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National Health Insurance in Germany*

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SOCIAL Insurance is on its way in North America, and with it National Health Insurance as a very important, if not the most important, feature. The United States has just introduced old age pensions on a contributory, i. e., an insurance basis, and health insurance is investigated by Government experts. Even before the United States legislation went through, the Canadian Parliament passed the Employment and Social Insurance Act. It contains a comprehensive system of unemployment insurance. Not so well known is the fact that the Social Insurance Commission, which will administer the scheme, has been authorized by the Act to collect information about Health Insurance and to propose methods of co-operation between the Dominion Government and the Provinces concerning the introduction and operation of that insurance. Provinces, in their turn, have tackled the problem. A few months ago, the Government of British Columbia published a draft bill aiming to introduce Health Insurance in that Province, while a Royal Commission in Alberta has published two reports dealing with the same subject and containing detailed propositions. Furthermore, the preparatory work done by the representatives of the medical profession in this country is of high value. I have in mind the excellent report (A Plan for Health Insurance in Canada) of the Committee on Economics of the Canadian Medical Association that has been presented at the annual meeting in Calgary in 1934. During the recent election campaign, candidates of the Liberal party pledged themselves to introduce Health Insurance if returned to power. So there are many signs that Health Insurance is on its way in Canada. I suppose that is why your Secretary has asked me to speak on that subject.

There may have been a further reason. Germany has a very old tradition in that field. Health Insurance has been introduced there by the Government headed by Bismarck fifty-one years ago; so Germany has been able to experience fully the benefits and disadvantages of the scheme. In Germany as well as in Great Britain, where the Government of Mr. Lloyd George introduced corresponding legislation twenty-five years ago, Health Insurance has become an integral part of community life, essential and indispensable. There has been a good deal of criticism on details of the scheme, but no Government, irrespective of party, would abolish the system. That also describes the attitude of the medical profession in both countries. The system is certainly not liked by all Doctors, but the great majority would not do without it. There is light and shadow in Health Insurance as in any scheme that has to be adapted to the needs of millions. It has proved to be one of the most efficient methods for the promotion of public hygiene and social security. On the other hand, it cannot be denied that the system has been liable to certain abuse, which has been a matter of concern for the Government

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as well in Germany as in Great Britain, but ways and means have been found to counterbalance them, and the advantages certainly prevail.

You can look at Health Insurance under various aspects: as a matter of hygiene, as a social and economic and a political problem. Speaking to the Medical Association of this city I shall stress the points in which the medical profession is chiefly interested.

But before dealing with these questions, I may be allowed to discuss shortly a more general point. Provision to secure medical help for those who cannot, or not without difficulty, provide for it themselves, may be made in two different ways: by State Medicine or by National Health Insurance. The former is a system introduced in Russia, and it would be likewise the scheme for any other socialistic or communistic society. You have heard recently a lecture on the Russian system, whereby medical treatment is a monopoly of the Government and is administered by doctors appointed, employed, and paid exclusively by the Government: no fees are paid, and the necessary funds are provided by general taxation.

In contrast to that system National Health Insurance is a real insurance. That means that only certain groups are eligible, only certain risks are covered, and that the expenditure has to be met by premiums, which in Social Insurance are called contributions. In all these questions there is only a difference of grade, not of principle, between private and social insurance. But they differ considerably in other aspects: private insurance is always voluntary, while nearly all systems of health insurance are on a compulsory basis. As all the members of the groups covered by the insurance scheme are compelled to join it, the rule of the majority comes in, and the social aspects can prevail to a certain degree over the individualistic aspects dominating in private insurance. We shall see the working of the social principle throughout the whole German system.

Whether you prefer State Medicine as in Russia, or National Health Insurance, is a matter of political conviction. Those believing in socialism will aim for the Russian idea. Those who think that our present society faulty, as it may be in many ways, will last for some time and is due for improvement through social reform, will aim for health insurance. Germany has always and decidedly gone the second way. *

There are various aspects of health insurance in which the medical profession is chiefly interested; which groups of the community should be included in this scheme, which risks should be covered and what sort of benefits given, which are the financial and administrative arrangements, and the ways in which the methods applied hereby reflect on the position of the medical profession. I shall deal with these points in succession, neglecting the most important problem of public hygiene as my time would be too short to include it.

1. The first point is: which groups should be included under the insurance scheme? There are several conflicting principles which make the decision rather a crucial problem. For the sake of promoting the cause of public health within the Nation it seems advisable to go rather far. In the same direction points the financial interest of the Insurance Fund wishing to get as many contributors upon whom the fund can rely from the ranks of the better-paid employees. On the other hand, we must keep in mind that social insurance is compulsory, and that compulsion may only be justified if it is applied to make provisions for those who cannot take care of themselves, or, as in the

* For fairly populated arers state medicine is, of course, the only practical method of medical service.

case of the young well paid miner—cannot reasonably be expected to do so. But it would mean overdoing the social principle, and it would be unfair towards the medical profession if the scheme were forced on groups who have sufficient means and foresight to take care of themselves in case of illness. These latter considerations have been given the greater weight in Germany, and insurance has been restricted accordingly. At present it is compulsory for all classes of wage earners, irrespective of age, sex, amount of wages, and the kind of business—industry, agriculture, fisheries, transportation are all included—and to those employees whose salary does not exceed 3,600 marks. Taking into consideration, not the official rate of exchange, but the purchasing power, that amounts to about $2,000.00.

Certain groups are allowed to join the insurance scheme of their own accord, others are allowed to remain in it even if some of the conditions for their inclusion are no longer fulfilled. But these privileges are rather restricted. At present only those may join voluntarily who, though not depending upon an employer derive from a business or from agriculture an income not exceeding the limit set for employees. In that way many farmers enjoy privileges of insurance.

Though there are a good many regulations about registration, notices, and so on, they are not essential for the right of insured persons for benefits. As soon as a person begins work that makes him liable to insurance, he enjoys the protection of the scheme. His employer may be fined for not having registered with the Insurance Fund, but the worker cannot be denied benefits for that reason. Further, nobody covered by the compulsory scheme can be refused on account of ill health, or can be denied benefits for diseases existing before he was covered by the scheme. Both privileges are not granted to persons who insure on their own accord.

The scheme covers not only the insured persons, but also the members of their family living with and supported by them. No additional contribution is charged for that protection; they receive some of the most important medical benefits, but no cash benefits.

In Germany, out of a population of 60,000,000, there were 20,000,000 insured in 1934. If we add the members of their families, we may say that two-thirds of the whole German population enjoyed the protection of National Health Insurance.

2. As in private insurance we may ask which risks are covered by National Health Insurance. There are large differences in that respect between the various countries. In Germany the risks covered are illness, (including dental disease), maternity and death. Time does not allow me to discuss the interesting subject of maternity benefits, which are an integral part of Health Insurance and make superfluous special legislation as existing in Canada. In the case of the death of an insured person, a sum to cover the expense of the funeral is given to those responsible for that duty. I shall also omit that point and only deal with benefits in the case of illness.

There are two classes of benefits in Germany. Benefits in kind, comprising medical treatment, hospital care, operations and so on, and cash benefits. The benefits in kind aim at curing the illness, and restoring the working capacity of the insured. The cash benefits are only given in case the insured person is unable to attend to his work. They compensate him for the loss of wages or salary, and give to him and his family means of subsistence during his illness.

There is still another classification of benefits: standard benefits, which according to the law have to be given by all insurance funds, and additional

benefits which are only granted by those funds who decide to do so and can afford it. Up to the depression additional benefits were abundant, especially with funds where labor influence prevailed. At present such benefits may only be introduced after consent of Government authorities.

All benefits are given as long as illness lasts, but no longer than twenty-six weeks. As an additional benefit the Insurance Fund may extend that period up to a year.

Medical benefits are given by practitioners or dentists, the choice of which is left to the insured person, provided the doctor is on the list of insurance practitioners. There are also specialists on that list under the same conditions as ordinary practitioners. When needed, and prescribed by the doctor, drugs, spectacles, bandges, and other so-called minor appliances are given. As an additional benefit the Insurance Fund may also provide for other than small appliances, special diet, a stay in a convalescent home, and so on.

Up to 1931 the insured person had to pay no extra fee when he wished to see the doctor, or when he got a prescription for medicine. But under that system undoubtedly certain abuses have developed. It was found that insured persons went to see the doctor for small ailments, in cases where other people would not think of seeking medical advice. It also happened that persons suffering from temporary constipation would see the doctor to get a prescription for a laxative on the expense of the Insurance Fund, for the sole reason of avoiding the small expense out of their own pocket. And there were also some doctors who rather indulged in prescriptions in order to satisfy patients who believed they were not properly attended if they could not take a prescription with them.

All these abuses resulted on a heavy drain on the Insurance Fund. Therefore, in 1931, a new method was introduced by emergency legislation. Before seeking medical advice the insured person must buy a ticket that he has to hand over to the doctor. It is valid as long as the illness lasts. Another ticket is necessary to get medicine from the drug store on account of a medical prescription. The fee for these tickets, which has been reduced since their first introduction, is exceedingly small. It is 25 pfennig, or equivalent to the expense for two street-car rides in Berlin. It had to be low in order that people might not be discouraged from seeing the doctor or receiving a prescription in cases where it was really needed. On the other hand, the expense involved was meant to prevent excessive and superfluous requests for medical advice and medicine. It has proved very successful indeed. There was a marked decline in the expenditure of the Insurance Funds after the fee had been introduced and experts are sure that the new system has contributed to that development. The three Governments which have been in power in Germany since have kept up the institution. It is certainly more just than the method applied in France for the same purpose. There, the insured person has to contribute 25% of the expense for medical treatment and medicine. That method penalizes those who suffer from serious and long protracted illness and who certainly cannot be suspected of abuse.

Hospital treatment is provided under the insurance scheme whenever it is needed, and in that respect Germany differs from Great Britain, where Health Insurance is not concerned in any way with hospital treatment. The hospitals are paid by the Insurance Fund according to a tariff that has been agreed upon between the organizations concerned within a certain district. A good many hospitals, especially in industrial areas, would be unable to carry

on without the income from the Insurance Fund. A similar method of financing hospitals has been proposed by the Government of British Columbia. There is, however, in Germany no special contribution for hospital treatment to be levied from the Insured, as it has been suggested for Canada in the propositions of the Canadian Medical Association's Committee.

3. Among the cash benefits as provided under the German scheme in case of sickness, the most important is the compensation for the loss of wages or salary suffered by the insured during his illness. That compensation is called sickness benefit in the British acts, while medical treatment is termed there as medical benefit. In Germany sickness benefit consists of periodical payments of half of the wages or salary to persons who are rendered incapable of work by disease. Payment commences as from the fourth day of incapacity and is continued for a period not exceeding twenty-six weeks. During hospital treatment no sickness benefit is paid to the insured, but half of it is given to his family.

4. The administration of Health Insurance is uniform all over Germany, and there is only one Insurance Law for all States and Provinces. I think that essential, taking into consideration the great fluctuation among industrial workers. But under the uniform laws and regulations administration is carried out by local funds enjoying independence and financial responsibility in a rather large degree. Until 1933 they were self-governing bodies administered by elected representatives of the insured and their employers. At present that system has been replaced by the principle of leadership. The Manager of the Fund is now no longer elected, but appointed by a high Government official, the Chairman of the Provincial Insurance Commission. Representatives of the insured and their employers—now also appointed—have only advisory functions. Experience has taught that the local funds must neither be too large nor too small. In the latter case, they become easily insufficient. Again, for a large fund, it is very difficult to supervise the members properly, and waste may be expected.

Contributions are fixed by the local funds according to their needs but certain limits are set by the Government. The contributions—as well as the cash benefits—are graded according to the amount of wages or salary. In that respect Germany differs from English Health Insurance and the Canadian Unemployment Insurance, which provide for uniform contributions and benefits for all groups of insured, irrespective of income. The average contribution is at present about 6% of the wages. According to a new German Act, the insured and the employer will have to pay each 50% of the contribution; until now, two-thirds were paid by the insured, one-third by the employer. No grants are given from the Government. Recently, the local funds have been put under the supervision of a Provincial Board. This Board has also been entrusted with some tasks of the local funds which it seemed more economic and feasible to carry out in common for the whole district of the Province, such as administration of the pooled reserves of the local funds, maintenance of sanatoria and recreation homes, carrying out measures of preventive hygiene, and so on. This Provincial Board is connected with the Commission responsible for the administration of old age and invalidity pensions which are based in Germany on a contributory system. So the various branches of social insurance are closely interlocked. That prevents overlapping and facilitates co-operation, especially in the field of public hygiene.

5. The position of the medical profession in the German system of National Health Insurance has changed very considerably during the long history of that system. May I be allowed to neglect the earlier periods and to speak only of the development in post-war time. To understand it one has to keep in mind that both the medical profession and the insurance funds are, and have been, very efficiently organized. There stood power against power in the conflict that arose from time to time, and these conflicts were very often vital for the existence of the medical profession, as for the great majority of German practitioners the sums received from the Insurance Fund are the chief source of income. Remember that two-thirds of German population is under the protection of the scheme. Relations between the German medical profession were often strained, and the Government had to mediate frequently. Dispute arose chiefly about the methods of payment, and the principles of admission to insurance practice.

Up to 1931 practitioners and specialists doing work for the Insurance Fund were paid according to a tariff agreed upon for a larger or smaller district between the two organizations concerned. Compared with the fees a doctor was entitled to charge in private practice the rates of the tariff were very much reduced. Many doctors thought that they were too low, while representatives of the Insurance Funds pointed out that average income of the Insurance Doctors derived from the Fund was rather considerable, and that certain doctors who enjoyed special sympathy among the insured—they were generally called insurance lions—received very high sums.

This system of payment for the individual services failed during the depression; a queer thing happened then. While in consequence of universal unemployment the number of insured persons decreased, and the income of the Insurance Fund shrank rapidly the expenditure for medical services, not only did not go down, but even rose slightly. Whether the insured or the insurance practitioners were more responsible for that phenomenon is a matter of controversy. At any rate it was felt that the expenditure for medical benefits, which is the largest item in the Insurance Fund's budget could not be out of proportion to the Fund's income for any length of time. Hence the reform made in 1931. Instead of paying the doctor fixed fees for his individual service, a certain part of the income of the Insurance Fund is reserved for the whole medical service in the district. It is handed over to the German Medical Association which has to distribute it among the doctors concerned, according to principles agreed upon between the two parties and the Government. The service given by the individual doctor is hereby considered, but it will only decide his share in the sum to be disposed of by the Medical Association, not increase it in any way. In order to do away with excessive practices certain limits have been set for the participation. This system has been working ever since. It has been modified in details, but the principle has been upheld under the present Government. It has introduced into social insurance what the economists call the "sliding scale". If the Insurance Fund includes many well paid contributors the doctor's income will be good. In times of depression, unemployment and reduced wages the doctor will suffer with his insured patients.

