To the Medical Men of Canada

A Message from Hon. Angus L. Macdonald
Premier of Nova Scotia

On behalf of the Government and people of Nova Scotia I cordially invite the medical men of Canada to visit this historic Province during the period in which the annual meetings of the Canadian Public Health Association and the Canadian Medical Association will be held this year at Halifax.

The history of Nova Scotia holds records that will interest you. In the annals of ancient Louisbourg the hospital, Hotel Dieu, finds an important place. It was established by His Majesty King Louis XIV of France to care for the sick and wounded of the fortress town. Twelve brothers of the Hospital Order of St. John of God served as medical doctors, surgeons and chemists. A tablet will be unveiled at Louisbourg this year in memory of those members of that hospital staff who were killed or dispersed during the siege of 1758.

Records of old Port Royal prove that Daniel Hay, a charter member of Champlain's famous Order of the Good Time, was the first surgeon in America, and some of the pioneers who helped settle Nova Scotia had served as surgeons in the army or navy.

Modern research in both medicine and surgery makes your annual gathering well-nigh a necessity to your profession. In addition, however, a trip to Nova Scotia will yield real pleasure and benefit to all lovers of beautiful scenery and historic associations, and it is my wish that you will bring your families, so that they may become acquainted with this old Province by the sea, and our capital city, Halifax.

No matter how much personal tastes may differ, Nova Scotia offers something to satisfy. There is here almost every form of scenery—miniature mountains, sheltered valleys, blue ocean, wooded islands, curving inlets and quaint fishing villages. Freshened by ocean breezes, Nova Scotia has been called an "air conditioned province" affording delightful relief to visitors from sultry cities and inland countries, while the influence of the sea awakens the most jaded appetite.

Those of you who are anglers will find trout and salmon in our lakes and streams and all kinds of deep sea sport fishing. Twenty-three golf courses will help you keep up with your game, and tennis courts are maintained at all resorts. The canoeist has a choice of many streams in which to dip his paddle, and motor boats may be hired at any of our ports. Surf bathing is a favorite sport here and no inland pool can match the exhilaration of contact with salt water. Motoring over paved roads, yachting, hiking, horse back riding and cycling are other recreations we offer to visitors.

I am sure that you will benefit by your convention at Halifax, and that your families will enjoy a holiday in Nova Scotia.

Recent Developments in Anatomy and Its Teaching

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THE completion, last year, of my first decade as a teacher of anatomy in Canada prompted a glance at the changes in my own teaching and at changes in anatomical teaching elsewhere. Throughout this period, and before it, I have paid attention to criticisms of anatomy and to regulations and recommendations by medical educational bodies in Britain and the United States. Last year these sources were supplemented by inspection of anatomy examination papers and other evidence from nearly all the medical schools in Britain and the Empire and from large American schools. During the summer I talked about the matter with many anatomists and others in Britain, and I had the privilege of a discussion with Sir Norman Walker, the President of the General Medical Council.

So many clinicians have expressed interest in the changes introduced in recent years in the Dalhousie University Anatomy Department that a survey in the BULLETIN has been suggested. I should not, however, have ventured to write at great length except that certain of the details and references to literature may be of direct value to some readers.

British and American Anatomy.

Despite the efforts of individuals, such as Sir Arthur Keith, British anatomy, especially as taught to students, has for almost a hundred years been not only dead and unscientific, but in many respects unpractical. Space forbids quotation of the numerous instances from my own experience of anatomical teaching, by surgeons as well as by professional anatomists, but the justice of this criticism is widely recognized.

American schools show greater variety in their teaching than do British schools, and, most important of all differences, the outlook of American anatomists is that of the earlier and best British anatomists, for instance Harvey (1578-1657), the discoverer of the circulation, and John Hunter (1728-93), the surgeon, anatomist and biologist—"a prince to the thinking surgeon and only a babbler to the merely practical one" (Keith[17]).

British anatomy is now being revivified by a return to the methods of Hunter, without neglecting regional anatomy as American teachers have been apt to do. The change is coming rather more readily in England than in Scotland, and it is delayed by some close adherents to tradition, who influence more schools than their own because they help to set examinations for licensing bodies and act as external examiners at other schools.

General and Local Conditions.

In Canada the anatomist is less hampered by tradition, although his course must secure the approval of the Association of American Medical Colleges if his school is to maintain its high rank. To a less extent is he bound

by recommendations of the British General Medical Council; but it is gratifying to know that changes of the type introduced into Dalhousie have the approval of members of the Council.

