tissues, is an established principle, and any scientific method of action, likely to stimulate increased performance of function, commands the most careful consideration. Therapeutic action under ordinary circumstances is a difficult problem strongly in evidence in the endless variety of medicinal agents administered nowadays, where they go, or what becomes of them, who can thoroughly explain. Fortunately an exceptionally potent drug, Salvarsan, appears suddenly like a comet in the heavens, arousing interest and belief, as to its therapeutic efficacy. The syphilitic system thus charged requires clearing out of a serious poison, and to effect the most perfect curative action I am confident decided benefit will result from stimulation of the absorbing tissues in the alimentary canal by abdominal electric massage.

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#### TREATMENT OF CHRONIC SPECIFIC URETHRITIS.

S. R. Thompson (*Charlotte Medical Journal*, April, 1917) divides the treatment into dietetic, hygienic and constitutional. Liberal diet, plenty of water, and free evacuation of the bowels daily are of the greatest importance. Of the urinary antiseptics, urotropin, methylene blue, salol, benzoic acid, and the benzoates are the best. Vaccines, with the exception of autogenous vaccines, are of little value, and phylacogens are still less scientific. Locally, the use of sounds and irrigations with potassium permanganate, silver nitrate, bichloride, or other germicidal agents is advised. The high frequency electric apparatus and local endoscopic applications have been abandoned. If the seminal vesicles are involved, they should be emptied every third to fifth day. If the symptoms fail to subside under this treatment, one of three surgical procedures should be performed: (1) The vas deferens should be opened and five cc. of a five per cent. solution of collargol or argyrol injected into the seminal vesicle; (2) seminal vesiculectomy; (3) seminal vesiculotomy.—*New York Med. Jour.*

## CURRENT MEDICAL LITERATURE

## THE THREE VARIETIES OF DIAGNOSTICIAN.

Doctors may be divided into three classes, those who diagnose boldly, spectacularly, and sometimes correctly; those who hesitate to commit themselves, and those who examine carefully and at length make up their minds, finally stating their convictions in a quiet, decided manner. Each kind of physician has his following among the laity and his disciples among the medical students and the younger members of the profession. As an example of the first class there recurs to us a small, energetic doctor who used to frequent the wards of a large hospital. His specialty was auscultatory percussion and by its means he would make some startling diagnoses, usually of malignant growth in some obscure part of the body. The writer remembers him to have diagnosed a tumor of the cerebellum by this means alone. The joke ran among the students that his favorite diagnoses was cancer of the foramen of Winslow. He never lost a chance to attend an autopsy and was invariably surprised and profane to find that he had not hit exactly the cause of the symptoms. Moreover, he always had some excellent reason why he had been led astray on that case.

Speaking of the second class of physicians the picture rises before us of an aged doctor who used to attend a children's hospital. He was a bachelor of the old school and meticulous to a fault. Sitting on the patient's bed or even putting one foot on the rung of a chair he abhorred. The student who consulted a watch in one of his clinics was publicly censured. This estimable gentleman's idiosyncrasy was conservatism. He would listen for half an hour to all parts of a child's lungs, said infant running a temperature, pulse, and respiration of 103°, 110, and 40, respectively, having an area of dullness on percussion over the entire top of the right chest, anteriorly and posteriorly, with vocal fremitus and bronchial breathing over the same area, not to mention subcrepitant rales, a hard, dry, painful cough, and a bright flush of the right cheek, and would finally say, "Well, doctor, I think this child has some condition in the lungs there—on the right side, I think—the upper right lobe, I think it is. Now I'll tell you what I'd do for him," and then would follow his usual directions for pneumonia cases.

The third class of physician hardly needs any exemplification, as the rank and file of the profession are included in it. Most of us would probably confess to a preference for this class, especially if it is ourselves or a member of our own family who is to be treated, however much we may admire the occasional brilliant diagnosis which smacks of necromancy or the cautious conservatism which guarantees prudence.—*Medical Record.*

## A NEW TREATMENT FOR STATUS EPILEPTICUS.

William Held (*Indianapolis Medical Journal*, February, 1917) states that he had never seen a case of status epilepticus which did not terminate fatally until he began to use the following method of treatment. He had now used the method on six patients, two of whom died while four survived. His description of it is as follows: Use hot applications to the feet, cold cloth upon the head and plenty of fresh air admitted through the windows while the patient is kept well covered to prevent chilling of the body. Any phlegm in the mouth is removed with the protected finger to prevent its inspiration during breathing. A high rectal enema of two quarts of warm water is given. It is necessary to have at least one assistant during the convulsive state as the treatment must be given regardless of attacks. An arm is bared, constricted above the elbow with a towel or other bandage, and from ten to twenty c. c. of blood are drawn into a syringe. When there is great congestion of the head or the patient is plethoric, the full amount of twenty c. c. is preferred. The blood is emptied into two test tubes and chilled for a few minutes either in running water or on ice, and then is centrifugated at the bedside. The serum is drawn off, two c. c. taken, and added to the same quantity of sterile physiological salt solution, the mixture shaken and one-half of it, i. e., two c. c., discarded. Again two c. c. of the salt solution is added, and the process of shaking and discarding of two c. c. repeated. This is done until two c. c. of the salt solution has been added fifteen times. To the last four c. c. of the solution obtained two minims of dissimilar antiepileptic serum is added, and after thoroughly mixing this solution five drops of the same are injected intravenously. In the text he says that the serum was that of any other epileptic under treatment at the time, but in a footnote he says: "Blood serum obtained from epileptic rabbits previously prepared with antirabic virus, inoculated with the serum—cerebrospinal fluid of particular epileptic also inoculated—serum inoculation continued until rabbit shows immunity to epileptic serum by not having anaphylactic reaction. Antiepileptic serum prepared from such rabbit's blood and tissue." This serum was not used in one of the two fatal cases, "the ferment not being on hand." No other reference to this ferment in connection with this method of treatment is given.