This system differs very much from the "Panel" system as existing in England. Here the doctor gets for every insured person he has on his panel a lump sum of nine shillings a year. The amount of treatment he gives to the insured will not affect his reward. That does not prove satisfactory

for the insured in all cases. According to the English law other methods of payment, more similar to the German system, may be introduced but the "Panel" as I described it prevails. The 4 propositions submitted to the Canadian Medical Association follows the German, not the English methods, though that has not been mentioned.

Another difficult problem that faces the medical profession as well as the Insurance Fund is the admission to insurance practice. The medical profession is badly over-crowded in Germany, and Insurance experts think that if too many doctors are admitted an unsound competition will result. For that reason certain restrictions had to be made. New practitioners are only admitted if there is a vacancy for them. For each six hundred members of an Insurance Fund a medical practitioner is allowed, and for each ten thousand members a dentist. A system of waiting lists has been introduced and the doctors are called to fill the vacancies in turn; for thinly populated districts special arrangements have been made.

MANDELIC ACID.

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Hemorrhagic Disease of the Newborn

A. B. CAMPBELL M. D.,

HEMORRHAGIC Disease of the newborn is a term used to designate a condition in infants which manifests itself shortly after birth by spontaneous bleeding. These haemorrhages are miltiple, persistent and often profuse. They are the essential features of the disease, which is self limited, does not recur and tends to recovery or death within the first week of life.

Etiology. The underlying cause of the disease is still unknown. Syphilis, bacterial intoxication, trauma, heredity, and intoxication by chemical agents have been offered as causes without satisfactorily explaining the cause of the disease. Lambert, Carrel and Brewer, in 1908 showing the wonderful improvement brought about by blood transfusion suggested that the disease was caused by a primary blood defect. Cooley suggests that the blood forming tissues react to the stimulus of normal blood, or blood serum, and that possibly there is a reaction between normal blood and the vessel walls lacking in certain abnormal blood states which explains the complete cessation of haemorrhage in these cases, when treated by transfusion.

Pathology. Autopsy reports throw little light on the cause of this disease. Crdinarily nothing is found except the signs of haemorrhage in different parts of the body. Bleeding in certain organs is often extensive. The adrenals have been found converted into large hemorrhagic cysts. Ulcers in the gastro intestinal tract are sometimes discovered. In Melena Neanatorum the intestinal tract often shows hemorrhagic areas in the bowel wall, and it has been suggested that necrosis and digestion of tissue results in ulcer formation. Not infrequently autopsies on infants dying with signs of sub-dural bleeding show this lesion combined with multiple haemorrhages in other parts of the body. This suggests that trauma is not the primary cause of the bleeding in all cases of intracranial haemorrhage of the newborn infant. In some it may be due to a tendency to spontaneous bleeding. Green and Warwick, after doing a large number of autopsies, state that it is reasonably clear that, in a fairly large percentage of cases, intracranial haemorrhages are merely incidental to a general hemorrhagic diathesis.

Occurrence. This condition occurs in about one percent of all births.

Symptoms and Diagnosis. The clinical picture of the disease is fairly definite and easily recognized. The onset is in the first week, generally the second, third, or fourth day. The principal feature is spontaneous and persistent tendency to haemorrhage. These haemorrhages may occur into any tissue and organ of the body. They are most frequently noted in the form of ecchymoses or hematomas in the skin and subcutaneous tissues. Haemorrhage is most frequently from the intestinal tract, shown by blood-stained vomitus and tarry stools. This is the form known as Melena Neanatorum. Also it is of common occurrence as a thin watery oozing from the umbilical stump, operation wounds and forcep abrasions on the face and scalp. Where the bleed-

ing is external, the diagnosis is easily made, but when it is internal into organs like the adrenals it is frequently unrecognized. The amount of blood may be large or small, but it is persistent, and, as a rule, local measures to check the haemorrhage have no permanent effect. In Melena Neanatorum the napkin usually contains a stool of dark, tarry material, with pink edges encircling the viscid mass. The usual picture is, blood-stained vomitus, recurring tarry stools or varying amount, and a gradual failure in the condition of the patient, pallor, prostration and feeble pulse. At times there is fever, often the temperature sub-normal. Some cases show icterus, probably of hematogenous origin.

Bleeding from any source is the one important feature in these cases, and its appearance in newborn infants should never be regarded lightly.

Diff. Diag. Ingestion of blood from the mother's nipple should be thought of. Slight bleeding from vagina or uterus, pseudo-menstruation. Hemophilia is a heriditary disease which rarely manifests itself before the end of the first year, occurs only in males and recurs. Hemorrhagic disease appears equally in both sexes, is not inherited, is self-limited and after recovery does not recur.

Blood Picture. is that of an anemia due to loss of blood and presents nothing remarkable. The coagulation time is almost always delayed. Fibrinogen, thrombin, pro-thrombin and thrombokinase have been found at fault in different cases, which seems to show that a change in not one, but several of these elements, may be responsible for the coagulation delay.

Prognosis. This disease is self-limited, and runs a definite course to recovery or early death. In untreated cases the mortality is about 60%, but spontaneous recovery sometimes takes place when the outlook seems hopeless. Cases surviving the first week are likely to get well. Infants that recover, with or without treatment, may be regarded as normal children. There are no sequlae and the disease does not recur. Haemorrhage into the kidneys, adrenals, liver or thymus is more likely to be fatal, and is often unrecognized. The use of human blood and its derivitives in treatment has greatly lowered the mortality in this disease.

Treatment. The use of human blood is to-day the generally accepted treatment for hemorrhagic disease of the newborn. It may be applied in three ways—1. By the subcutaneous injection of blood serum. 2. By the subcutaneous injection of whole blood. 3. By transfusion of whole or citriated blood. All three methods are capable of correcting the tendency to bleed. Transfusion has the added merit of replacing the blood lost through haemorrhage. In giving blood serum the dosage is graduated to suit the urgency of the case, usually 30 c. c. two or three times a day. Welch, in 1910, reported twelve cases all cured by this means. In this series the duration of treatment was from two to seven days. *Whole blood.* The blood is drawn from the veins of the doner and immediately injected under the infant's skin. The dose varies from 10 to 30 c. c., repeated every four or eight hours until the bleeding is checked. The proceedure is simple, can be applied without delay and is as efficatious as the injection of serum. *Blood transfusion.* This is the method of choice for the most serious cases and where the loss of blood is a vital factor. Its disadvantage lies in the technical difficulty in carrying out the proceedure in newborn infants. The blood may be transferred by means of an ordinary syringe, a paraffined tube, or any form of apparatus used in adults. The difficulty is to find a suitable vein—the femoral, median basilic, internal or external

jugular have been usual. In 1915 Helmholtz suggested that the blood be injected through a needle into the superior longitudinal sinus at the posterior angle of the anterior fontanelle. The sinus is attached to the dura just beneath the skin and large enough at this point to be easily located in a newborn infant. The needle should be pointed backwards and kept exactly in the line of the saggital suture. When the needle is in the sinus, proved by withdrawing blood into the syringe, the blood should be injected slowly. In mild cases 30 c. c. is probably enough. Ordinary cases will require 60 to 120 to 190 c. c. according to the degree of anaemia.

Compatability of the blood. The usual group tests need not be done but are desirable. It is recognized that the iso-agglutinins and their receptors are not entirely developed at birth and that, probably, isohemolysins are not present in the infants blood. One of the parents usually furnish the blood, but any healty person will do.

Results. The recorded results of transfusion are consistently good, regardless whether citriated or whole blood is used. The death rate at present is about ten percent, and many of the infants who died were recognized as congenital syphilitics. It would seem that treatment by human blood is a specific cure for hemorrhagic disease of the newborn.

Case report. Cn January 3rd of this year I was in attendance at the birth of a female child in this Village. The labor was short and fairly easy. The birth was normal, and the child apparently perfectly normal at birth. When twenty-four hours old the child vomited up a considerable amount of blood stained milk. The mother's nipples were intact. I gave it one c. c. lapentas hemostatic serum, with no results for shortly afterwards it vomited more blood and passed tarry stools, similar to those described in the paper. I gave another c. c. of hemostatic serum, with no visible improvement. At this point I was faced with a question of giving human blood, either by transfusion or subcutaneously. I had never put a needle into the longitudinal sinus, nor seen it done. As the condition of the child was not desperate I decided to give whole blood subcutaneously, and to hold the transfusion as a last resort should the injections fail to work. I gave 20c. c. about every eight hours, injecting into the buttocks, abdominal wall and pectorals. 60 c. c. was given in all. Following the last injection the synptoms cleared up as if by magic and the baby was perfectly normal. The baby remained pale for several months and I really believe that should I have the same kind of a case again, I should attempt the transfusion. The mother's veins were small and hard to get into, so I used the Father's blood. It was a very dramatic and interesting case.

Fundamental Considerations in the Treatment of Arthritis*

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UNTIL recent years, the treatment of arthritis has not engaged the serious attention of the medical profession. Since no specific treatment has been developed, physicians have been slow to realize that, notwithstanding, many therapeutic measures are available which taken together may reasonably be expected to lead to improvement. Medical thought has too long been concerned with the negative rather that the postive aspects of the disease. Because we have no definite cure for arthritis, it does not follow that nothing can be done for the large group of patients who constantly demand our attention.

In this brief paper, the attempt will be made to consider what can be done to help the person suffering from chronic rheumatism. It should be understood at the outset that students of this disease have come to regard it not as a local disease of joints, but one in which several factors combine to produce a disturbance of the constitution generally, and if search is made, other systems will be found to be involved in the rheumatic process, in addition to the osteologic.

Fundamentally, then, a rational view of therapy in rheumatism cannot be achieved unless one appreciates and recognises that numerous factors probably combine in any one individual to produce the disease. Efforts at therapy, in view of the fact that no specific treatment has been evolved, should be directed to the re-establishment of the patient's disordered physiological equilibrium.

A classification will not be offered here, and the disease will be grouped in but two categories: first, the Rheumatoid or Atrophic variety; and secondly, the Osteo or Hypertrophic Arthritis. Likewise the pathology and the pathological physiology of chronic arthritis cannot be considered at this time.

Methods of treatment available to us in the care of the chronic arthritic will be discussed under the following headings:

1. Rest.
2. Physical Therapy.
3. Constitutional Measures.
4. Orthopaedic Aids.
5. Diet.
6. Drugs.
7. Foci of Infection.
8. Vaccines.
9. Foreign Proteins.
10. Psychotherapy.

1. *Rest.* Rest to the involved joints locally is of the greatest importance, but equally so is systemic rest to the individual as a whole. No other single measure can do more to restore physiologic balance and assist the patient in

*Read before the Western Nova Scotia Medical Society, Yarmouth, Nova Scotia, November 26, 1935.

using to greatest advantage the full influence of his reparative forces. The prone position favors the correction of circulatory disturbances, avoiding gravitational effects and overaction of the sympathetic nervous system in the attempt to maintain circulatory dynamics.

2. *Physical Therapy.* The chief measure under this head is the application of heat. This may be accomplished by the use of such simple methods as the application of hot cloths, hot water bottles, baking, warm baths, steam baths, exposure to the sun, or by the more elaborate electrical methods. In any event, heat should be used with discretion, particularly when dealing with an acute arthritis. Melted paraffin applied to the hands is a simple way of opening the capillary beds in the fingers. Hyperthermia or elevation of the body temperature generally has been found to be useful, chiefly in the treatment of gonorrheal arthritis.

3. *Constitutional Measures.* The gastro-intestinal tract should not be overlooked. Constipation must be corrected, and proper elimination secured. Many arthritics have a secondary anemia which will require iron to correct. Dimished expansion with consequent improper function of the diaphragm will require breathing and postural exercises. The effort should be made to relieve the nervous system of undue pressure, as worry and mental unrest may well be an important factor in prolonging the illness. Enough fluid should be ingested to avoid concentration of the urine, and the skin function should be kept active by massage or by inducing perspiration.

4. *Orthopaedic Aids.* The orthopaedic consultant should be called early in the course of the disease and not after deformities have developed. The various types of orthopaedic splints, wrist and foot supports, plaster casts, and other appliances can, properly used, prevent the development of almost any deformity. These measures should be instituted, however, before deformities have occurred, and not after they have made their appearance. It should be born in mind that in recent years much has been accomplished by orthopaedic surgery in restoring function to joints already crippled by rheumatism.

5. *Diet.* A simple diet, high in vitamine content, in fresh fruits and green vegetables, and low in sweet foods and sugars, is perhaps most suited to these patients. Cod liver oil or one of the other vitamine preparations should be used. There is no scientific evidence to support the notion that red meat is harmful for these patients. Optimum nutrition should be the goal in each case.

6. *Drugs.* The salicylates have always been the most commonly used drug in the treatment of rheumatism. It is not to be expected that relief by this means will be at all permanent without the additional methods of therapy suggested here. The protracted use of salicylates in any given case usually means that other methods of treatment which should be instituted are being overlooked. Arsenic in the form of Fowler's solution may often be of benefit. Thyroid is often useful when the metabolic processes are lowered. Cincophen, popular because of its analgesic properties, is not entirely safe because of its toxicity for the liver. Drug therapy is most likely of least importance in the treatment of rheumatism, and the most that can be said for large numbers of patent medicines advocated for this disease is that some of them will occasionally relieve pain temporarily.

7. *Foci of Infection.* For twenty years, the frantic search for foci of infection in the teeth, tonsils, or other tissues has diverted attention from more

significant disturbances in the individual's body economy. In recent years, the trend is toward a more conservative view in this respect. To remove foci of infection, without proper consideration of the numerous other factors, which may have a share in the etiology of the disease, is to court disaster. As a rule, foci of infection should be attended to later in the course of the disease, instead of in the beginning. The sick arthritic should be built up and fortified before any radical procedure is attempted.

8. *Vaccines.* The voluminous but conflicting literature on this subject leads me to believe that vaccine thereapy *per se* is poor treatment. There is no doubt it is a simple and easy method of therapy, but one which has yet to gain wide scientific support. Personally, I believe the psychic value of vaccine treatment accounts for its success in some cases. It may be a suitable means of keeping in contact with the patient in order that other more fundamental thereapy may be checked at weekly intervals.

9. *Foreign Proteins.* The wide variety of foreign proteins offered by the various pharmaceutical houses requires a word of caution. In chronic arthritis, it is extremely doubtful if this method of treatment is ever of more than transient value. The one type of arthritis which may respond favorably to this regime is that resulting from gonorrhea. As mentioned above, hyperpyrexia is undoubtedly the best way to accomplish satisfactory results in this form of rheumatism.