While organizing such changes one must remember the recent growth of many other branches of medicine, which not only crowd the curriculum, but demand different kinds of anatomical information from what our fathers, or even our elder brothers, had to learn.

Local conditions are important. Some schools are essentially training grounds for practitioners; but one who has taught anatomy in a large surgical school may easily think that students should learn such details of the trigeminal (Gasserian) ganglion or the cervical sympathetic nerves as will enable him to understand operations on them, or even to assist in such operations. In a school where these operations are seldom or never performed such teaching is inappropriate, and even in large surgical centres its value to the undergraduate is now much disputed. On the other hand, Canadian practitioners in remote districts may have to perform certain emergency operations for which in Britain a fully qualified surgeon would be accessible, and therefore certain selected anatomical details must be learned thoroughly, so that the practitioner may quickly refresh his memory when necessary. The time devoted to gross anatomy has been discussed elsewhere.[19] Dalhousie has rather more time than leading American schools; but not much more than half the time allowed at some Canadian schools, which have more, even, than schools in Britain. There is a tendency, not without reason, to reduce the hours in Britain and in Canada. To an anatomist with an unbiased view of the whole curriculum a small allotment of time is a challenge to make the best use of it.

Still other factors to be considered in arranging a course are the local standard of high school and pre-medical education, and even the students' limited finances, which make the buying of numerous textbooks a burden.

Failure to Retain Anatomical Knowledge.

The anatomist, like all other teachers, must realize that his students will forget most of what they learn. The chief laryngologist at a large Scottish medical school complained that senior students hardly seemed to recall that there was such a thing as the recurrent nerve, although this school gave excellent anatomical teaching of the "spoon-feeding" type, and the students had studied the recurrent nerve on some half-dozen separate occasions. Again, at one Canadian school with the maximum number of hours for gross anatomy the inguinal canal was taught with exceptional clarity and thoroughness, but one surgeon, who was also an anatomy demonstrator, told me that he was amazed at the students' ignorance of the inguinal canal after they had left the anatomy course.

Examples could be multiplied indefinitely, and every teacher, unless he has a very rare form of memory, must have experienced his own lamentable ability to forget important things. The cure is not the devoting of more time to anatomy, for, in the quoted cases and many others, the facts, afterwards forgotten, were so well known by the students while studying anatomy that it would have been a waste of time to devote longer or more careful attention to them.

Scope and Content of the Anatomy Course.

Truly, one never knows when an anatomical fact may be of use, but this is no reason for failing to select facts, principles and ideas that are most likely to be of value—first in other medical school subjects, secondly in general practice, and thirdly in any specialty that the student may later select. For this last purpose one should indicate the kind of information that is available, and where it can be found.

To teach in this way the anatomist must maintain an ever-renewed acquaintance with general and special medical literature, and as far as possible attend clinical meetings. (The Dalhousie Refresher courses have given me much guidance in this way.) Specialization in surgery is not the best training for one who has to teach anatomy to future general practitioners. Among other things it fosters the pernicious notion that anatomy can give little help to the physician. The difficulties (medical, economic, social and psychological) that may confront a practitioner are well appreciated if the anatomist can, for instance, vividly remember his experiences when sent out from Edinburgh dispensaries to treat cases in the home—memories that can be supplemented by frequent talk of recent cases with his colleagues in general practice.

When anatomical facts and ideas are selected on a basis of probable greatest usefulness or practical value, the anatomy course undergoes a great change. One is appalled at the millions of hours that must have been wasted on learning the names of tiny arteries and details of bones of the skull.

The words "usefulness" and "practical value" must not be misconstrued. As shown below, they do not mean simply facts that are of use in particular diagnoses or operations. Some of them are important general notions, for example the following:

(1) *The human body is alive.*

The cadaver is not only dead, but usually old, has often had a long illness, and is a product of the lowest social stratum—enfeebled, undernourished and decrepit.

His *bones* give but a poor idea of the normal distribution of red marrow. Many of the so-called "muscular ridges" are not present on the bones of a healthy muscular man in the prime of life.[29] The ossification dates from dead children are misleading, because rapidity of ossification and maturation of bone depends largely on environment (nourishment and so on) [29, 27], and because bone is very sensitive to transient illnesses even too slight to confine a child to bed.[12, 29] Even current textbook ossification dates from radiographs of hospital patients must be disregarded for these and other reasons.[22]

Dissecting room *fascia* is stiff and inelastic. Students are therefore instructed to push from side to side the uncontracted biceps in their own arms, the larynx and trachea in their own necks, and to realize that one of the functions of fascia is to let things move on each other.