## TREATMENT OF ACHYLIA GASTRICA.

William MacLennan (*Glasgow Medical Journal*, January, 1917) is convinced that achylia is not sufficiently recognized as a causative factor in many apparently obscure gastrointestinal derangements. In achylia gastrica nervosa and in only partial achylia, good results from treatment may be expected. Fresh air, gentle exercise, and avoidance of fatigue and

over-excitement are essential measures. If there is loss of weight, rest in bed and general massage with olive oil are of great value. After massage, physical culture at home, e. g., Müller's exercises, should be carried on persistently. In the diet, large quantities of fat and oils are to be avoided, though small doses of codliver oil emulsion or of malt and oil are sometimes well borne and improve general tone. If signs of gastric fermentation exist, gentle lavage twice weekly with saline solution at 100° F. is very useful. Hot compresses, the Aix massage douche, and alternate hot and cold douches over the stomach are all of value. Medicinally, bitters, though sometimes useful, alone are insufficient, hydrochloric acid being the chief remedy. In partial achylia, the gastric contents should be tested at intervals to avoid artificial hyperchlorhydria. The carbohydrates should be taken in the intervals—three hours after each meal—and as far as possible, eaten quite dry, to promote mastication, fluid being ingested later. A useful form of artificial digestive is:

℞ Acidi hydrochlorici diluti. . . . . ℥i-ii;  
 Glyceriti pepsini (N. F.) . . . . . ℥iiss;  
 Fluidextracti condurango, . . . . . ℥i;  
 Aquæ chloroformi, q. s. ad. . . . . ℥vi.  
 M. et sig.: Two teaspoonfuls in water thrice daily, after food.

If there is fermentation, a small dose of resorcinol may be added. Where motor insufficiency exists, as in achylia with gastroptosis, the following combination is effective:

℞ Strychninæ . . . . . gr. 1/24;;  
 Physostigminæ salicylatis . . . . . gr. 1/96;  
 Quininæ hydrochloridi, . . . . . gr. i.  
 Extracti euonymi . . . . .  
 Gingerine . . . . . ana gr. 1/4.  
 Fiat pilula no. i. Mitte tales no. lx.  
 Sig.: One pil thrice daily after food.

—*New York Medical Journal.*

#### BISMUTH AND IODOFORM PASTE IN GUNSHOT WOUNDS.

At a meeting of the Association of Registered Medical Women on February 13th, when Dr. Helen Boyle was in the chair, Dr. Louisa Garrett Anderson read a report on gunshot wounds, more especially of the head, treated at the Military Hospital, Endell Street. The total admissions to the hospital during the later part of 1915 numbered 2,633; of these, 18 had compound fracture of the skull due to gunshot wounds, 18 were trephined, and all but 2 recovered. During 1916, among 4,297 admissions, 14 had compound fracture of the skull, 12 were trephined, and



one ended fatally. The prognosis depended partly upon the position of the injury; thus, of the above 32 cases, 6 in the frontal region recovered, 4 in the temporo-sphenoidal recovered, 16 in the Rolandic area recovered, while of 6 in the occipital region 3 proved fatal. Complications included 7 cases of hernia cerebri, of which 6 recovered, 2 of abscess, of which one recovered, one of meningitis, which was fatal. Dr. Anderson reported many cases in detail, and showed slides of the X-ray appearances. A boy, aged 19, had his right arm shattered, necessitating amputation at the shoulder; there was also a scalp wound. In a few days the temperature was  $102^{\circ}$ , and he complained of headache and vomited; an abscess an inch in depth was discovered in the frontal lobe. This was treated with bismuth and iodoform paste, and the patient made an excellent recovery. Several cases of cerebral hernia also yielded rapidly to treatment by the same paste. In a very badly comminuted fracture of the ulna near the elbow, the wound was thoroughly exposed under an anaesthetic, and bismuth and iodoform paste was crubbed well in. In six weeks union had taken place, the wound had healed and the movement of the arm was normal. Before the introduction of bismuth and iodoform paste this case would probably have been under treatment for months. The first dressing was left for six days, and later dressings for a longer period. In another case the head of the humerus had been removed in France, leaving a very septic wound and a cavity which admitted three fingers. This was dressed at six to nine days' intervals with bismuth and iodoform paste, and in six weeks had healed completely, leaving neither pain nor swelling. A bad fracture of the wrist healed in a month by the use of bismuth and iodoform paste, movement being perfect. A fracture of the neck of the femur connected with a foul gangrenous wound was similarly treated with bismuth and iodoform paste and put at rest in a Boulogne box; the patient was now walking with the aid of a thin stock. In a fracture of both leg bones, pouring out pus and with a high temperature, the wound was thoroughly cleansed and treated with bismuth and iodoform paste; the edges of the septic wound were stitched up and held; the wound was dressed every seven to ten days, and healed completely. The use of bismuth and iodoform paste was originally suggested by Mr. Rutherford Morison, and the advantages over the old method of treatment were enormous. In the early days of the war these septic wounds were dressed two to three times daily, causing great pain, and requiring much assistance and much time, while healing was much delayed. In using bismuth and iodoform paste the gauze covering was changed every seven to ten days, and the time required for dressing was about three minutes, while healing was infinitely more rapid.—*British Medical Journal*.