10. *Psychotherapy.* Lastly, but by no means least important, is the psychic element in treatment. Without the confidence of the patient, little progress can be expected from any form of treatment. The attending physician should do his utmost to understand the psychic as well as the physical make-up of his patient. An optimistic view of the patient's illness must be taken at all times. The individual sufferer must be made to appreciate the very real possibilities for the restoration of his bodily function and eventual improvement through a regime based on a broad grasp of the fundamental considerations concerned.

Reference—American Committee for the Control of Rheumatism: "Outline of Factors Influencing the Onset and Recovery from Chronic Arthritis," pamphlet published by the American Medical Association, 535 North Dearborn Street, Chicago, Ill., 1934.

War on Diphtheria.

In Saint John, New Brunswick inoculation against diphtheria has produced the most valuable results. The like is true of the city of Ottawa. While the board of health and the public and separate school authorities are co-operating, the immunization of boys and girls of pre-school age or very early in their school years is not yet 100 per cent, the eradication of the disease grows nearer and the progress is in proportion to the extent to which immunization is made effective. The war against disease is one which appeals to everybody and Ottawa is to be congratulated upon the success attending its efforts in this particular case.—*Truro News*, Oct. 24.

"Appendicitis"

O. R. STONE, M.D.

AT the outset, one feels like offering an apology for writing anything on this subject. However, one is convinced that there is always something new to learn about this condition, with which every Physician has to deal every day, whether he has been in practice one year or thirty years.

Many diagnostic errors have been made pro and con, and will in all likelihood, continue to be made in respect to this disease of appendicitis.

In considering the aetiology from the bacterial point of view, it is only necessary to say here, that a number of bacteria are responsible.

The most common are the streptococcus pyogenes, staphylococcus and bacillus coli communis, and a few others not so common.

The presence of the streptococcus may be of grave omen, causing a severe infection and a spreading peritonitis; this making for a very unfavorable prognosis; the staphylococcus also is often found in association with the streptococcus.

The bacillus coli communis is a normal inhabitant of the intestine, and is found in practically all cases of appendicitis. In perforated cases with which the surgeon has to deal, the unpleasant odor of bacillus coli gives some comfort to him, knowing that usually in an unmixed infection the patient will more likely recover.

The bacillus influenzae and the micrococcus lanceolatis may, in the writer's opinion, also be causative factors, and also the pneumococcus; the writer has met with one case of fulminating appendicitis following a bronchopneumonia. However, it is very possible the attack of appendicitis in association with pulmonary disease may have been but a coincidence.

Focal infections play their part as causative factors, such as infected tonsils, teeth and naso-pharynx. Appendicitis quite often follows exanthemata.

Anatomical formations and situations of the appendix may be predisposing factors, causing it to fall easy prey to infection.

One may mention also caecal stasis, and ptosis, interfering with drainage of the appendix. When one considers its situation the wonder is that any escape infection at some time or other.

Intestional parasites, and foreign bodies may so traumatise the mucous lining as to open up avenues for infection. Indeed on a number of occasions the appendix has been found completely blocked with pin worms.

Slight infections, perhaps almost symptomless, cause changes in the contour, and calibre of the appendix providing a favorable field for a virulent infection.

Another cause may be a poor blood supply to the organ; it is such cases that early become gangrenous.

The majority of cases occur between ten and forty years, but cases occur earlier than ten and even up to old age.

Men seem to be more suceptible than women; different reasons have been given for this, such as diet, use of tobacco, and alcohol, but in this day these

explanations would seem to require some revision. The blood supply of the appendix is said to be better in the female than in the male, and this may be the explanation of the lesser incidence in women.

It is stated the negro race is almost immune.

Heredity. One is convinced that heredity plays an important part in the incidence of this disease; the writer recalls a number of families where several members were affected. The lymph tissues of some families seem especially prone to infections.

After all that has been said on the aetiology, such as focal infections, and other remote causes, it seems more reasonable to state that as the normal intestine is the home of numerous bacteria, these agents, become of some unknown condition, are the cause of a great majority of the cases of appendicitis.

The Pathologists have classified the different forms of appendicitis as: (1) Acute Catarrhal; (2) Acute Diffusen on suppurating; (3) Acute Suppurating; (4) Acute Fulminating; (5) Chronic. However, while these forms are described, there is no sharp dividing line between them. The acute catarrhal may merge into the severe form and this factor, to the writer's mind, should cause every physician to consider each case as a potentially perforated bowel.

Every surgeon who has opened the abdomen for acute appendicitis is often surprised at the extent of the pathology in the appendix, in comparison with the clinical signs and symptoms present. Cases with mild symptoms often present gross inflammation in the appendix; which leads one to say that every physician should, where possible, follow his cases to the operating room and view for himself the condition present at operation. The appendix is a very unreliable organ for a favorable prognosis without surgery.

We are all familiar with the classical text book description of acute appendicitis; pain, nausea, vomiting, tenderness, muscular rigidity, constipation, some elevation of temperature and an increased pulse rate. Yet how often are these symptoms presented in this sequence? Many times one will look in vain for all these symptoms, and it is in just such cases that a diagnosis may be most urgent and difficult.

The appendix being a mobile organ, and sometimes abnormally long, may point in any direction, and fix itself to other structures. It may lie retrocaecal, giving no abdominal wall symptoms, although pain in the back may be present. It may point upwards towards the liver, and even attach itself to the gall bladder, or downwards in the pelvis, fixing itself to the ovary, tube or bladder; causing symptoms referable to these organs, and in this way obscure the diagnosis.

The physicial signs of most importance are tenderness in the right lower quadrant, and muscular rigidity; but in a certain number of cases these are absent. There may or may not be vomiting, and the temperature and pulse may give little or no aid.

The patient, running a temperature, may complain of difficulty in voiding, pain in the rectum, and distress over the bladder.

The white cell count may be 10,000 or 12,000 showing a moderate infection.

As an early diagnosis is imperative, it may be said that where there is a leucocyte count of over 10,000 and a polymorphonuclear count of seventy-eight percent. it is well to look upon these as indicative of infective inflammation, and in these obscure cases blood counts should be done every two or three hours.

It should also be borne in mind that serious pathological changes occur in acute appendicitis without any noticeable rise in the cell count. There, the polymorphonuclear count may be eighty-five per cent. or higher; this is of distinct significance, in this disease if other causes of leucocytosis are ruled out.

Finally, one must never forget to make a rectal and where necessary vaginal examination. Nor should the use of the catheter be forgotten.

In arriving at an exact diagnosis other conditions must be excluded: such as gall bladder disease, renal colic, pyelitis, salpingitis, ectopic pregnancy, intestinal obstruction, perforated gastric and duodenal ulcer, acute haemorrhagic pancreatis, embolism of the superior mesenteric artery, thrombosis of the superior mesenteric vein, pneumonia, (particularly in children), pleurisy, empyema, diverticultis, tubercular peritonis and lead colic.

When we come to treatment, at the risk of being dogmatic, one would say, that every case of acute abdominal pain, with accompanying abdominal symptoms, pointing to appendicitis should be treated surgically.

It may be said that there are many cases where this is not necessary; however, the fact remains that many cases considered mild, and treated medically, have died. Speaking generally there should be no mortality to-day.

In those cases which come to operation after perforation, the prognosis is in direct proportion to the efficiency of nature's cofferdam, and the organism responsible. When the culprit is the bacillus coli unmixed with other bacteria, the prognosis is much improved.

In these drainage cases, Kennedy of Philadelphia, in his book, "Practical Surgery of the Abdominal and Pelvic Regions", quotes Doctor Price as, "The greatest exponent of the Pathological Era, and whose success may be measured by his very thorough Primary Work." He says: "He always removed the appendix, he broke all adhesions, therefore, partial and complete bowel obstructions were released; distal abscesses were exposed, inflammatory walls were recognized as fixed abdominal viscera, and a part of the pathology. The pelvis was always explored in the peritonitic patient, and his drainage was never guess work. He drained entirely with gauze, and established a continuity of the area to be drained with the outside world."

The writer cannot give an opinion on the above quotation except that he believes the appendix should be removed in all these cases.

One has not said the last word on treatment with the opening of the abdomen, and removal of the offending appendix. The post operative treatment is most important, for while most cases have a smooth convalescence, others present grave post operative complications, which call for effective and courageous treatment in an attempt to rescue the patient.

The chief complications following abdominal operations are peritonitis, acute dilatation of the stomach, post operative obstruction, lung complications, post operative haematemesis, phlebitis and thrombosis.

Nothing has been said of chronic appendicitis, although it may be stated that if it can be demonstrated that chronic appendicitis is at the root of many and varied symptoms, surgical treatment is desirable; otherwise, the removal of this organ may still leave the patient with his symptoms, and the explanation to the doctor.

The Use of Sera and Vaccines for the Prevention of Some Communicable Diseases

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DIPHTHERIA.

The Schick Test.

THE Schick test, devised by Schick in 1913, has been employed extensively for a number of years. When properly executed and interpreted it is of practical value in determining those individuals susceptible or immune to diphtheria as measured by the antitoxin content of the blood. Von Behring and others have determined that the presence of approximately 1/30 unit of antitoxin per cubic centimeter of blood serum will protect against diphtheria.

In conducting this test a control is necessary in order to detect pseudo reactions in individuals who are sensitive to the autolyzed protein of the diphtheria bacilli present in the culture broth.

The Schick test consists in injecting intradermally into the flexor surface of one forearm 1/10 cc. of Schick test material containing not less than 1/50 nor more than 1/30 of a minimal lethal dose of diphtheria toxin. (A minimal lethal dose is the smallest amount of diphtheria toxin that will kill an 8 to 10 ounce guinea pig in less than four days).

For the control test the same amount of solution of the same toxin which has been heated to 70°C. for 5 to 10 minutes, is injected intradermally into the flexor surface of the other arm. Heating destroys the toxin, but only slightly the amount of autolyzed protein and other substances present in the solution which may cause an allergic reaction.

The Schick test and its control should be read from 5 to 7 days after the injections are given. At this time one of four reactions may be observed:

(1) *A Positive Reaction.* In this reaction there is an area of redness or pigmentation at the site of the toxin injection, with no reaction at the site of the control injection. This result indicates that the individual's blood contains an insufficient amount of diphtheria antitoxin for protection and therefore he may develop the disease.

(2) *A Negative Reaction.* There is no area of redness or pigmentation at either site. Provided the test has been properly carried out this reaction indicates immunity to diphtheria at the time the test was made, the blood containing a sufficient amount of antitoxin for protection.

(3) *A Pseudo Reaction.* In some persons, particularly children over 6 years of age and adults, a reaction develops at the site of both injections. This is due to a hypersensitiveness of some individuals to the autolyzed protein of the diphtheria bacilli present in the test and control material. A reaction developing at the site of both injections, running a similar course, reaching a maximum intensity on the 3rd or 4th day, and then fading, is a pseudo reaction—the individual being hypersensitive to the protein in the material, but immune to diphtheria.

NOTE: The Bulletin is publishing this article at the request of the physicians attending the Dalhousie Refresher Course, 1935.—H. G. G.

(4) *A Combined True and Pseudo Positive Reaction.* In this reaction the redness and infiltration at the site of the toxin injection will be more marked at the end of twenty-four hours than at the site of the control injection. By the third day the toxin injection will be quite distinct, the control usually showing only an area of pigmentation. If the test is positive, the reaction at the end of 5 to 7 days will be much more marked at the site of the toxin injection than at the site of the control. A combined true and pseudo positive reaction indicates susceptibility to diphtheria. All doubtful reactions should be considered positive.

Active Immunization Against Diphtheria.

(1) *Toxin-Antitoxin.* The first material used for active immunization against diphtheria was toxin-antitoxin.

Theobold Smith in 1907 suggested that toxin-antitoxin, which for some years prior to this time had been used to immunize horses, might be used for the purpose of producing active immunity against diphtheria in man. This was finally accomplished by Von Behring who, in 1913, demonstrated the safety of the procedure by innoculating several human beings.

Toxin-antitoxin contains the toxin of the diphtheria bacillus and diphtheria antitoxin, the toxin in excess to such a degree that the mixture is only slightly toxic for the guinea pig. In communities where this material was extensively used, a marked decline in the incidence of and mortality from diphtheria was noted. Certain disadvantages, however, were associated with its use:

(*a*) In the beginning toxin-antitoxin contained horse serum. For this reason it was contraindicated in allergic persons, and in addition produced in many individuals a state of anaphylactic sensitization to the future use of sera produced in the horse. The substitution of goat or sheep serum for horse serum overcame this latter disadvantage.

(*b*) On freezing toxin-antitoxin is rendered toxic by the disassociation of the toxin and antitoxin. One instance is on record where a number of deaths occurred following the use of such a material.

(*c*) At ordinary temperatures toxin-antitoxin loses its potency rather quickly and therefore must be kept continuously in a cool place until used.

(2) *Toxoid (Anatoxin Ramon).* For a number of years toxin-antitoxin was the only material available for active immunization against diphtheria. However, in 1923 Ramon of the Pasteur Institute of Paris prepared a formalized toxoid which was completely atoxic. He established its value by the successful immunization of a number of children.

Toxoid is prepared by growing a suitable strain of the diphtheria bacillus in veal infusion broth for a period of 6 to 7 days, after which time the bacteria are removed by filtration. To detoxify this filtrate 0.4 per cent. of formalin is added and this formalized toxin is held at a temperature of 37°C. until detoxification is complete, which usually takes a period of from one to four weeks. It is then tested for atoxicity, sterility, and potency. A potent toxoid should contain not less than 12 flocculating units per cubic centimeter.

Toxoid is to be preferred to toxin-antitoxin in that: (*a*) It is atoxic. The addition of formalin and the aging process, while destroying the toxic properties, does not affect its property of stimulating antitoxin formation in

the body. (b) It contains no serum and therefore cannot produce a state of hypersensitiveness to the future use of any serum. (c) It is stable, and is not rendered toxic by freezing. (d) It can be kept at ordinary temperatures without deterioration for several months. Three doses of .5 cc., 1 cc., and 1 cc., allowing an interval of two to three weeks between doses, will immunize 90 to 95 per cent. of susceptibles as determined by the Schick Test.

(3) *Alum Precipitated Toxoid.* There is now on the market a preparation known as alum precipitated toxoid. In 1926 Glenny, Waddington, and Wallace noted that the addition of alum to diphtheria toxoid greatly increased its power to stimulate antitoxin formation in the body. Havens and Wells of the Alabama State Department of Health in 1930 were successful in preparing a material by precipitating the toxoid with alum. The use of this alum precipitated toxoid in large groups of children in Alabama, Virginia, New York and several other States, giving one injection of 1 cc., has shown that this material will render approximately 95% of Schick positive persons, Schick negative in 6 to 8 weeks.

Alum precipitated toxoid is to be preferred to untreated toxoid in that only one dose is required to attain the same results. This is an important factor especially in rural areas if large numbers of children are to be immunized. One trip to the doctor's office or one visit to the home is all that is required. It often happens that a parent will bring a child once or twice for the untreated toxoid and not return to complete the treatment.

Reports have been circulated that reactions following the use of alum precipitated toxoid have been more severe than those following the use of untreated toxoid. Studies to prove or disprove these reports have been carried out in Virginia by McGinnis, Stebbins, and Hart, and in Alabama by Baker and Gill. In Virginia a group of individuals mostly of school and preschool age was chosen. Each alternate person was given 1 cc. of alum precipitated toxoid and 1 cc. of untreated toxoid. The temperature of each was taken before the injection and again 24 and 48 hours afterwards. Histories were taken and observations made daily until all symptoms subsided. The results of these observations led to the following conclusion: "Reactions following the administration of alum precipitated toxoid are not of sufficient severity to limit its use, nor are these reactions of greater severity than those following the administration of untreated toxoid." In a very large series in Alabama the investigators reported: "That as a rule local and general reactions were not severe."

Abscess formation at the site of inoculation has also been described. In a group of 2,000 children in Virginia given a single dose of .5 cc. or 1 cc. of alum precipitated toxoid only one developed an abscess. In Alabama 8 abscesses were reported following the inoculation of 16,000 children. In each instance on culture these abscesses were found to be sterile. It is quite possible that abscess formation may, in many instances, be due to carelessness on the part of the person administering the material in failing to keep the precipitate in suspension. This is liable to occur when more than one dose is contained in a syringe which is the usual practice when large numbers are inoculated at clinics. If the material is not shaken well between each dose the alum will precipitate out, and as a result those given the last couple of doses will receive an excessive amount of alum which may result in the formation of a sterile abscess.

Active immunization against diphtheria should be carried out when the child reaches the age of six months. The attending physician might include this service in the confinement fee, thereby increasing the number of younger children who would be protected against diphtheria.

The following procedure is suggested for active immunization against diphtheria:

(a) Under six years of age:

If groups of children of this age are to be treated, a preliminary Schick Test is not recommended. Much time and money will be wasted if this is done, because the majority will be found to react positively. It is therefore only necessary to give three doses of untreated toxoid at two to three week intervals or one dose of the alum precipitated toxoid.

(b) Six years of age and over:

A preliminary Schick Test should always be carried out because a large percentage of this age group will have developed an acquired immunity. Those found to react positively to the test should be given either untreated toxoid or the alum precipitated toxoid.

A Schick test should always be carried out two months following completion of the treatment, regardless of age or the preparation used. Positive reactors should be given another course of treatment.

SCARLET FEVER.

The Dick Test.

The Dick test is used to determine susceptibility or immunity to scarlet fever as measured by the antitoxin content of the blood. In carrying out this test a control is not necessary as pseudo reactions are rare, occurring in less than 5 per cent. of individuals.

The Dick test consists of injecting intradermally into the flexor surface of the forearm 1/10 cc. of Dick material containing 1 skin test dose of streptococcus scarlatinae toxin. (A skin test dose is that amount of scarlet fever toxin which causes, in slightly susceptible persons, a slightly positive reaction). This test must be read 20 to 24 hours after the injection. A positive reaction manifests itself as an area of redness, varying from a faint pink to bright red, 1 cm. or more in diameter.

Active Immunization Against Scarlet Fever.

Scarlet Fever Toxin. The toxin of the streptococcus scarlatinae is at present our only means for producing active immunization against scarlet fever. In using this material the Connaught Laboratories recommend five doses at weekly intervals, the first containing 330 skin test doses, the second 1000, the third 2300, the fourth 5000, and the fifth 10,000 skin test doses. By following this procedure 60 to 70 per cent. of susceptibles are rendered immune.

Scarlet fever toxin for the prevention of scarlet fever has not been so extensively used as has toxin-antitoxin and toxoid for the prevention of diphtheria. Reactions, both local and general, are more common and more severe, and this, along with the time element involved in administering five doses, has more or less limited its use to institutions, and to communities where scarlet fever has presented a problem.

Scarlet Fever Toxoid. A scarlet fever toxoid has been prepared by Veldee of the United States Public Health Service which may shortly be available for active immunization against scarlet fever, if permission can be obtained from Doctors Dick of Chicago, to market the product. This material is prepared in a similar manner to diphtheria toxoid, the toxin of the streptococcus scarlatinae being used in place of the toxin of the diphtheria bacillus.

Veldee reports that three doses of .5 cc., 1 cc., and 2 cc., containing 20,000 skin test doses per cc., given at weekly intervals will render 70 to 85 per cent. of susceptibles immune one month after the last dose. Local and general reactions following the use of this material in children are neither more severe nor more frequent than those following the use of diphtheria toxoid, and much milder than those following the use of scarlet fever toxin.

The following procedure is suggested for active immunization against scarlet fever:

(a) For those who have not been recently exposed to the disease.

A preliminary Dick test should be performed on all. If a positive reaction results the individual should be actively immunized with graduated doses of scarlet fever toxin. One week following the last dose a Dick test should again be performed to determine whether immunity has or has not been established. If the reaction is still positive the treatment should be repeated.

(b) For those who have been recently exposed to the disease.

A preliminary Dick test should be carried out and, if positive and deemed necessary, a prophylactic dose of scarlet fever antitoxin should be given at once. One week later if no symptoms of scarlet fever have developed active immunization with scarlet fever toxin should be begun.

Passive Immunization Against Scarlet Fever.

Scarlet Fever Antitoxin. Large numbers of susceptible contacts (as determined by the Dick test) of cases of scarlet fever have been passively immunized against this disease for a period of from 2 to 6 weeks by the prophylactic use of scarlet fever antitoxin.

At the Hospital for Sick Children in Toronto it is now routine practice to Dick test all patients on admission. All positive reactors receive a prophylactic dose of 2 cc. of scarlet fever antitoxin. From 1921 to 1924, before the above procedure was introduced, among 26,639 patients admitted to this hospital, 120 cases of scarlet fever occurred, an incidence of 0.5 per cent.; from 1925 to 1931 among 40,000 admissions, who were either Dick negative or received a prophylactic dose of 2 cc. of antitoxin only 5 cases occurred, an incidence of 0.01 per cent. or 1/50 the rate during 1921 to 1924.

A simple procedure to follow in general practice to prevent the development of scarlet fever in children who have been exposed to a clinical case, is to Dick test the contacts, read the reaction 20 to 24 hours later, and give those reacting positively a prophylactic dose of 2 cc. of scarlet fever antitoxin.

Scarlet Fever Convalescent Serum. In some centres serum obtained from persons convalescing from scarlet fever is also being used prophylactically for the prevention of this disease in contacts. The dosage is usually 5 cc. to 10 cc. Scarlet fever convalescent serum has the advantage over scarlet fever antitoxin in that reactions following its use are either absent or very mild, and in addition individuals are not rendered sensitive to horse serum. The chief drawback to its extensive use is the difficulty encountered in obtaining a sufficient supply of the serum to meet the demand.

MEASLES.

Measles is a highly communicable disease, and one which attacks most persons some time during their life time. Up to the present time neither the cause of this disease is definitely known nor has a practical procedure for the production of active immunity been discovered. Mortality statistics show that 65% of deaths from measles occur among children under 2 years of age and 90% under 5 years of age. Isolation and quarantine as a measure for reducing its incidence and mortality have proven of little value. There is, however, a means of passive immunization for either preventing or modifying an attack. This end can be attained by the use of convalescent measles serum, convalescent measles whole blood and, although not nearly so reliable, by the use of adult whole blood from persons who at some time have had measles.

It is generally accepted now that in the vast majority of instances complete protection is afforded when convalescent measles serum, using a dose of 5 cc. or convalescent measles whole blood, using a dose of 10 cc. is administered before the sixth day of incubation; and partial protection between the sixth and ninth days. In the latter, the individual not only suffers a mild attack unaccompanied by complications, but develops in addition a permanent active immunity.

Passive immunization against measles is indicated for children under five years of age and especially for those under two years of age if complications followed by death are to be reduced. Whether to prevent the disease or to modify the attack will depend upon the age and general health of the child. Sickly children under five years if exposed should be protected, i. e., the serum should be administered before the sixth day of incubation.

The preparation of convalescent measles serum is simple, and at the present time supplies are available in some centres through a co-operative agreement between the medical profession and available laboratories.

Blood should be taken from the donor from the seventh to tenth day after the temperature has fallen to normal, because it is during this period that maximal antibody concentration in the blood is reached. Facilities for the preparation of convalescent serum are not always available in small centres and rural areas. In these instances citrated whole blood from convalescents or from individuals who sometime previously have had measles may be used. The dose of citrated convalescent whole blood is 10 cc. of citrated adult immune whole blood 20 cc. Citrated adult immune whole blood cannot be depended upon for uniform results as the antibody content varies widely in different individuals.

A simple method which the family physician can avail himself of is to use 1 to 2 cc. of 2.5% sodium citrate solution in a 20 cc. syringe, withdrawing from the convalescent the required amount of blood and then inject this intramuscularly into the patient.

Recently MacKahun and Chu have reported the use of concentrated extracts of the globulin fractions of the human placenta using a dose of 5 or 6 cc. for protection against measles. They injected the placental extract into four susceptible children exposed to measles, the protection sought being successful in each case. This work is of great interest and if proven successful opens up possibilities for the preparation of protective substances against certain other infectious diseases in which immunity is transmitted through the placenta.

WHOOPING COUGH.

Whooping cough is one of our communicable diseases which causes in Canada more deaths per annum than diphtheria, and more than the combined total attributed to typhoid fever, measles and scarlet fever. Seventy per cent. of deaths due to whooping cough occur among infants under one year of age and 90 per cent. under 2 years.

In the past many vaccines made from the Bordet Gengou bacillus have been used but until recently, none have been proven of value in preventing the disease or modifying an attack. However, there is now a vaccine prepared by Dr. Lewis W. Sauer of Evanston, Ill., which, from his observations and the observations of other investigators, is apparently a long sought means of producing active immunization against whooping cough.

Sauer has used this vaccine as an immunizing agent since 1928. During the five year period 1928 to 1932 he injected 394 selected, young, non immune children of eighteen months average age, with a total of 70 to 80 billion bacilli. One cubic centimeter was injected into the deltoid region of each arm. A week later, 1.5 cc. was injected into the biceps region of each arm, and one week later 1.5 cc. into the triceps region of each arm. One hundred and ninety-one or 50% of these children during the five year period were known definitely to have been exposed to cases of whooping cough, twenty-nine exposures being to cases in the same household four months to four years after having been given the vaccine. None of these children developed whooping cough. Thirty-one unvaccinated control children in twenty-four of the families contracted whooping cough. From these observations active immunity was apparently completed in four months time and lasted for at least four years. Because of the severity of this disease during the first two years of life and as four months should elapse for immunization to occur, the giving of the vaccine should be started early, preferably at six months of age. Reactions as a rule are mild consisting only of a transient rise in temperature and redness, induration and tenderness at the site of injection.

SMALLPOX.

Provided a potent vaccine is used, and the technique of vaccination is properly carried out, there is always a "take" following vaccination against smallpox. Out-dated virus or virus which has not been kept at or about the freezing point should never be used if a high percentage of takes are to be expected. A higher percentage of takes and a much smaller scar can also be obtained by using the multiple pressure method devised by Leake in place of the old scratch method.

The technique of the Leake method of vaccinaton is as follows: Cleanse the arm in the region of the insertion of the deltoid muscle and allow the area to dry thoroughly. Then place a drop of the virus on the skin. Hold the needle with the thumb and first and second finger almost parallel to the arm. Pressure is then made on the skin twenty-five or thirty times within an area of one-eighth of an inch, being careful not to bring blood. The remaining virus is wiped off with a piece of sterile cotton and no dressing or shield applied.

Following vaccination the site should always be inspected about forty-eight hours after, and again on the fifth or sixth day, to see if the vaccination

has been successful. A successful "take" is always evident by one of three reactions:

(1) *A Primary Reaction.* This reaction occurs in persons who have never been vaccinated or who have never had smallpox. Nothing is noted for the first three to six days, then a papule appears which soon becomes vesicular and then pustular reaching its height on the ninth or tenth day. By the twelfth day it begins to dry up with crust formation, the crust dropping off during the third or fourth week, leaving a characteristic scar.

(2) *An Accelerated Reaction.* This reaction occurs in persons who have a partial immunity due to previous vaccination or having at some time suffered an attack of smallpox. This reaction is much less severe than the primary take, developing more quickly, reaching its maximum sooner and disappearing more rapidly. The height of the reaction occurs on the fourth to the eighth day instead of the ninth to tenth and may not go beyond the vesicular stage.

(3) *A Reaction of Immunity.* This reaction is seen in persons who have a relatively high degree of immunity produced by either having had the disease or having been successfully vaccinated at some previous time. This reaction consists of a small area of redness or a small papule, or both, which reaches its height in 48 to 72 hours, then rapidly disappears.

"Ovaltine" Jersey Cows Sweep The Board At The Dairy Show. 100% Success.

At the Dairy Show at the Agricultural Hall, London, the "Ovaltine" Jersey Herd swept the board by winning first prize in all three classes.

In addition the Herd secured the much sought-after extra Inspection Prize for the animal giving the greatest quanity of milk, and also the Reserve award—the only two awards given in this class.

Every animal entered by the "Ovaltine" Dairy Farm secured a prize—a 100% success and a remarkable achievement which sets the seal on the record season which this famous herd has enjoyed. The total number of awards gained in 1935 at the principal Agricultural Shows is no less than 115.

Columbia University announces discovery of a revolutionary and harmless pain deadener by Dr. Leroy L. Hartman, formerly of Victoria, B. C., and now professor of dentistry in the school of dental and oral surgery, New York.

The new desensitizer is expected to revolutionize the practice of dentistry by eliminating pain and that "drilly" feeling in the preparation and filling of tooth cavities.

The new desensitizer, perfected by Dr. Hartman after 20 years of research, is described as a solution applied to the surface of the tooth, not only preventing pain but also offering the possibilities of saving teeth now doomed to be lost through extraction.

The solution becomes effective in about one and a half minutes after application. It remains effective from 20 minutes to an hour. It causes no after-effects and the patient is not aware of its application.—*Halifax Mail.*

Some Aspects of the Classics in Medicine

J. E. LeBlanc, M. D.

WE studied in February the "Value of the Classics in Medicine"—and we laid special stress upon their importance and necessity in our curriculum as a prerequisite of our course of study. To-day, we shall again come back to the same topic and treat it, more fully. It will not be necessary for our present purpose to repeat the well known arguments in favor of the classics. It certainly would not be easy to single out as a new claim any result of Classical Education, any benefit or utility which has not been set forth by competent writers in Europe and America. While there are those who are bent on extermination, giving no quarter to the Classics, we insist on proportion, on such co-operation of all educational values as well secure the best results. We believe in Science, in all that it has given to mankind but also we believe in the *Humanities* otherwise we would have missed the basic element of *Beauty*, and *Life* which the Greeks have revealed to the world.