## RECENT RESEARCHES ON TUBERCULOSIS.

Under the aegis of the Henry Phipps Institute at Philadelphia a series of experimental researches have been carried out during the last few years. Some of them have already appeared in American scientific periodicals, but have now been published collectively in the Thirteenth Annual Report of the Institute. They cover a wide field, but all have a direct bearing upon the study, treatment or prevention of tuberculosis. An interesting inquiry into the dietary of the ordinary dispensary patient and the actual food values of the articles consumed daily by the various types has elicited proof that in the great majority of cases the diet did not come up to the accepted standard of calories by one-fifth. The explanation given is two-fold. Poverty, on the one hand, may account for a good deal, but ignorance on the part of the housewife is responsible for the greater part. A close investigation as to the purchasing power of 10 cents, as expended by different classes, such as Italians, Russians, negroes, and Jews, showed a marked difference in results. The prevention rather than the treatment of disease, and especially of tuberculosis in connection with childbirth, is the subject of an interesting account of work carried on at the institute and the Babies Hospital. Prenatal work among the well-to-do, as well as among the poorer classes, is effecting many changes for the better, but the mortality from preventable causes is still appallingly high. A very important, though short, communication on the subject of latent syphilitic infection of the lungs deserves special note. Pulmonary lesions unaccompanied by fever or sputum are almost always attributed to quiescent tubercle, but in many instances the Wasserman test has revealed the specific taint and special treatment has healed the lesion. Salvansan has proved as effective in such cases as in cutaneous affections due to the same cause. Attempts to destroy or annul the activity of the tubercle bacillus in the tissues have occupied the minds of experimental pathologists in many lands since the selective action of tuberculin was first demonstrated. It has now been found that certain substances, of which trypan-red is thought to be the best, have a definite effect upon the blood-vessels surrounding a tuberculous lesion, and that in the laboratory such substances will inhibit the growth of the bacilli when used in sufficient concentration. Details are given of the results so far obtained, and they undoubtedly form a substantial foundation for future work. Many other papers of interest bearing upon difficult chemical questions, and notably as to the presence of iodine in tuberculous and other organic tissues, will be found in the report.

### CLOSURE OF INTESTINAL WOUNDS WITH PORTIONS OF MESENTERY.

As far back as 1876, when antisepsis was in its infancy, Tietze suggested that omental grafts could be used to reinforce possible defects of the stomach and bowel, such as might occur in enteroanastomoses. In 1888 Senn tested this subject thoroughly in animal experiment, mesenteric grafts having been used to aid in preventing necrosis. In 1906 Ammann covered the same subject in the laboratory, and recommended the principle warmly.

Nevertheless, Vincente Castro of Costa Rica (*Cronica Médico-Quirúrgica de la Habana*, February 17) has been unable to find in literature a single case in which this principle has been utilized in surgery, although case reports are abundant in which such a procedure could well have been tested. Lest case reports or their absence be not a true measure of work done, the author draws upon his personal experience for three years in the Hamburg-Eppendorf Hospital with its 800 surgical beds. This was entirely negative in this respect. He claims no originality for the operation performed by him save in technique.

In the author's case the patient was a woman aged 35, who had suffered for many years with constipation and a tenderness in the right iliac region. She was believed to have had several mild attacks of appendicitis. Four years before she had been operated on for fibroma of the uterus. Upon laparotomy the appendix was found buried in a mass of adhesions and was excised. A Meckel's diverticulum was also discovered which was 8 cm. long and partly inflamed. The insertion was compressed with an angiotribe and ligated and the stump cauterized and inverted. For some reason, however, the lumen of the intestine was at first seriously occluded, while at the same time a ready opportunity was afforded for the stump area to contract adhesions. The ideal operation was a short resection of the small bowel, but this would have subjected the patient to too severe an intervention, her heart action being poor (myoma heart?). The author therefore excised a small piece of mesentery and sutured it over the raw surface of the intestine with a few points of fine catgut. Although fully prepared for a sloughing of the transplant he was able to report a complete success.—*Medical Record*.

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### EPIDEMIC INFLUENZA WITH THROAT SIGNS.

A. Geoffrey Shera (*Lancet*, March 24, 1917) states that he studied some 500 patients during an epidemic of influenza and in every case observed characteristic throat signs. In the initial stages there was a vesicular eruption on the soft palate, fauces, and posterior pharyngeal wall with erythema of the mucosa. These local phenomena were gen-

erally followed by neuralgias or other nervous manifestations. The clinical types of the disease were exclusively the catarrhal and nervous, with no cases of the abdominal form. Some complication occurred in forty-two per cent. of the cases, the commonest having been some form of neuralgia, which occurred in seventy-five per cent. of the cases with complications. Vertigo, seventh nerve paralysis, melancholia, and persistent sweating comprised most of the remaining complications. From a careful analysis of the conditions seen the author concluded that the influenza toxin seemed to spread centripetally along the sensory nerve fibres after attacking the pharyngeal mucosa. Its spread might lead to nothing fore than neuralgia, or might continue and involve the central nervous system.—*New York Med. Jour.*

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#### BANTI'S DISEASE.