The great gift which the Classics have given to Medicine is a liberal Education. That, no one can deny; and, in this regard the Medical Profession has some right to speak, for she has demanded them as a prerequisite of those who are to take our course of study. Medical men, coming, as they do, into close contact with the lives of all sorts and conditions of men have excellent opportunities to observe the effects of different kinds of education upon human life. It is now generally admitted that an education to be *Liberal* must include natural science on the one hand and language, literature and history on the other: i. e. Knowledge of the world around us; and knowledge of human life, of man's capacities and ideals, of his longings and achievements, of his political theories and social aims, of his appreciation, of the beautiful and of his conception of faith and worships. The experience which most of us have gone through at College or at the University fully substantiate this. When we entered College, we were faced with three great intellectual problems: The first one was, the vast world of things outside us; the largest and outermost circle within which our whole life is spent. To solve this problem, four means were placed at our disposal: first of all, mathematics for the underlying abstract relations of space and number which exist everywhere. Next, rising from this, came physics which deals with energy and matter. Then came Chemistry which deals with the analysis and synthesis of the elements of matter and finally, biology, the science of Living matter. These four subjects compose the central body of the Sciences which a liberally educated man needs to know.

But did we stop here? By no means. We took up the second great problem, the problem of mankind, the world of persons around us, within this large but lesser circle where we must spend our whole life unless we retire to a desert. The answer to this problem we found it written in what we call history: the whole record of the collective activity of the race. Of this problem, we cannot say too much because by its very definition we are at once plunged in a

vast world of accumulated facts. "History" put in a simple phrase, "is a narrative or account of ascertained facts to which man is witness." "It is" says an ancient writer "the witness of ages, the light of truth, the life of the memory, the school of life, the messenger of antiquity. For us, of course, the history of our own land is essential, but the mother study, source of all the rest is history proper, that of our own civilization which is to be found in our ancient history, the story of Greece and Rome.

And thirdly we studied, at College the problem of the Individual man; the tiny world of self, the centre of all our interest in the large world of mankind and the large world of nature. That we described last February in pointing out "the Value of the Classics in Medicine"—language, literature and philosophy.

A famous man said: "I have but one lamp by which my feet are guided and that is the lamp of experience. I have no way of Judging the future but by the past."

This is particularly true of the Classics and Education in general. The present takes its root in the past and therefore to know the present, we must study the past. When Classical studies were predominant in education, natural science being neglected, medicine held up the hands of those who urge the objective study of external nature. She stood as she stands to-day for the principle "of a true cognition of the things (or objects) themselves taken directly from the things themselves." But there seems to be a tendency now a days to push this principle a little too far because some of us in medicine feel, that Education is in danger of becoming too *Illiberal* in the other direction, first because schools are growing remiss about humanistic rather than about physical subjects and secondly, because of the tendency in the Colleges to displace liberal by vocational training. If the humanitites which are fully as important for the welfare of individuals and nations as well as physical science were to be neglected, all human progress would be endangered and Medicine as well as other sciences would suffer. In our desire to be "practical", to be "efficient" to be "modern", we must take care not to become too narrow minded and materialistic; not to sacrifice a greater good that is remote by striving too eagerly after a lesser good that seems near. *Science* and *Thought* have been created by men who desired to know not in order to become famous but simply that *they might know*. To be liberally educated, a man must have gained a belief in the value of knowledge; have learned the methods by which true knowledge is acquired and have applied these methods in his studies of nature and of man.

In conclusion, let me quote you the Joint Statement of Viscount Bryce and others first published in the London Times on May 4, 1916.

"It is our conviction that the nation requires scientific method and a belief in Knowledge, even more than physical Science and that the former is by no means identical with the latter. We might enthrone physical science in all our schools without acquiring as a nation what we most need, the persuasion that Knowledge is essential to success and that this Knowledge means facts laboriously gathered, wisely selected and carefully tested. This scientific method is not the peculiar property of physical science; all good work in all studies is based upon it, it is indispensable to *law history, classics, politics* and all branches of Knowledge rightly understood. What we want is scientific method in all the branches of an education which will develop human faculty to the highest possible degree.

In this education, we believe that the study of Greece and Rome must always have a large part because our whole civilization is rooted in the history of these people and without Knowledge of them, cannot be properly understood. The small city communities of Greece created the intellectual life of Europe. In their literature we find models of thought and expression and meet the subtle and powerful personalities who originated for Europe all forms of poetry, history and philosophy and even physical science itself no less than the ideal of freedom and the conception of a self governing democracy; while the student is introduced to the great problems of thought and Life at their springs before he follows them through the wider but more confused currents of the modern world. Nor can it be right that the educated citizen of a great empire should remain ignorant of the first state that met the problem of uniting in a contented and prosperous commonwealth nations differing in race, temper, culture and which has left so deep a mark on the language, law and political conceptions of Europe. Some Knowledge of Latin is indispensable for the intelligent study of any one of these things and even for the intelligent use of our own language. Greece and Rome afford us unique instances, the one creative, and critical intelligence, the other of constructive statemanship. Nor can we afford to neglect the noble precepts and shining examples of patriotism with which their history abounds."

Thus, the cause of the classics is part of greater problems—the unity of our higher Knowledge, the best training for all those who can take it, the welfare of our country. Mathematics and Classics, science and philosophy, history and modern literature are the nobler sons in the household of liberal training. To have known them all, well enough to like them all, no matter which one we come to like most, is the best liberal education.

A Morning Visit to a Rural Hospital

L. R. MORSE, M.D., Lawrencetown, N. S.

THE reader is invited to have a drive in a mud-bespattered car, for the roads in this section of Nova Scotia have a regular habit of being muddy at this time of the year. This is the reason that the country medical auto, which has to go every day, rain or shine, is not always in as presentable appearance as it might otherwise be in the city. After a drive of a short six miles, winding our way through dump carts and a small army of men engaged in putting through the hard-surface program of the present Government, we arrive at a small rural hospital.

There is not much to be said about the building; so we will only look over the patients and see how the practitioners here are engaged, also, what assortment of cases they meet with. The plain garden variety is here of course, but I have no doubt that we shall find some interesting subjects. This is an actual visit as it happened, and the cases are not hypothetical, but are as and when we saw them.

There is a standard filing system and the histories and operative records are fairly well written up. No one, I think, will have any objection if we make a few remarks on his patient in an impersonal way.

Double Salpingitis:

The first case is a young married woman, aet. 19, complaining of pain in right inguinal region. There was a possibility of acute appendicitis, as she has fever, tenderness on palpation and white blood count increased. But there is a purulent vaginal discharge, and examination shows a mass high up in the right formix, with uterus fixed and painful. She had a left side attack ten days ago. No operative measures are contemplated. She has improved under rest in bed and application of dry heat. Vaginal smears were negative in this case for gonococci; but it is evidently a double salpingitis.

Purperal Infection:

The next patient is a married woman, aet. 35, V-para. This is fourth day after delivery. She has temperature 104°F., pulse 120, lochia offensive, and is also coughing with quickened respiration. Examination shows that right chest is dull with bronchial breathing and evidence of pulmonary infection, probably septic emboli carried from septic uterus. Four years ago she had puerperal septicemia which was very severe and lasted three months. There were similar lung complication and a phlebitis of right leg. This attack has been short and she will make a rapid recovery.

Repair of Cystocele and Perineum:

The third woman in this room is 60 years old and has been operated on for cystocele and second degree perineal tear. There was no rectocele and slight descendus uteri. The cystocele was very prominent. She had had a great deal of discomfort and bladder disturbances. The operation was done

in the usual manner by median incision from the meatus to the cervix and dissecting off lateral flaps extending well outwards. The bladder was plicated by sutures of No. 1 catgut on a small round needle, then deep sutures passed laterally brought forward the underlying tissues a support to the bladder. Following the practice of the R.V.H., Montreal, gynecological service, it has been found convenient to insert a self retaining catheter, at the time of the operation for 4 or 5 days. This prevents any soiling of stitches during urination. The vagina is filled up with acriflavine jelly on completion of operation. She has done well and the stitches have healed satisfactorily.

Complete Rupture of Urethra:

J. K., aet. 59. This patient was struck by an automobile while crossing the road. He is supposed to have been injured at level of left hip. There was a hematona in perineum and he was unable to urinate. Several attempts to catheterize were not successful. X-ray examination showed a fracture of the ascending ramus of right pubic bone with a displaced comminuted fragment apparently towards the median line. This, evidently, had injured the urethra. Twenty-four hours after injury an incision was made in perineum after steel sound had been passed per urethra. The distal end of urethra was located easily but after a long search the proximal (bladder) end of urethra was not located. He had had a long anaesthesia and was not in very good condition. It was decided to puncture bladder from area in which search had been made for the other end of urethra. A Pezzer catheter was introduced and gauze drainage through perineal wound to provide for any leakage. There was none, and ten days afterwards supra pubic incision was made and bladder opened. A stiff woven catheter No. 10 English was passed into bladder end of urethra and after removal of the Pezzer catheter from bladder and urethra the new catheter was passed from bladder out, and through meatus. He drained freely through the supra pubic wound. There was a small amount of urine through the in dwelling catheter for two weeks when a larger one was inserted and the supra pubic wound soon healed. There was some contraction of scar tissue, but he has been kept dilated up to No. 23 French-Steel sound, and is passing water freely with good control. He seems to have been immune to epididymitis, from irritation and infection of long retained catheters. In fact, he stood the "racket" well.

Large Omental Hernia:

Mr. T., aet. 65, has had an interesting experience. He was afflicted with a double inguinal hernia for many years. Ten days ago the right side rupture became strangulated, which he thought he had reduced before admission. The vomiting stopped but there were great pain and tenderness in the right inguinal region with fever and elevation of pulse. The scrotum was large and filled with a large mass continuous up to the internal ring. The scrotal part of the mass was apparently an old hydrocele as he said he had had an enlargement there for years which did not disappear on lying down. Immediately above this was felt a hard mass about the size of a walnut. It was irregular and hard. It was difficult to say whether it was an old tumor of the spermatic cord or not.

At the upper end of this large tumor and extending into right inginual region was an area about McBurneys point which was very tender, and, with a temperature around 101°F. suggested appendicitis. His obstructive sym-

ptoms subsided and after a week he had no fever or tenderness in this area. At operation it was found that there was a large omental hernia together with a moderate size hydrocele. The puzzling tumor, apparently in connection with the cord, was made up of omentum tightly packed into a thin sac. Ordinary Bazzini operation was done and the hydrocele sac trimmed off the testicle. After operation he had a pulmonary disturbance with fever, dulness in right chest. Cough and quickened respiratory rate—probably atelectasis which we formerly considered as an ether or post-operative pneumonia. He has made a good recovery.

Prostatectomy:

This old man in the corner has had a long hard pull, but is doing well now. He has had symptoms of prostatic obstruction for four years and catheterisation at various times. His general condition in June was bad. He had rapid pulse 120 and BP 110/40. Laboratory report was as follows:

Non-protein nitrogen 66.6 per 100 cc.

Urea	31.1
Uric Acid	4.46
Crealnmic	2.14

Supra pubic cystotomy was done at this time with Pezzer catheter drainage. He had a stormy time but improved after a few weeks and went home for about three months with a supra pubic drain. He returned a few weeks ago in fairly good shape, although pulse rate was over 100. The supra pubic opening had pretty well closed up so that it was necessary to pass a small ordinary soft rubber catheter through the fistula to empty his bladder. A small fibrous prostate was removed with difficulty. After another stormy period he has sailed into quiet waters and is now urinating normally. He will go home in a few days.

Caesarian Section:

Mrs. L. has made seven attempts at having normal childbirth. There have been five miscarriages at various times from the third to sixth month of pregnancy. The sixth pregnancy went to full time, but foetus was hydrocephalic requiring puncture of cranium followed by a long difficult delivery of the collapsed head. The last pregnancy was fairly normal but during delivery there was prolapse of the cord and foceps delivery with a still born child as the result. She is a fairly healthy woman inclined to be anaemic. Examination of blood showed a negative Kahn Test.

This time Caesarian section was suggested as a plan to have a living child. After a family consultation, a decision was made to have it carried out. This was done as in the ordinary procedure. The time selected was two days after the completed reckoned time for pregnancy to end, although labor had not begun. She and the child have done well.

Kochers Operation for Prolapse of Uterus:

Mrs. F. This woman, aet. 60, has had prolapse of uterus with rectocele and cystocele, for years. Lately she has not been able to carry on her household work only with difficulty and distress. About a year ago right breast operation for Scirrhus carcinoma but there are no signs of any recurrence and she seems to be in good general condition at present.

In Kochers operation the uterus is brought up between rectus muscles. The peritoneum and fascia are stitched to the uterine body so that the fundus is fixed in a sub-cutaneous position. This draws up the vaginal walls so that the cystocele rectocele disappear. In this case it was not necessary to submit the patient to a long procedure of repair of vaginal walls. Wm. Mayo says that twenty years ago Kocher showed him his operation for uterine prolapse for elderly women. He went back to America impressed with it, but at first thought it was also necessary to do vaginal repair work. On a subsequent visit years after to Kocher the latter arranged to have some of the same cases present for Mayo's inspection. The results were excellent. This case is also going to have a good result.

Cholecystectomy:

Mrs. L., aet. 40. This woman had a long history of gall stone colic for ten years. She has never had jaundice until a few weeks before admission. An unusual happening in her case was a well marked seizure of tetany during gall stone colic. The hands were in the characteristic position, but the feet and ankles were not affected. This was the only attack of tetany as far as could be ascertained. Cholecystectomy was carried out in the usual manner. Over 130 gall stones were contained in the gall bladder. The stump of cystic duct was transfixed by a needle and ligature and securely tied so as to prevent slipping and escape of bile from common duct. But on the fourth day she had abdominal pain, rapid pulse and symptoms of a severe disturbance which cleared up next day when there was free discharge of bile from the wound. This continued several weeks when it looked as if she would have a biliary fistula. However, it suddenly ceased discharging and she is making a good recovery.

Fractures of Tibia and Fibula Lower Third:

Perhaps you will have time to look at another case, of fracture of tibia and fibula in the lower third. This woman was on the receiving end of an automobile accident and had suffered a severe scalp and face wound besides the fracture. There was great mobility of the lower end of tibia so that it slipped in and out of position, when pressure was released over the post surface of tibia resembling a posterior dislocation of the ankle joint. It was maintained in position by being held there while extension of leg was made, after fixing knee joint and plaster paris bandage was applied by assistant while leg was held with foot inverted. This patient is going to have an excellent leg.

And soon, there are other patients, but I think I see the reader beginning to yawn, so will we re-enter our rather unkempt looking conveyance and return to the place from whence we came, having attempted to show the patients as they were on this particular day. The aforesaid patients have had a necessarily hurried "once over" in order to avoid overstepping the limits of an article of this sort but enough has been said, no doubt, to give an idea of what was going on at the time of this visit. Much more could be said about the problems of the small hospital, with no endowment or government and municipal support except grants of less than $1,000 per year. The sympathy and loyalty of the communities served by it keep it going. Notwithstanding there are real difficulties in administration and finance, etc., but "that is another story".

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ENSOL AND SOUTH SEA BUBBLES.

IN a recent issue we suggested that we should give ample opportunity to the progenitors of Ensol to demonstrate its usefulness in our fight against cancer. In the light of more recently received impressions we are constrained to advert to the subject again and we do so regretfully since our impressions are by no means favourable, neither to the product nor to the atmosphere from which it ensued.

As yet no evidence has come to light that it is a cure for cancer. On the contrary there is enough to encourage our belief that in many respects it is in keeping with those other "Cancer Cures" which in the relatively recent past have darkened the pages of Medical History. Readers will remember very well examples of these: The Glover serum at fifty dollars a vial as our outstanding Canadian example, and of more recent, but not more loving memory, the Coffee treatment in California. In the latter, there was the spectacle of people rushing in thousands to receive the injections, of pictures in the newspapers of sufferers receiving treatment at the curb side because there was no room inside.

And now Ensol. When the writer was in Kingston one of the best rooms in a certain hotel was four dollars a day and when a couple of weeks later some of our confreres went from here the rate for similar accommodation was seven dollars, and that, for rooms in which notices ask you not to steal the linen! Then the price of Ensol at the Laboratory is $3.00 per cc.—20 cc. constitutes a course. Apparently any number of courses can be given and these are not necessarily limited in number by failure to get improvement. This is scarcely the "giving to the world" which *Liberty** quotes Dr. Connell as saying. People were flocking there in hundreds for treatment, pouring their money into the place in thousands—and *cui bono?* So far as we have been able to check on results we are driven to ask if they haven't been chasing another will-o-the-wisp.

It seems to be true that in some cases temporary benefit has followed its use, more subjectively than objectively, but at times definitely both. However, we have not yet heard of a case of a primary histological cure. It seems

* *Liberty*, December 14, 1935.

to us, therefore, to have failed to develop qualifications which would entitle it to a place with surgery and irradiation, or even with lesser things, in the control of cancer. Yet *Liberty* quotes the Ontario Minister of Health as having said, "since the discovery of Dr. Connell's new remedy for cancer there was no more need of radium".

The purpose of this writing is not to question the bona fides of any of the persons engaged in this enterprise. We do, however, regard it as our province to discuss certain principles in medicine which may appear to us to have suffered violence, or to be more specific perhaps, to discuss matters which appear to us to be subversive of the best interests of our profession *or of the people which it serves.* For the italicized half of that statement one might have had to apologize a few years ago but not now, since medicine has come to have, and seems destined to continue to have, such an important social significance. It is very obvious that we are no longer concerned only with advance in medical education and improvement in medical or surgical technique, but more and more with those features of medicine which are for the good of all Society.

It is opportune then for us to ask if we can with propriety or with equanimity stand back and watch such subversions go on under our eyes. The publicity part of this Ensol business, which, in our effort to accord the benefit of doubt to a confrere, we at first defended, seems now to have transgressed the bounds of decency and to have become quite indefensible. Witness the article in *Liberty**, quoted above and recently recalled to our attention. It carries verbatim quotations from the principals of Ensol which appear to us to be flagrant violations of even Canadian ethical standards and which, as we have seen no repudiation of their authorship, we must accept as authentic.

Is it any wonder that in the face of such advertising, in the light of such pictures of the marvellous effects of Ensol, as are painted in that article, that people who are unable to read the truth which lies buried between its lines are flocking to Kingston with hopes built high and with enthusiasm developed to the point where they think they experience improvement which may not exist, and all for what? Has not medicine as a social force advanced to the point in this country where it should insist upon something better than that? Is the time not here when we should adopt regulations such as those which obtain in England governing such matters? It seems obvious to us that the enforcement of such regulations in this country would be a real protection, not only to our own position as a profession but to the public as well.

We have heard a great deal about the influence upon us of practices followed by our confreres to the South, but the tendency of the times even there is indicated by the recent decision of the American College of Surgeons to form a strong judiciary department having charge of discipline among its fellows —a veritable "Supreme Court in Surgery".

Is the time not here—now that the fusion of the Provincial into the Federal organization is apparently being realized—for us to think in terms of assuming our responsibilities in similar fashion? The law of the land goes as far as possible to protect the public from South Sea Bubbles in the realm of finance. So far it has left us to prevent this occurrence in the field of medicine; but it will not always so leave us. If, then, it is agreed that action should be taken, how much better it would be if we, who have within ourselves the qualifications for fair examination into such matters, were to initiate the measures for control, and were to construct the machinery for their execution.

Let the law-makers go on with their protection of the pockets of the people; the inevitable disappointment and despondency and heart-ache that follows failure of prematurely-released cures, we are the better able to appreciate, the better able to control. Our developing social conscience demands that we keep our house in order.

THE FALLING DEATH RATE FROM TUBERCULOSIS.

Looking back and "taking stock", we, who are interested in the attempt to control tuberculosis must feel that some progress has been made. Sad as the record of its ravages and side issues still is, this great enemy is actually, if slowly, being conquered.

Of many things that can be done the three essentials on which life-saving and, incidentally, money-saving—in short, on which the conquering of tuberculosis hinges—are (1) institutional treatment (segregation) for the tuberculous; (2) early diagnosis; (3) education of all the people with regard to the prevention of tuberculosis. It needs no special knowledge to see the prime necessity of these three things. They should be taken to heart by every one, and every one who is in the least interested should stress these points and strive for their attainment.

As to early diagnosis, a complete and expert examination must be sought early and often. The yearly examination is a good common-sense lifesaver. Remember that in early cases the x-ray is necessary to exact diagnosis. It is a pitiful thing even in this enlightened day that more than three-fourths of all patients coming to the Nova Scotia Sanatorium are in an advanced stage of tuberculosis, most of them having had discoverable though insidious disease for months or years. Eternal watchfulness, invariable suspicion, x-ray examination while you are apparently well—these are the salvation of mankind from tuberculosis, as we are at present constituted. The waste of years and wrecked lives that pass continuously before us sanatorium physicians constitute a tragedy that is for the most part utterly unnecessary.

The public money is being wisely used, not only for the treatment of the sick but for the provision of examination. The free clinics have been increasingly useful as outposts and feeders for the sanatorium, and as centres for the instruction of the people. From them may come a stream of early cases discovered by expert examiners of suspects and contacts. To this end, x-ray examinations should form a routine part of clinic examinations.

These are the things that most need to be taken to heart; we know that the measures we urge will produce results, because they have done so and are doing so. In our own province in 1910 when we had only 22 institutional beds for tuberculosis, we were losing approximately 859 lives a year from that disease and the death rate was around 210 per 100,000 of population. In 1934 our deaths from tuberculosis totalled 464, the rate being 88.2 per 100,000, and now we have approximately 544 beds besides other aids in the fight.

In other countries, too, wherever modernized anti-tuberculosis measures have been carried out there is a proportionate decrease in death rates, which is partly due to education and better living. It is worth while, however, to note a lesson as to the connection between proper preventive measures and death rates from a large scale experiment sponsored by the Metropolitan Life Insurance Company. While the death rate in the United States under a

remarkable public health tuberculosis program was lowered by fifty per cent. in twenty-five years, at the same time among the large group (eighteen million policy holders) of the experiment in an intensive health and examination campaign, the death rate was cut down almost fifty per cent. in only fifteen years. In 1911 the tuberculosis mortality rate among industrial policy holders of the Metropolitan Life Insurance Company was 241 per 100,000. By 1930, the rate had fallen to 82 per 100,000, that is, a drop of 66 per cent.

The encouraging fact that Canada has kept pace with progressive countries and has reduced its death rate from tuberculosis from 180 per 100,000 in 1900 to 67.9 in 1932, while no doubt due to several causes, has surely been brought about largely by the notable increase of sanatorium and hospital accommodation and by the constant educational work, especially along the lines of prevention, of the various anti-tuberculosis organizations. It is gratifying to note that new records have been reported. During the past four years the death rate from tuberculosis in Saskatchewan has fallen 25 per cent., i. e., to 27.5 per 100,000, and the City of Hamilton to 28.5 per 100,-000. To-day some 8,000 tuberculous patients are segregated annually in sanatoria and hospitals in Canada, and for the reason that they have had training in sanitary habits they must certainly be spreading fewer tubercle bacilli than the uninstructed patient of some years ago. This naturally results in reduction of infection, fewer cases of new disease, and a corresponding lower mortality rate.

Tuberculosis no longer heads the list in the causes of deaths among mankind. It still maintains its supremacy in adolescent and early adult life, and may be regarded as our foremost public health problem. In 1934 some 464 persons in Nova Scotia died from this disease alone. This is certainly no time to let up in our efforts. They must be continued and broadened. With the spread of medical knowledge we have every reason to feel that tuberculosis will ultimately be brought under control and our loss of life gradually reduced. An end devoutly to be desired.

CASE REPORTS

Myxedema—Diabetes Mellitus.

Patient No. 1209, female, age 53 was first visited on May 7, 1934, at which time she complained chiefly of general weakness and pains in her legs.

Family History—Father died following attack of Gall Stones at the age of 75. Mother and one sister succumbed to Tuberculosis. Another sister died following childbirth. Three brothers and one sister are living and well. There is no history of thyroid disturbances or diabetes in any of the immediate or remote relations as far as she is aware.

Past History—Patient suffered from Mumps and Tonsillitis as a child and at the age of 23 passed a renal stone. There were eight normal pregnancies followed by the menopause 8 years ago. Three years ago, on several occasions within one month she coughed up a small amount of blood without having any other suggestive symptoms. All teeth were removed at about this time.

Present Illness—Patient has never enjoyed good health in the past 25 years and for two or three years has been practically an invalid, suffering from pains in the legs, back and abdomen, constipation, weakness, drowsiness and increasing obesity. She has been extremely sensitive to cold, even in relatively warm weather. At the present time she does little but eat, sleep and sit in a chair.

Examination—Patient is an obese middle aged female. Weight 164. Height 5 feet 4 inches. Temperature 96.4. Pulse 60. The facies are typically myxedematous—coarse broad features with an apathetic expression, wrinkled forehead, puffy eyelids and sallow lumpy cheeks. The hair is moderately coarse and dry but fairly abundant. The skin is rough, dry and shows the characteristic infiltration of marked hypothyroidism.

Eyes—Vision fairly acute; pupils equal and react to light; movements normal; opthalmoscopic normal.

Ears—Canals are clean; drums intact; hearing not impaired.

Nose—Normal except for mild rhinitis.

Teeth—Have been removed; gums in good condition.

Tonsils—Large and smooth.

Pharynx—Clean.

Glands—No enlargement of superficial lymph nodes; breasts are pendulous and lumpy; thyroid is small, smooth and soft.

Chest—Negative except for a few rales at the bases. Respirations are slow.

Heart—Sounds are regular but indistinct; no murmurs; slight enlargement to the left. B.P. 128/90. Vessels soft. Pulse barely felt.

Abdomen—Moderate tenderness in all areas but no gross pathology present. No hernia.

Extremities—Moderate pitting edema present in addition to the myxodemators swelling; calf muscles are tender; no joint pathology; reflexes normal.

Genitalia—Moderate pelvic relaxation; cervix normal; fundus small and freely movable; adnexae normal.

Rectal—Normal except for a few hemorrhoidal tags.

Urinalysis—Negative except for moderate pyuria (several specimens examined).

Diagnosis—This case was considered to present the following diagnoses—Myxedema. Chronic Cystitis. Chronic Myocarditis.

Progress and Treatment—Thyroid therapy was immediately instituted with ascending doses until she was taking 5 grains of the extract daily. Exactly one month later her condition was closely checked and definite improvement noted, especially in regards to relative freedom from pain and a feeling of well-being. The urine at this time was essentially as before recorded. Thyroid dosage was reduced to 3 grains daily. Ten weeks after taking thyroid there was quite definite improvement. She had lost 19 lbs. of her excess weight and felt much better in every way, especially in regards to drowsiness. She was able to do part of her housework and did not feel the need of an after noon nap. She suffered less from aches and pains but did not feel much warmer. There was no thirst, polyuria or increased appetite, nor any signs of hyperthyroidism. A specimen of urine examined during the course of this examination revealed a four plus Benedict Test.

Thyroid dosage was reduced to one grain daily, and, as she refused to consider insulin therapy a rather low carbohydrate diet was prescribed.

She has continued to pass a variable amount of sugar though an occasional specimen is clear and recently this glycosuria has shown signs of abating. Her weight is now 132½ lbs., a loss of 32 lbs., and her general appearance has improved in every way. Whereas formerly dull and listless she is now bright and alert, able for the first time in years to do her own housework, is practically free from any discomfort and yet does not show any symptoms or signs suggesting that the thyroid dosage is too large.

I realize that this history lacks the confirmatory evidence possible through Basal Metabolic Rate determinations, yet the clinical signs are so definite that one can feel certain of both diagnoses.

D. F. MACDONALD, M.D.,
Yarmouth, N. S.

Carbuncle of the Kidney.

An uncommon condition of the kidney so-called because of its resemblance to carbuncle of the skin and from which it is metastatic in many cases. This condition may appear in two forms one of which presents multiple-small abscesses of the cortex of the kidney—the Pyemic Kidney—and the other a single localized suppurative area of the cortex—Israel's boil. The causative organism is usually the Staphylococcus Aureus. It is metastatic in origin usually from furunculosis of the skin or carbuncle, but may follow a simple patch of eczema or an osteomyelitis. The onset of the kidney lesion may follow immediately the resolution of the skin lesion or may not occur for several weeks after resolution.

The symptoms are variable and often obscure and depend largely upon the area of cortex involved and the extent of the suppuration. Recently I

have seen two cases, in one of which the suppurative process was in the lower pole of the right kidney and resembled a retro-caecal appendicitis, and in the other there was suppuration in the anterior surface of the upper pole and closely resembled an acute intra-peritoneal lesion.

In the former case the symptoms were insidious in onset and a definite perirenal abscess had formed before a definite diagnosis was made.