E. Mosthcowitz, New York, (*Journal A. M. A.*, Sept. 29, 1917), reviews the question as to whether Banti's disease is a distinct entity or not. He says we meet with a strange phenomenon, the disease being accepted by clinicians and only negatively, so to speak, by pathologists. His study of the disease was instigated by the report of two cases treated in the Beth Israel Hospital. In both the clinical diagnosis of Banti's disease seemed to be inevitable but the pathologic findings he argues do not bear out the clinical diagnosis. His argument is extended and cannot be fully stated in a brief abstract, but he concludes that all the evidence thus far points to the theory that Banti's disease and splenic anemia are the same. There is no reason, he says, for differentiating Banti's disease from other splenic maladies on the ground that in the former no etiology can be determined. Nosologic distinction based on whether the cause of a disease is known or unknown has no place in clinical medicine. We should rather regard Banti's disease, he thinks, as a nosologic and clinical entity which may be due to known or unknown causes. The known causes are syphilis, alcohol, malaria, trypanosomiasis, persistent umbilical vein, etc. In all these maladies the splenomegaly and indurative splenitis with eventual atrophy of malpighian follicles and an anemia are the predominant features. Banti's disease has no typical course and diagnostic symptoms, and he cites instances, which in his opinion show the erroneous diagnosis of this disorder even by able clinicians. Its pathology is by no means specific and Mosthcowitz believes he has good reasons for rejecting Banti's diagnosis of cirrhosis of the liver. It is secondary to the splenotoxin. On the other hand, he thinks it is better to hold that a fibrogenetic toxin, probably of intestinal origin, attacks the organs, draining the portal area and

causing primarily a fibrosis of the spleen and, if the toxin is sufficiently virulent, or if the patient lives long enough, producing a cirrhosis of the liver as well, and also the common association of sclerotic vascular changes in the mesenteric vessels in Banti's disease are most readily explained. He suggests that the name "Banti complex" be substituted for "Banti's disease" in clinical medicine.

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## PERSONAL AND NEWS ITEMS

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The Ontario License Board has shown marked and commendable energy regarding medicated wines, and some proprietary medicines. A short time ago several firms which put on the market medicated wines were given their choice between going out of business or accepting prosecution. They decided to discontinue making their medicated wines.

Acting-Major Harold Buck, of Port Rowan, a graduate in medicine of 1910, is reported wounded. He went overseas with No. 5 Field Ambulance, and has been serving with an ambulance at the front. In June last he was mentioned in the despatches and was awarded the Military Cross the following month.

Dr. Charles J. O. Hastings, of Toronto, was recently elected president of the American Public Health Association at its closing session.

At the annual meeting of the Collingwood General and Marine Hospital reports showed that 602 patients had been given medical attendance, this being an increase of 126 over the preceding year, and the record in the history of the hospital. The total assets of the hospital are \$34,200, and the net liabilities \$3,300. The following were elected trustees: H. Y. Telfer, C. C. Begg, David Williams, W. A. Hamilton, H. W. Bruce, W. A. Hogg and F. W. Bryan.

Sir William Hearst, Premier of Ontario, has made a presentation of a large motor van for the use of crippled soldiers to the North Toronto Military Hospital. C. F. Bailey, of the Department of Agriculture of the Province, stated to the men that the ambulance had been bought with funds contributed by children of the Province at the rural school fall fairs. Sir William was accompanied by I. G. Riddle, of the Military Hospitals Commission, and the gift was accepted on behalf of the commission by F. J. Winslow. After the presentation the party, accompanied by the commanding officer of the hospital, Major W. C. M. Marriott, inspected the building.

The Toronto Board of Education has turned over Park school to the military authorities to be used as a military base hospital.

Dr. A. L. Danard has been selected a candidate in North Grey. Dr. Danard's home is in Owen Sound.

Lieut. Paul Brook Clarke, only son of Dr. W. F. Clarke, of 2132 Queen Street East, Toronto, has been killed in action. Lieut. Clarke was 21 years of age and had served more than ten months in the trenches. He went overseas with the 19th Battalion of the 2nd contingent.

The news has come to this country through an escaped Canadian prisoner that Dr. Beland, formerly Postmaster-General of Canada, is in fair health and is acting as a cook.

Dr. Albert Dastro, a member of the Academy of Sciences and the Academy of Medicine, and a noted physiologist, was killed recently in an automobile accident. Dr. Dastro met death in the same street near where Prof. Curie, co-discoverer of radium, with his wife, Madame Curie, was killed in 1906.

A very hearty welcome was given to Dr. and Mrs. Gunn, of Clinton, Ont., on their arrival by the G. T. R. For the last two years Dr. Gunn has been doing military hospital work in England and Scotland, and during the last year he had charge of one of the large hospitals in Glasgow. A large number of the citizens met at the station to join in the welcome, and the pipes of the Clinton Kilty Band enlivened the proceedings and escorted the Dr. and his wife to their home on High Street. Before going overseas Dr. Gunn took a leading part in the surgical work of Huron county, and conducted a private hospital in Clinton, but unfortunately for the town the hospital has been closed during his absence.

The returns from the Toronto cemeteries for the month of October show that there were 422 interments, as follows: Mount Pleasant, 110; Necropolis, 10; Prospect, 115; St. James', 18; St. John's, 76; Mount Hope, 61; St. Michael's, 12; Hebrew cemeteries, 20.

Dr. Fred Burnham, of Winnipeg and Peterboro, who has been director of a hospital among the Serbians for the past two years, has returned to Canada, where he will make an appeal on behalf of this work in the Balkans with a view to establishing a Canadian hospital there.

The results of the analysis of half a dozen brands of medicated wine, made upon the instructions of the Ontario License Board, have been announced. The laboratory examination reveals the fact that most of the brands upon the market contain from four to five times as much alcohol as beer. The most serious offender—a very well-known brand—had 35.08 per cent. proof spirits. The others were, 29.92 per cent., 25.62 per cent., 21.11 per cent., and 20.60. Two malt extracts had 13.95 and 10.01 per cent. proof spirits. The strength of the preparation can be

appreciated when it is remembered that beer runs from 6 to 8 per cent.