In the latter case the symptoms came on suddenly and closely followed an infection of the nose and was operated before suppuration of the perirenal fat had occurred. The symptoms usually presented are abdominal pains appearing in one or other upper quadrant or in the loin, fever, chills and a leucocytosis. Urinary symptoms are in the beginning usually absent and may remain so throughout, if the suppurative process does not approach the pelvis of the kidney, or there may be haematuria if the abscess is near the pelvis. Physical examination, if the patient is not too obese, may reveal tenderness on deep palpation over the kidney involved, or there may be some fullness in the abdomen over the underlying kidney Limitation of movement and diminution of the breath sounds over the lower chest on the side involved may be present.

Renal function tests may be within normal limits. Pyelography where there is blurring or obliteration of one or more calyces is a distinct diagnostic aid, but this method of examination will be found often to be negative. The gall bladder and appendix must be ruled out.

The history or visible evidence of recent skin infection is extremely important as the presence of such makes the diagnosis comparatively easy, but in the absence of such a history the diagnosis may be extremely difficult, even after extensive suppuration of the perirenal fat has taken place. (An interesting article on the diagnosis of Retroperitoneal abscess appeared in the February /35 issue of the Canadian Medical Journal).

Given such a history with a continued or prolonged fever and leucocytosis and physical examination of the various other organs of the body negative, you should suspect the presence of a carbuncle of the kidney with or without attendant perirenal suppuration even though local signs are absent.

As regards treatment—if there is suppuration in progress it should be thoroughly drained over a period of weeks through a posterior incision. It is considered wiser not to remove the kidney as the possibility of involvement of the opposite kidney is great, a condition which obtained in one of the cases here reported.

Case 1. Mr. C. M. C. Male, aged 43 years. Family history, negative. Personal history, usual childhood infections. Chronic nasal infection. Frequent sufferer from furunculosis. Operation for abscess on left kidney fifteen years ago. Present illness, returned to his home a few days previously recovering from suppuration due to infection of hair follicle in left nares. Became suddenly ill with abdominal pains, chills and fever.

Physical examination revealed a male of slender build with temperature of 101°F., pulse 90, and respiration 20. The infection of the left nares found to be resolving. Examination of the chest did not reveal any abnormalities. Examination of the abdomen revealed some tenderness on deep palpation over the right kidney, but no "boarding". Gastro-intestinal tract and central nervous system normal. Urinalysis did not reveal either pus, blood, albumin or sugar. There was a leucocytosis.

Within three days there developed a "thickening" which made palpation of the right kidney difficult. A diagnosis of carbuncle of the right kidney

was made from the history and visible evidence of a skin infection, continued fever, leucocytosis, abdominal pain and tenderness over the right kidney. At operation, through a posterior incision, the kidney was exposed. There was no perirenal suppuration, but an area of suppuration was found on the anterior surface of the cortex at the upper pole. The pus revealed Staphylococcus Aureus. Drainage was maintained for three weeks. Recovery slow but complete.

Case 2. Female, aged 12 years, schoolgirl. Family history, negative. Personal history, other than for "colds" and the usual childhood infections the personal history is negative.

Present illness began insidiously several days prior to seeking advice from her physician for relief of malaise, fever and vague discomfort in the lower right quadrant. She was admitted to hospital on April 19th for observation. On the following day I was asked to see her by her attending physician, Dr. G. K. Smith, of Hantsport.

Physical examination revealed a female aged about twelve years, not too well nourished, pale and appeared very ill. Temperature 103.8°F., pulse 110, respiration 22. Examination of the chest revealed normal respiratory movements, normal breath sounds and no rales were found. Examination of the abdomen revealed no rigidity, no mass, and no tenderness except for a slight tenderness on deep palpation over the lower portion of the right kidney. The central nervous system and G.I. system were normal. Examination of the blood revealed a secondary anaemia and polymorphonuclear leucocytosis —count 17,500. The urine was negative. No tubercle bacilli were found in urine or sputum. She remained in much the same condition until May 4th, fifteen days after admission when a trace of albumin, some pus and red blood cells appeared in the urine. At this time a cystoscopic examination and pyelogram was done but our findings did not aid us in determining the cause of her prolonged illness. Because of the appearance of urinary symptoms the original tenderness on deep palpation over the right kidney and a recently developed tenderness below the 12th right rib, it was considered advisable to explore the right kidney. At operation, performed by Dr. G. K. Smith and myself, we found a definite perirenal suppuration with an area of necrosis in the cortex at its lower pole. This was thoroughly cleaned out and drainage instituted. The temperature subsided and though recovery was slow it was complete.

A. R. REID, M.D., Windsor, N. S.

Tenotomy and Muscle Advancement in the Case of Cross-eye.

D. T. female, age 15.

Patient consulted me for a severe case of cross-eye, in which the eyes alternated, first one and then the other (Concomitant Squint). The right, however, had the poorer vision and consequently was the chief offender.

This condition had dated from early childhood and was not corrected by glasses.

The vision was O.D. 6/18 O.S. 6/12 partly.

A general anaesthetic was given and tenotomy of the Internal rectus muscle of the right eye, was carried out.

There was some improvement in position, but the result was far from the objective.

One week later an incision was made through the conjunctiva on the external side, and the tendon of the external rectus was cut and shortened, or advanced, and sutured into position.

The result was further improvement in the position of the eye; but it was still crossed to a marked degree.

One week later the internal rectus operation was repeated, some lateral adherent fibres were released and Tenon's capsule incised superiorly and inferiorly.

This gave a splendid result, the eye assuming practically its normal position and restoring binocular vision.

J. P. McGRATH, M.D., Kentville, N. S.

The Noble Prize for Medicine goes this year to Professor Hans Spemann of the University of Freiberg.

He takes first rank for his work as experimental embryologist. His studies for years past have been devoted to the fate of transplants (out of animal eggs no larger than small pin heads and secured by microdissection) of organ-producing clumps of cells into other developing eggs. They develop, irrespective of the place of their transplantation, into what would have been the organ of the original embryo.

The Nobel distinction brings with it this year a cash award in the sum of $40,608, assigned to Spemann for discovering "the organizing effect developed in cells during embryonic evolution."

Typical of the scientist not working in marble halls, Professor Spemann remarked upon being notified of his distinction: "What can one do with so much money? The possibility of such award never occurred to me. I have all the instruments that I need for my work."

Doctor Occupies Romantic House?

Harley Street, London, for some time has been proving inadequate for the number of physicians desirous of setting up offices there. Wimpole Street, adjoining, has been accommodating the overflow and No. 50, famed home of England's colorful Barrett family, is now a physician's office. . . An operating table, X-ray apparatus and an austere collection of medical books have supplanted the quaint Victorian furnishings. Elizabeth Barrett's combined bed-sitting room, to which Robert Browning was a frequent visitor, has become a waiting room for the doctor's patients.

Report on Executive Activities of C. M. A.

THE Executive Committee of the Canadian Medical Association met at the Chateau Laurier, Ottawa on Oct. 31st. Over 50 items of business were discussed at a session which lasted from 9 a. m till midnight with short adjournments for luncheon and dinner.

The following is of special interest.

1. *Report of Dr. Primrose, Chairman of the Cancer Committee.* The Directors of the King George V Silver Jubilee Cancer Fund have appealed to the C. M. A. asking for suggestions as to ways and means of using the fund. They have indicated that they are willing to hand over this fund to the C. M. A. as being the logical body to deal with the problem of Cancer in Canada. Discussion centred around three points of activty: (1) Research; (2) Education; (3) Treatment. The concensus of opinion was that efforts at present should be largely educational and the problems of research and treatment left to other bodies. A committee with representatives from all the Provinces are giving this problem their earnest attention.

2. *Federation.* This proposition has been presented to all the Provinces and with the exception of Quebec has been endorsed in principle. Details and difficulties will be studied by the various provinces during the coming months. Alberta has led the way by officially accepting the proposition and from the first of Jan., '36 will be known as the Alberta Branch of the C. M. A. All the members of the profession in Alberta will be members of the C. M. A.

3. *Annual Meeting in Victoria.* The new President Dr. H. M. Robertson reported that arrangements were well in hand and assured the C. M. A. that no efforts would be spared to make the meeting a success.

4. The Health Assurance situation in British Columbia was discussed at some length. The profession of B. C. are looking to the profession of Canada through the National body for support and assistance in framing legislation which will be fair to the public and profession when such legislation comes into force. British Columbia is on the eve of adopting a system of State Medicine and what happens there will be of great importance to the profession in other provinces.

K. A. MACK.

Department of the Public Health

PROVINCE OF NOVA SCOTIA

Office—Metropole Building, Hollis Street, Halifax, N. S.

MINISTER OF HEALTH - - - - HON. F. R. DAVIS, M.D.,F.A.C.S., Halifax

Chief Health Officer - - - - - -	DR. P. S. CAMPBELL, Halifax.
Divisional Medical Health Officer - -	DR. C. M. BAYNE, Sydney.
Divisional Medical Health Officer - -	DR. J. J. MACRITCHIE, Halifax.
Director of Public Health Laboratory - -	DR. D. J. MACKENZIE, Halifax.
Pathologist - - - - - - - - - -	DR. R. P. SMITH, Halifax.
Psychiatrist - - - - - - - - - -	DR. ELIZA P. BRISON, Halifax.
Superintendent Nursing Service - - -	MISS M. E. MACKENZIE, Reg. N., Halifax.

OFFICERS OF THE PROVINCIAL HEALTH OFFICERS' ASSOCIATION

President - - - -	DR. F. F. EATON - - - -	Truro.
1st Vice-President - -	Dr. P. E. BELLIVEAU - - - -	Meteghan
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DR. F. O'NEIL - - - - - - - - - -	Sydney
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DR. R. M. BENVIE - - - - - - - - - -	Stellarton

MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

Hall, E. B., Bridgetown.
Braine, L. B. W., Annapolis Royal.
Kelley, H. E., Middleton (County & Town).

ANTIGONISH COUNTY

Cameron, J. J., Antigonish (County).
MacKinnon, W. F., Antigonish.

CAPE BRETON COUNTY

Densmore, F. T., Dominion.
Morrison, J. C. New Waterford.
Johnstone, L. W., Sydney Mines
McNeil, J. R., Glace Bay.
McLeod, J. K., Sydney.
O'Neil, F., Sydney (County), South Side.
Murray, R. L., North Sydney.
Townsend, H. J., Louisburg.
Gouthro, A. C., Little Bras d'Or Bridge (Co. North Side.)

COLCHESTER COUNTY

Eaton, F. F., Truro.
Havey, H. B., Stewiacke.
Johnston, T. R., Great Village (County)

CUMBERLAND COUNTY

Bliss, G. C. W., Amherst.
Drury, D., Amherst (County).
Gilroy, J. R., Oxford.
Hill, F. L., Parrsboro.
Eaton, R. B., River Hebert (Joggins).
Withrow, R. R., Springhill.

DIGBY COUNTY

McCleave, J. R., Digby.
Rice, F. E., Sandy Cove (Mcpy.).
Belliveau. P. E., Meteghan.Clare Mcpy.

GUYSBORO COUNTY

Chisholm, A. N., Port Hawkesbury (Mulgrave).
Sodero, G. W., Guysboro (Mcpy).
Moore, E. F., Canso.
Monaghan, T. T., Sherbrooke (St. Mary's Mcpy).

HALIFAX COUNTY

Almon, W. B., Halifax.
Forrest, W. D., Halifax (County).
Glenister, E. I., Dartmouth.

HANTS COUNTY

Bissett, E. E., Windsor.
MacLellan, R. A., Rawdon Gold Mines (East Hants Mcpy).
Reid, A. R., Windsor (West Hants Mcpy).
Shankel, F. R., Windsor (Hantsport).

INVERNESS COUNTY

MacLeod, J. R., Port Hawkesbury
Chisholm, D. M., Port Hood.
Chisholm, M., Margaree Harbour (County).
Ratchford, H. A., Inverness.

KINGS COUNTY

Bishop, B. S., Kentville.
Bethune, R. O., Berwick (Co. and Town).
deWitt, C. E. A., Wolfville.

LUNENBURG COUNTY

Marcus, S., Bridgewater (Mcpy.).
Rehfuss, W. N., Bridgewater.
McKinnon, C. G., Mahone Bay
Zinck, R. C., Lunenburg.
Zwicker, D. W. N., Chester (Chester Mcpy).

PICTOU COUNTY

Crummy, C. B., Trenton.
Blackett, A. E., New Glasgow.
Chisholm, H. D., Springville, (County).
MacMillan, J. L. Westville.
Stramberg, C. W., Trenton.
Sutherland, R. H., Pictou.
Benvie, R. M., Stellarton.

QUEENS COUNTY

Ford, T. R., Liverpool (County).
Hebb, F. J., Liverpool.

RICHMOND COUNTY

Deveau, G. R., Arichat (County).

SHELBURNE COUNTY

Brown, G. W., Clark's Harbour.
Churchill, L. P., Shelburne.
Fuller, L. O., Shelburne.
Banks, H. H., Barrington Passage (Barrington Mcpy).
Herbin, C. A., Lockeport.

VICTORIA COUNTY

MacMillan, C. L., Baddeck (County).

YARMOUTH COUNTY

Blackadar, R. L., Port Maitland (Mcpy).
Burton, G. V., Yarmouth.
O'Brien, W. C., Wedgeport.
Siddall, A. M., Pubnico (Argyle Mcpy.).

Those physicians wishing to make use of the free diagnostic services offered by the Public Health Laboratory, will please address material to Dr. D. J. MacKenzie, Public Health Laboratory, Pathological Institute, Morris Street, Halifax. This free service has reference to the examination of such specimens as will assist in the diagnosis and control of communicable diseases; including Kahn test, Widal test, blood culture, cerebro spinal fluid, gonococci and sputa smears, bacteriological examination of pleural fluid, urine and faeces for tubercle or typhoid, water and milk analysis.

In connection with Cancer Control, tumor tissues are examined free. These should be addressed to Dr. R. P. Smith, Pathological Institute, Morris Street, Halifax.

All orders for Vaccines and sera are to be sent to the Department of the Public Health, Metropole Building, Halifax.

Report on Tissues sectioned and examined at the Provincial Pathological Laboratory from December 1, 1935, to January 1, 1936.

During the month, 145 tissues were sectioned and examined, which with 48 tissues from 8 autopsies, makes a total of 193 tissues.

Tumours, malignant	27
Tumours, simple	13
Tumours, suspicious	..
Other conditions	105
Tissues from 8 autopsies	48
	—193

Communicable Diseases Reported by the Medical Health Officers for the month of December, 1935.