An interesting event in the annals of the medical department of the Toronto University occurred on the 15th November, when the graduates in medicine of 1892 celebrated the 25th anniversary of their graduation—a quinquennial affair—by a dinner at the Carls-Rite. Of the original class of 58 graduates, some 47 are still in practice in various parts of the continent. Lieut.-Col. Herbert A. Bruce, Major Samuel H. McCoy and Capt. Chester C. Richardson are overseas, while Lieut.-Col. D. A. Clark has recently returned. Drs. Thomas Middlebro, F.R.C.S., of Owen Sound; Thomas Beith, superintendent of the Victoria Hospital, Winnipeg; Harry Way, obstetrician to the West Side Hospital, Chicago; William Chambers (an old Toronto boy), of Cleveland, and Rev. E. G. Smith, a returned medical missionary from India, are among the members of this class. Dr. Laughlin MacKechie, of Vancouver, is president; Dr. George Bowles, Coroner James A. Evans, Benjamin Kilborne and John N. E. Brown, all of Toronto, constituted the committee of arrangements.

Dr. Clarence Hineks recently stated that there are 7,700 feeble-minded persons at liberty in Ontario. They are causes for much degeneracy, pauperism, crime, and immortality. They are filling the jails and reformatories with unfortunates that should never have been born had common sense prevailed in the past.

Announcement is made by the Military Hospitals Commission of the immediate erection at London, Ont., of a convalescent home for returned soldiers. Provision will be made at once for three hundred beds, with capacity for expansion to six hundred or more as required. The site has been contributed by the London city council. The Ontario Government is bearing a substantial portion of the cost of construction. It is stated in the announcement that the decision to build a convalescent hospital at London comes as a culmination of negotiations in which Sir Adam Beck, S. Frank Glass, ex-M.P., and the city council of London took part.

Capt. R. W. Young, a graduate in medicine of 1912, whose home is in Waterloo, Ont., is home and doing work at Whitby Military Hospital. When the war broke out he obtained a commission in the R.A.M.C. and saw service in Egypt, where he had many exciting experiences, especially in caring for wounded Turkish prisoners.

Drs. T. Middlebro, of Owen Sound; H. B. Anderson, and J. N. E. Brown, of Toronto; H. J. Way, of Chicago, with ex-superintendent, Dr. Charles O'Reilly, celebrated their 25th anniversary as internes at the Toronto General Hospital on 15th November, by lunching together at the York Club. The other members of this class are Col. H. A. Bruce and Lt.-Col. H. C. Parsons, overseas, and Dr. F. Fenton, deceased.

Surgeon-General Carlton Jones is returning to Canada at an early date.

The Muskoka Free Hospital for Consumptives is just in receipt of a cheque for \$2,000 from the estate of the late Mrs. Mark E. Cockburn, to be applied towards the maintenance of a bed at that hospital to be known as the "Major H. Z. Churchill Cockburn, V.C., Cot."

Dr. Charles Sheard, formerly Medical Health Officer of Toronto, is a candidate for parliamentary honors in South Toronto.

Dr. E. T. Myers was nominated as Unionist candidate for Kindersley, Sask.

Dr. F. C. Hamilton, of Winnipeg, is in the field as a candidate in Marquette, Manitoba.

Dr. A. E. Hanna was nominated Unionist candidate for the new constituency of Lanark.

Dr. S. Bonnell, of Fernie, is the Union candidate in East Kootenay, B.C.

Dr. J. W. Edward is again in the Federal election for Frontenac, Ontario.

Dr. B. K. Anderson is a candidate in Halton, Ont.

Dr. M. R. Blake is a candidate in North Winnipeg.

Announcement has been made at a meeting of the Swedish Medical Society by Dr. Carl Kling that he had discovered a serum for the treatment of scarlet fever.

Hon. Dr. J. D. Reid is again a candidate in the county of Grenville, Ontario.

Dr. J. R. Johns, of Morris, is a candidate in Provencher, Man.

Dr. Mahoney, of Eganville, is a candidate in South Renfrew, Ont.

Dr. J. G. Merrison is in the field in West Lambton, Ont.

Dr. P. B. McGibbon, of Bracebridge, is a Federal candidate in Muskoka, Ont.

Major J. S. Jenkins, who is attached to the medical headquarters in London, appears in the orders to-day as a Lt.-Col. Major Jenkins, is a McGill man, and is the son of Senator Jenkins, of Charlottetown. He has taken over the duties of Major Macphail.

Major Kenneth L. Duggan, of the Mounted Rifles, who is unofficially reported missing and believed killed, is the son of Mr. and Mrs. G. H. Duggan, of Montreal. His only brother, Herrick Duggan, of the Royal Engineers, was killed at the battle of Loos two years ago.

Among the medical officers who have sailed to Canada on either short leave or duty are Col. L. McCombe, of Ottawa, assistant medical director of the London area; Col. C. L. Starr, of Toronto, who has been ortho-



pædic surgeon at Ramsgate Hospital; Col. J. L. Ptter, acting director at Ottawa, who has been visiting England.

In Canada there are annually about 8,000 deaths from cancer. Much could be done to reduce the number by carefully attending to sores on the lips, tongue, in the mouth, moles, small ulcers, etc., on persons over 45 years of age.

The annual meeting of the Women's College Hospital, Toronto, gave evidence of progress. The income for the year was \$12,527, and the expenditures \$12,907, leaving a small deficit of \$380.

Dr. Lewis A. Stimson, of New York, who died suddenly in September, was born at Paterson, New Jersey, in 1844. He graduated in arts at Yale in 1863, and served as a captain in the Union army till the end of the Civil War. He was professor of physiology from 1883 to 1885, of anatomy from 1885 to 1889, and of surgery from 1889 to 1898, in the New York University Medical College. In 1898 he was called to the chair of surgery in the Cornell Medical College, New York City. Dr. Stimson was consulting surgeon to the New York and Bellevue Hospitals, and his name was well known to surgeons throughout the world by his work on operative surgery published in 1900 and his *Treatise on Fractures and Dislocations*, which has gone through eight editions. He was also the author of numerous other contributions to medical literature. He was an enthusiastic yachtsman, and some years ago sailed his own boat in a race across the Atlantic.

The Cuban Red Cross Society is equipping a 100-bed hospital unit, manned by Cuban physicians and nurses, for service on the western front in France. Cuban women prominent in Havana society have set out to raise a fund of \$1,000,000 to finance the unit. It is hoped that the enterprise will reach completion at an early date. Upward of \$100,000 is already in hand.

A correspondent of the *New York Times* calls attention to the possibility of using sphagnum or peat moss as a surgical dressing. Owing to the very limited supply of cotton that the blockade permits to get into the Central Empires, the Germans have been using this substitute on fresh wounds and claim that it absorbs from seven to ten times its own weight in liquid, while cotton absorbs only six times its weight. The moss also dries more quickly than cotton.

Dr. Lachapelle, of Montreal, has been elected president of the Dominion Medical Council. Many congratulations on receiving this high honor. Dr. Lachapelle will duly do honor to the office.

Dr. W. J. Clark, of Toronto, who has been overseas for a year and a half, is home on furlough.

Dr. J. Gordon Gallie, of Toronto, will in future confine his practice to obstetrics and gynæcology.

Captains L. J. Siebert, M.D., and J. D. Livingstone, M.D.; Lieutenants J. A. MacDonald and P. E. Ford, M.D., have gone to China.

Drs. W. L. Denny, London, and D. A. McKillop, St. Thomas, Ont., have received commissions in the Royal Navy.

The Toronto General Hospital has applied to the city council for a grant of \$50,000; the Western Hospital for \$20,000; the Hospital for Consumptives, \$40,000; the Hospital for Sick Children, \$38,000, and Women's College Hospital, \$33,000.

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## OBITUARY

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### WILLIAM JULIUS MICKLE, M.D., F.R.C.P.

Professor William Julius Mickle, an eminent authority on general paralysis of the insane, died at Allandale, Ont., on 14th November, aged 70 years.

Prof. Mickle was born in Guelph and was educated at the Elora school, later going to Toronto University, where he was gold medalist in 1866. He had a very distinguished course at the University and later went to England, and was made a Fellow of the Royal College of Physicians of London. He was also made a lecturer at London University and Middlesex College.

While in England he did most important pioneer work on general paralysis of the insane, and he wrote a book on this subject, which was published and used as a classic. For some time he was superintendent of the Bow Asylum. He was considered an authority on brain and nervous disorders. He was an associate editor of the publication, *Brain*, published in London, and contributed articles to the *Journal of Mental Science*.

At the meeting of the British Medical Association in Toronto in 1906 he was made chairman of the psychological section and held this for eight years.

At the time of the outbreak of the war Prof. Mickle was living in England. He was a friend of Lord Kitchener, and the latter's death had a lot to do with the breaking down of his health. He then came back to Canada and had been in failing health for some time.

Prof. Mickle was offered an important position shortly before his health broke down, that of devoting his whole time to the work of brain

and mental diseases in England. He had one sister, Mrs. Bell, wife of Mr. Bell, of the Geological Survey at Ottawa, and a brother, Mr. Harry Mickle, a Toronto lawyer.

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HUGH RYERSON BRIGHT, M.D.

Dr. Hugh Ryerson Bright, who died at his home in Athens after a very brief illness, was a native of Wellington county, and an honor graduate of Toronto University, 1905. Previous to going to Athens, over two years ago he practised at Exeter, Huron county. His father resided at Wiarton, and a brother, who is also a doctor, lives in Winnipeg. Two days prior to his death his automobile capsized and he was injured across the back, which is thought to have been the indirect cause of death. Mrs. Bright is a graduate nurse, and was connected with the Western Hospital, Toronto, prior to her marriage. Their family consists of two sons.

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HON. THOMAS SIMPSON SPROULE, M.D.

Hon. Thos. Simpson Sproule, M.D., M.P., for East Grey, 1879 to 1915, when he was called to the Senate, and for four years Speaker of the Commons, died 10th November, in his 75th year. He had been in fairly good health and a few days before his death attended a funeral in Flesherton. The night before his death he was seized with intestinal trouble. He is survived by his widow and one daughter, Mrs. Turner, of Salt Lake.

Born in King township, York county, October 25th, 1843, of Irish parentage, he graduated in medicine at Victoria College in 1868, and finally settled in Markdale, where, besides practising his profession, he carried on farming, and was in the drug and stationery business. He married, in 1881, May Alice, daughter of K. W. Fisher, ex-M.P.

In Parliament he was the oldest member, in time of service, with the exception of Sir Wilfrid Laurier. He was for five years chairman of the standing committee on Colonization and Agriculture, and was for some years chairman of the Miscellaneous Private Bills Committee. He was recognized as leader of the Orange forces in Parliament, having always been prominently connected with the Loyal Orange Association of British North America, to the Grand Mastership of which he was appointed upon the death of the Hon. N. Clarke Wallace in 1901, holding the position until about four years ago. He was also a prominent member of the British Empire League.

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RICHARD H. BONNYCASTLE, M.D.

Dr. Bonnycastle graduated from Toronto University in 1905. When the war broke out he joined the R.A.M.C. After a time he was trans-

ferred to the C.A.M.C., and was raised to the rank of major in August, 1917. He returned to his home in Campbellford, Ont., owing to ill-health, where he died 8th October.

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MURRAY H. PATTERSON, M.D.

Dr. Patterson was a Toronto graduate of 1914 and held the position of interne at the Hospital for Sick Children when the war began. He volunteered for active service, and served in the trenches, where he was wounded and suffered from hell-shock. He was for a time in the Orpington Hospital. He was then removed to London, where he died.