County	Chickenpox	Diphtheria	Infantile Paralysis	Influenza	Measles	Mumps	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	Tbc.-other Forms	V. D. G.	V. D. S.	Whooping Cough	Conjunctivitis	German Measles	Goitre	TOTAL
Annapolis	27	..	..	..	..	19	..	..	..	..	..	..	..	..	11	..	..	..	57
Antigonish	..	..	..	..	..	..	..	..	17	..	..	..	..	2	..	..	..	..	19
Cape Breton	5	3	..	..	1	..	..	..	3	..	..	..	..	..	21	..	..	..	33
Colchester	26	..	..	..	30	..	..	..	2	..	..	..	..	..	33	..	..	..	91
Cumberland	1	..	..	..	..	..	..	..	3	..	..	..	..	..	1	..	..	..	5
Digby	30	..	..	..	..	40	..	1	2	..	..	..	..	..	20	..	2	..	95
Guysboro	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Halifax City	8	7	..	..	35	..	..	..	32	..	2	..	..	..	10	..	..	..	94
Halifax	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
Hants	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3
Inverness	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	..	..	8
Kings	..	..	..	7	..	22	..	..	..	..	1	..	1	2	3	..	4	..	40
Lunenburg	..	..	..	..	50	14	..	..	..	..	..	..	..	2	..	..	..	..	66
Pictou	6	..	..	14	..	..	..	..	2	..	..	..	1	..	20	..	..	1	44
Queens	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	4
Richmond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Shelburne	..	..	..	..	..	20	..	..	..	..	..	..	..	..	..	..	..	..	20
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Yarmouth	..	..	..	3	20	10	..	..	..	..	..	..	1	..	..	..	..	..	34
TOTAL	105	10	..	24	136	125	..	1	67	..	3	..	3	6	127	..	7	1	615

Positive cases Tbc. reported by D. M. H. O's. 28.

RETURNS VITAL STATISTICS FOR NOVEMBER, 1935.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis	18	11	13	10	10	0
Antigonish	7	8	6	10	9	0
Cape Breton	63	56	113	38	35	9
Colchester	18	23	18	17	14	2
Cumberland	36	27	31	15	11	4
Digby	16	15	16	12	7	0
Guysboro	13	11	10	7	4	0
Halifax	104	92	88	37	43	1
Hants	17	15	13	8	14	2
Inverness	21	24	29	10	5	5
Kings	18	27	28	23	6	1
Lunenburg	26	21	23	15	13	2
Pictou	34	34	26	25	28	5
Queens	13	9	10	7	8	1
Richmond	13	2	7	4	2	0
Shelburne	9	7	12	5	5	2
Victoria	5	4	4	1	3	3
Yarmouth	14	7	23	10	10	0
	445	393	470	254	227	37

OBITUARY

SAMUEL NELSON MILLER, M. D.

THERE passed away at his home in Middleton on December 16, 1935, of Coronary Thrombosis, one of the oldest of the provincial practitioners in the person of Dr. Samuel Nelson Miller. Born in Mount Hanley, Annapolis County on July 22, 1850 he first taught school and then studied for a year or so at the old Halifax Medical College, but left to finish his course at New York University where he graduated in 1875. He first located in Victoria Vale, Annapolis County, moving shortly to Middleton where he soon built up a large practice.

Local hospitals did not exist in the early days of his practice and what Surgery was done, was of necessity done in the home. Dr. Miller had many interesting and humorous stories of the practice of Medicine at that time. His favorite story was of the removal of a large portion of the parietal bone from an old cobbler suffering from Osteomyelitis. This was done with no other anaesthetic than a large dose of crude Opium which the patient was in the habit of taking to relieve the pain resulting from painful stumps, both legs having been amputated some years previously. At the conclusion of the operation the patient was allowed to look at the bared Dura with the aid of a hand mirror, the brain pulsating underneath, the Doctor remarking that he was probably the only man alive to look at his own brain. Recovery was uneventful and the patient lived for many years afterwards.

Dr. Miller was a great reader of Medical Literature and was a regular attendant at meetings of the Valley Medical Society after its organization and was its President in 1909-1910. In religion he was an Anglican and in politics a strong Liberal; he maintained a keen interest in national and civic affairs. He was twice married and is survived by his widow and one son by his first marriage, H. Willis Miller, of Buffalo, N. Y.

We regret to chronicle the death of Dr. Israel M. Lovitt of Yarmouth, N. S., which occurred on December 7, 1935, in his seventy-third year. Dr. Lovitt was the son of the late Wm. D. Lovitt, the largest and wealthiest ship-owner and builder of Yarmouth.

He attended the Milton Public School and Mount Allison Academy and College. He received his medical education at the Harvard Medical School, graduating in 1885.

He then began general practice in his home town, where he also opened a drug store which he ran for some years. On the death of his father and coming into an independent fortune, he gave up his practice and devoted himself to travel and farming.

His gift of $5,000 to the Yarmouth Hospital, along with the same amount from another generous donor, saw the successful start of that institution; while $5,000 more given to the Digby Hospital was instrumental in building

that hospital. He was also largely interested in various local institutions and doings.

For several years Dr. Lovitt had been a partial paralytic, but his death was due to hypostatic pneumonia. Dr. Lovitt leaves three sons, Melbourne, Hector and Lincoln.

The BULLETIN extends sympathy to Dr. E. K. Woodroofe of Canning in the death of his father, Rev. S. J. Woodroofe. Rev. Mr. Woodroofe passed away at Oakfield on December 19th, 1935. Death was due to injuries received in a fall at his home.

We regret to announce the death of Dr. O'Shaughnessy, of Gottingen Street, Halifax, which took place on Saturday, December 14th, 1935. Dr. O'Shaughnessy was born at Oldham, Halifax County, and after attending the common schools, entered St. Francis Xavier University in 1892; from St. Francis Xavier he went to McGill where he completed his medical education, graduating in 1898. The Doctor practised in the north of Halifax, was well known and maintained a hospital on the corner of North and Gottingen Streets. He is survived by his widow, formerly Miss Mary Louise Gladwin, and three sons Peter, Rupert F., and Murdock V., a sister, Miss Mary at Enfield, and two brothers, Martin and Vincent of Cobalt, Ontario.

Our sympathy is also extended to Dr. F. E. Lawlor, of Dartmouth, retired Superintendent of the Nova Scotia Hospital, in the death of his wife, Mrs. Muriel E. Lawlor, who passed away at the Halifax Infirmary on January 3rd. Mrs. Lawlor had been an invalid for the past two years. Mrs. Lawlor had been associated with I. O. D. E. work for many years, and took a great deal of interest in the Girl Guides.

Personal Interest Notes

THE marriage of Dr. Donald M. MacRae, eldest son of Dr. and Mrs. D. R. MacRae, of Sydney Mines to Miss Gladys Emeline, daughter of Mr. and Mrs. F. E. Wade, of Kentville, which took place on September 7, 1935, at the Church of St. Andrew and St. Paul, Montreal, was announced from Kentville, December 26th. Dr. MacRae is a graduate of Dalhousie University. After graduation he was a member of the medical staff of the Nova Scotia Sanatorium. At present he is taking a post-graduate course in diseases of the eye, ear, nose and throat at the Royal Victoria Hospital, Montreal.

On Thursday, December 5th, at New Glasgow, Dr. John Bell spoke before the Rotary Club on the subject of defective vision in school children. Dr. Bell drew the attention of the Rotarians to the frequency of defective vision and also pointed out that at present there was no organization responsible for this particular phase of visual defect. Dr. Blackett, in thanking Dr. Bell for his address, mentioned the great amount of time and care which Dr. Bell gave to the school children of New Glasgow in this particular phase of health work.

Kentville to Build General Hospital.

The decision to erect a general hospital in Kentville in 1936 was made at the annual meeting of the Kentville Hospital Association on Friday evening, December 20th, 1935. The project will get under way with assets of $63,000.00 willed to the Kentville Hospital Commission for the purpose of building a hospital in the shire town. Property valued at $33,000.00 was deeded to the Commission by the late Mr. George E. Calkin, who died four years ago at the age of ninety. The balance, $30,000.00 in cash was the bequest of the late Mr. A. Milne Fraser, of Halifax, with the proviso that the hospital be started within ten years of his death. Mr. Fraser died in 1929.

Dr. C. M. Hincks, Director of the Canadian National Committee on Mental Hygiene visits Halifax. Dr. C. M. Hincks, Director of the Canadian National Committee on Mental Hygiene spoke before the Commercial Club of Halifax on December 19th, 1935. Dr. Hincks dwelt on the importance of education in mental hygiene. He pointed out that mental hygiene was particularly important in Nova Scotia because of the great loss through emigration. To improve conditions he advocated education, the establishment of clinics throughout the Province, and more importance to the subject of mental hygiene to medical students.

Dr. P. S. Campbell, Health Officer of Nova Scotia, has recently returned to Halifax from a ten day's visit to Ottawa in connection with health matters.

Dr. Hubert M. Lyons, who has spent some weeks at Kentville, has returned to his home in New York.

Hickman Medal to Canada.

Canadian medicine was signally honored when the Royal Society of Medicine of England bestowed the Hickman Medal for original research work in anaesthesia on Dr. Wesley Bourne, anaesthetist-in-chief of St. Mary's Hospital, Montreal, the first anaesthetist in the world to be accorded the honor. At a banquet tendered Dr. Bourne by the directors of and his confreres at the hospital reference was made to the outstanding work he had accomplished in his chosen field, the international reputation he had achieved being demonstrated when he was chosen to preside over the section of anaesthesis at the combined meeting of the Canadian and American Medical Societies at Atlantic City.

The Hickman Medal was founded in 1931 and its award is made for original work of outstanding merit in anaesthesis or subjects directly connected therewith. The deed of foundation laid down that the first award should be made in 1935 and subsequent awards at intervals of not less than three years, the award being open to any person of any country. The Council of the Royal Society of Medicine by unanimous choice made the first award on May 23rd, 1935, and Canadian medicine was honored in that the selection fell on one of her members.

The medal is designed by H. Paget and is struck at the Royal Mint. On the one side is a portrait of Henry Hill Hickman and on the other an allegorical representation of Pain being banished by Anaesthesia.

The story of Hickman is a very interesting and rather pathetic one. He was a remarkable figure in the beginning of the last century in England. A pioneer in the use of nitrous oxide as an anaesthetic his work encountered derision in his native land when he made his first communication in 1882. He had one sympathiser, a layman, Mr. Knight, who gave him encouragement, but the medical press of the time refused him publicity. Later he reported his work before the Academy of Medicine in Paris and again met derision except from the famous Baron Larrey who went so far as to offer himself for experimentation. These continued repulses went far to break Hickman's spirit and he died at the early age of 29 in 1829. It was 1846 before his experiments were recalled and his friend, Dr. Thomas Dudley, then wrote to the Lancet drawing attention to Hickman's discovery. This clearly established his position as the first medical man to suggest inhalation as a method of producing anaesthesia for surgical operations.

We have just received an advance copy of "The Bloodless Phlebotomist" Vol. VIII No. 3, which is being mailed to every physician in Nova Scotia.

This little journal published by the Denver Chemical Manufacturing Company of New York is replete with interesting articles written by physicians who are located in many different countries and while the purpose of the publication is to acquaint its medical readers with Antiphlogistine, the physicians will find a number of items and illustrations which will excite their curiosity and interest—altogether, the little journal is well worth reading and we note that 450,500 copies are printed in nine languages and distributed to every doctor in the world with a known address, excepting in the countries of Russia, Latvia and Bulgaria.

If you do not receive a copy write to the Denver Chemical Manufacturing Company, New York, who will place your name on their list. The journal will be supplied you free of all charges.

A Poor Scholar . . .
because of a Poor Breakfast

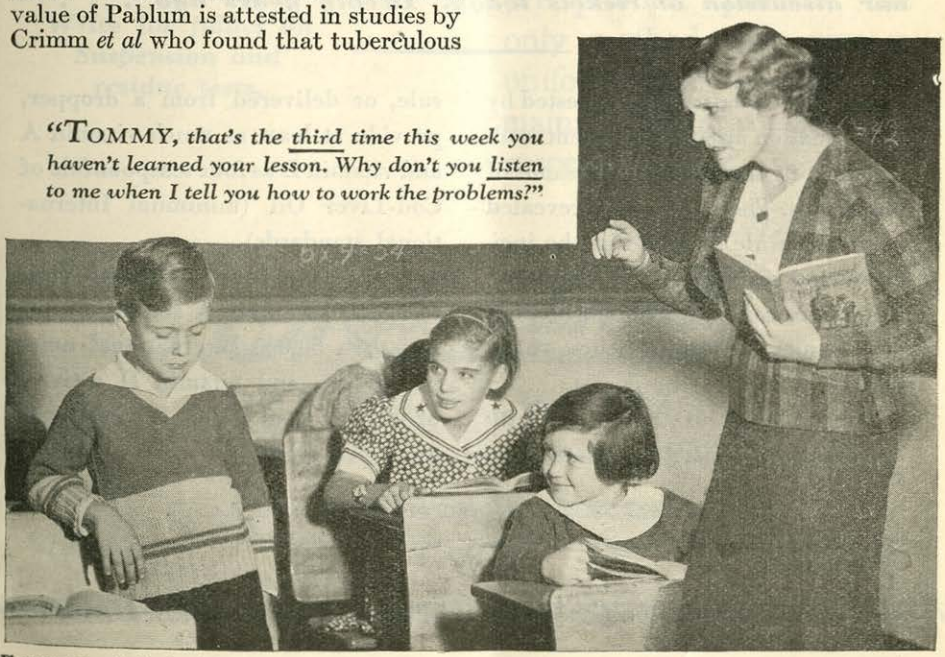
MANY a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental breakfast" of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school.

Pablum offers a happy solution to the problem of the school-child's breakfast. Mothers who learn about Pablum from their physicians are delighted to serve it for it needs no cooking and can be prepared in a minute at the table—more quickly than many less nourishing foods. Pablum not only ends the bane of long cooking of cereals but in addition furnishes a variety of minerals (calcium, phosphorus, iron, and copper) and vitamins (A, B, G, and E) not found so abundantly in any other cereal.

PABLUM is rich in calcium and iron, minerals likely to be deficient in the school-child's diet yet needed in more than average amounts during childhood. Pablum is 6 times richer than fluid milk in calcium and contains 10 times more iron than does spinach. It also furnishes generous amounts of vitamins B and G, essential for normal appetite. Unlike other cereals, Pablum is base-forming, important because the growing child needs to store alkali. The nutritional value of Pablum is attested in studies by Crimm *et al* who found that tuberculous children receiving supplements of Pablum showed greater weight-gain, greater increase in hemoglobin, and higher serum-calcium values than a control group fed farina. Reprint sent on request of physicians. Mead Johnson & Co. of Canada, Ltd., Belleville, Ont.

Pablum (Mead's Cereal thoroughly pre-cooked) is a palatable cereal enriched with vitamin- and mineral-containing foods, consisting of wheat-meal, oatmeal, cornmeal, wheat embryo, alfalfa leaf, beef bone, brewers' yeast, iron salt, and sodium chloride

"TOMMY, that's the third time this week you haven't learned your lesson. Why don't you listen to me when I tell you how to work the problems?"



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