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GILBERT PROUT GIRWOOD, M.D.

Dr. Girwood died in Montreal on the 2nd October, at the advanced age of 85. For the past five years he was blind, but by the aid of his wife and daughter made a very careful and valuable study on the effect of coal gas on the health of the people of England, Canada and the United States. The late Dr. Girwood was the son of Dr. Girdwood, of Edinburgh, and was one of the most learned and best liked of medical men in Canada. He studied at St. George's Medical School, and became a member of the English College of Surgeons in 1854. He came to this country in 1862 with the British Grenadiers, and settled in Montreal. In 1865 he took the degrees of M.D., C.M., at McGill. In 1869 he was appointed to the subject of practical chemistry and in 1872 became professor of chemistry at McGill.

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WILLIAM KIER, M.D.

Dr. Kier died at the great age of 93 at Malpeque, Prince Edward Island, where he had lived and practised his profession for nearly 70 years. He lived a simple life that won the respect of all. Even at his extreme age he was able to attend to his practice until a few days before his death.

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H. W. WOOD, M.D.

Dr. Wood died at St. John's, Quebec, 27th September. He was a son of the late Hon. Thomas Wood, a member of the first Legislative Council after Confederation. He was born in Durham, Que., in 1839, and graduated in arts from the University of Vermont, and in medicine from McGill.

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## BOOK REVIEWS

## BLOOD PRESSURE.

Blood Pressure, its Clinical Applications. By George William Norris, A.B., M.D., Assistant Professor of Medicine in the University of Pennsylvania; Visiting Physician to the Pennsylvania Hospital; Assistant Visiting Physician to the University Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Third edition, thoroughly revised. Illustrated with 110 engravings and 1 colored plate. Philadelphia and New York: Lea & Febiger, 1917. Price, in cloth, \$3.50.

Those who wish to study the subject of blood pressure should secure a copy of this work. Professor Norris has given much time to the task of clearing up the many difficulties surrounding an accurate knowledge of blood pressure, and he is to be heartily congratulated upon the result of his labors. This book shows that the author has a wide knowledge of the literature of the vascular system, and more especially of that portion of it bearing upon the subject under discussion. To this knowledge he has contributed the conclusions he has reached from his own observations. The volume, therefore, contains the latest views upon blood pressure, and we most cordially recommend the book. The publishers have done their part well. The paper, typography, presswork and binding should please the most fastidious.

## REGIONAL SURGERY.

A Treatise on Regional Surgery by various authors. Edited by John Fairbairn Binnie, A.M., C.M., F.A.C.S., Kansas City, Missouri. Volume II., with 213 illustrations. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. Price, \$7.00.

The volume deals with the abdomen, the genito-urinary system, and the spine. The authorship includes such well-known names as Drs. Binnie, Morison, Ochsner, Mayo, Paul, Powers, Judd, McArthur, Coffey, Haggard, Lower, Fenwick, Gibson, Smith, Thomson and Thorburn. Each of these takes up some subject to which he has given special consideration. They are all professional men of great experience and well-known writers. Dr. Binnie has displayed excellent judgment in his selection of writers and in the assignment of subjects to them. In turn, the various writers have done well in contributing the very best sort of material for the volume. This work is sure to take a place among the great modern works on surgery. The publishers, so well known, have

done their share in a most commendable manner. We recommend this volume, and feel quite sure it will not disappoint those who consult it.

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### PRACTICE OF MEDICINE.

A Manual for Students and Practitioners. By Hughes Dayton, M.D., Associate Attending Physician, New York Hospital; Attending Physician, Hudson Street Hospital; formerly Instructor in Physical Diagnosis, Cornell University Medical School, New York. Third edition, revised. Philadelphia and New York: Lea & Febiger, 1917. Price, \$1.50.

This is a very well-arranged little volume of 325 pages, and gives the essentials of the practice of medicine in condensed form. It is a very readable book, and one from which the busy practitioner may refresh his memory, and the student use to much advantage in preparing for his examinations.

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### WAR SURGICAL NURSING.

Surgical Nursing in War. By Elizabeth R. Bundy, M.D., Member of the Medical Staff, Woman's Hospital, Philadelphia; formerly Superintendent of Connecticut Training School for Nurses, New Haven, etc. With 37 illustrations. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. Price, 75 cents.

A splendid new textbook—one that can be read as well as studied. It is prepared for the nurse at or near the front and points out the conditions there and consequent demands to be made upon her. The problems to be solved and the way to solve them. Contents: 1, Surgical Nursing in Wartime; 2, Missills Used in Modern Warfare and Their Immediate Effects; 3, Bacterial Invasion and Immunity; 4, Dangers of Infection, Shock, Hemorrhage; 5, Surgical Dressings; 6, The Wounded Man; 7, Mechanical Appliances; 8, Burns, Tetanus, Blood-vessel Injuries, Gangrene; 9, Bone Injuries; 10, Injuries of the Head; 11, Injuries of the Neck and Spine; 12, Wounds of the Chest and Abdomen; 13, Trench Diseases, Aviator's Headache.

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### RURAL PLANNING AND DEVELOPMENT.

A Study of Rural Conditions and Problems in Canada. By Thomas Adams, Town Planning Adviser, Commission of Conservation, Ottawa, 1917.

The latest report of the Commission of Conservation deals with the important subject of the planning and development of rural districts and small towns in Canada. It has been prepared by Mr. Thomas Adams, town planning adviser of the Commission, who has made a close

study of the problems of rural development in this country during the past three years, following twenty-five years' experience in farming, land surveying and town planning in other countries.

The report deals comprehensively with the social conditions and tendencies in rural areas and the prevailing systems of land settlement and development. It indicates the rural problems requiring solution in order to secure the proper development and economic use of land for purpose of efficiency, health, convenience and amenity. The great injury which land development in Canada suffers from speculation, neglect of public health and want of expert business administration of land settlement is considered. Incidentally the problem of returned soldiers is dealt with, and the connection between land development and such questions as taxation, unemployment and high cost of living is clearly shown.

Having regard to the need for more attention being given to production in Canada; to the extent to which production is impaired by speculation in land, by neglect of public health, and by haphazard systems of development, to the importance of increasing the supply of human skill and energy and of capital derived from production instead of by borrowing; the problems dealt with in this report are of vital and current interest to the people of this country.

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#### GENITO-URINARY AND VENEREAL DISEASES.

White and Martin's Genito-Urinary Surgery and Venereal Diseases. By Edward Martin, A.M., M.D., F.A.C.S.; John Rhea Barton, Professor of Surgery, University of Pennsylvania; Benjamin A. Thomas, A.M., M.D., F.A.C.S., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine; Instructor in Surgery, University of Pennsylvania; and Stirling W. Moorhead, M.D., F.A.C.S., Assistant Surgeon to the Howard Hospital, Philadelphia, Pa. Illustrated with 422 engravings and 21 colored plates. Tenth edition. Philadelphia and London: J. B. Lippincott Company. Montreal, Canada, 201 Unity Building.

It is just twenty years since the first edition of the work appeared under the joint authorship of the late J. W. White and Edward Martin. Since that date ten editions have appeared, and the senior author, the gifted Dr. White, has died. The present edition is dedicated to the late J. William White, a proper testimony to his splendid qualities of head and heart. The book before us is as complete as long experience and the wide reading of the authors could make it. Every phase of the surgery of the genito-urinary organs is considered, and handled in a most skilful manner. On the diagnosis and treatment of venereal diseases

the work is very full and exhaustive. The latest methods of treatment are very fully discussed. This work is such as can be the text-book for the specialist, and the guide and consultant for the general practitioner. No words of praise would be too high for the way in which the publishers have done their part.

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MISCELLANEOUS

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CONTAGIOUS DISEASES IN TORONTO.

While there is a falling off in the number of cases of diphtheria reported to the Medical Officer of Health for October, compared with September, there are 37 more than were reported in October last year. There were only 8 cases of typhoid fever, as against 27 in October last year. Of the 8 cases, 3 originated inside and 5 outside the city. The figures are as follows:

	Oct., 1917	Oct., 1916	Sept., 1917
Diphtheria .....	167	130	180
Scarlet fever .....	35	19	10
Typhoid ... ..	8	27	22
Measles .....	76	10	33
Smallpox .....	0	0	0
Tuberculosis .....	112	78	62
Chickenpox .....	51	42	17
Whooping cough .....	23	29	81
Mumps .....	33	4	19
Spinal Meningitis .....	1	2	1
Diphtheria carriers .....	29	4	35
Infantile paralysis .....	0	5	2
Ehysipelas .....	2	1	0

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MEDICAL CLASS OF 1892 MEET.

Several well-known medical men were present at the banquet at the Carls-Rite Hotel to join their confreres of the 1892 class of graduates in celebrating their twenty-fifth anniversary. Dr. Grown presided. The following were present: Drs. James A. C. Evans, Toronto; George



Bowles, Toronto; John N. E. Brown, Toronto; E. G. Smith, on furlough from India; Benjamin Kilbourne, Toronto; R. G. Green, Embro, Ont.; Harry J. Way, Chicago; Wm. Chambers, Cleveland; John Youen, of Aylmer; John J. Harper, Alliston; L. H. Campbell, Bradford; J. A. C. Grant, Gravenhurst; Thomas H. Middleboro, Owen Sound; John Hershey, Owen Sound; William Crawford, Hamilton; Harry Wardell, Hamilton; Jos. R. Smith, Grimsby, Ont.; Jos. Pinkham, Grand Rapids, Mish.; Frank Forrest, Port Hope. Roll of honor overseas are: Herbert A. Bruce, Toronto; S. H. McCoy (who cabled congratulations), Toronto; Chester C. Richardson, Windsor; Geo. Clingan, Virden, Man.

The following officers were elected: President, T. H. Middleboro, Owen Sound; vice-presidents, Harry J. Way, Chicago, R. G. Green, Embro, Benjamin Kilborne, Toronto, E. G. Smith, India; treasurer, Geo. Bowles, Toronto; secretary, John N. E. Brown, Toronto; executive committee, Wm. Crawford, Hamilton, J. J. Harper, Alliston, J. A. C. Grant, Gravenhurst.

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#### SUPPLIES ARE NEEDED FOR BASE HOSPITAL.

Word has definitely been received that the University Base Hospital has settled down for work at Basingstoke, in Hampshire, which is between 30 and 40 miles from Southampton. It is understood that a spur line of the railway has been run into the hospital so that cases will reach the wards direct from the field of battle. It will even be possible to render first aid to men from the front, so good are the lines of communication. The capacity of the hospital has been raised from 1,040 to 2,000 beds, and it is expected that even more valuable work will be done now than in Salonica.

As it was impossible to bring any supplies from the East, a complete new equipment is needed. The supplies left in Salonica will, of course, be used by the unit taking up the work of the University of Toronto Hospital, and it was considered neither wise nor possible to attempt to transport them to England. In consequence of this the University Hospital Supply Association have been asked by the commandant, Col. Hendry, to send the necessary articles. Therefore both workers and funds will be needed by the association, so that the work of the unit may not in any way be hindered for lack of equipment. Garments of every kind, as well as surgical supplies, are being made in the rooms of the association with as great speed as possible.