Current textbook information regarding *muscle action* is still either unhelpful or misleading for those who have to deal with paralyzed or weakened muscles. Bones and dissected parts usually easily indicate what movement a muscle will make or tend to make; but this does not prove that the brain uses that muscle to produce the movement in question, or that the muscle is important if it is used. Experiments, largely based on those of Wright[34] are therefore prescribed, so that students can decide on themselves and others what muscles are chiefly responsible for each movement at each joint, separate-

ly and during natural movements such as walking, climbing stairs and lifting weights. (This is more valuable than electrical stimulation, which affords a useful demonstration of what individual muscles tend to do, but does not prove how muscles are used during voluntary movement.)

Just as important as voluntary contraction is the *postural activity* of muscles, and the students are shown the principles of good posture, and how to investigate postural action in themselves.

They have to feel all the *arteries* that can be felt in their own bodies, not only so as to know where to compress for haemorrhage, but to learn, as is shown by the largest of these vessels, that arterial pulsation is expansile. This throws light on the arrangement of muscle and elastic tissue in histological sections, explains why aneurismal pulsation should be expansile, and shows how to distinguish, in operations, arteries from other structures that may be pushed up by them with a rhythmical but non-expansile beat.

Scarcity of human autopsies and a crowded time-table make it difficult to arrange for First Year students to see unembalmed human cadavera; but dogs and cats, *still warm after death*, are demonstrated alongside another dog or cat, embalmed as are the dissecting room cadavera. In the fresh animal are shown, for example, the smooth, glistening, elastic peritoneum, pleura and serous pericardium, the mobile abdominal viscera and heart, the fascia, periosteum, bone, muscle, and so on. The lung, which collapses as soon as the thorax is opened in the fresh animal, forms an excellent contrast to the embalmed lung with its artificial grooves and ridges. Brief reference is made to pulmonary elastic tissue (seen in histology), differences between intrapleural and atmospheric pressure, and to pneumothorax treatment.

Among the worst effects of dissecting room anatomy have been the conceptions of *position and immobility of viscera*. Barclay[1] and others have shown how these conceptions have led to erroneous notions of visceroptosis. The student is therefore informed of the investigations of hundreds of healthy people, and is shown by fluoroscope the viscera of his classmates, and his own viscera in a mirror. He sees, for example, how the right colic ("hepatic") flexure of the colon may, when he is erect, lie at the level of the iliac crest and jump up four or five inches as he tightens his abdominal muscles or laughs. He sees how the heart moves as the diaphragm contrac s and relaxes, and as he bends from side to side. He looks at the contraction of the various parts of the heart and at the aortic pulsation while he keeps his finger on the radial pulse.

(2) *The human body is much more than the sum of its various regions.*

The student is shown, for instance, how a book, placed under one foot as he stands erect, alters the curvatures of the vertebral column, and is told of how the column alters when a woman has a large gravid uterus. He is instructed to feel his right abdominal muscles and sacro-spinalis (erector spinae) when he holds a weight out in his left hand. He is told how bone structure alters in response to a demand for more mineral matter elsewhere.

(3) *The human body and every part of it varies from one person to another.*

The student looks around at his classmates, and is shown height and weight records of Dalhousie students and others, and this simple idea of *variation* is repeatedly referred to. As a perhaps trivial example, he is told, when dissecting the inferior dental nerve, about the man who tried to anaesthetize this nerve according to standard textbook methods, and, being unsuccessful,

claimed that his patient was immune to cocaine! A colleague, remembering the omnipresent tendency to variation, tried higher up and blocked the nerve successfully.

Variation in height, weight and body build, and in size and position of organs, associated with differences in sex, age, race and heredity is *constitutional anatomy*; and this is becoming specially important now that medicine is finding the causes of disease in the patients' own bodies and not simply in bacteria. Constitutional anatomy involves the question: What is meant by "normal"?—a vital question when the chief aim of medicine is to detect early and slight departures from normality. (Incidentally, if the anatomists had paid more attention to standards of normality, perhaps the pathologists would not have so long accepted as the "normal" red cell count the figures obtained from two males and two females.[21])

(4) *The human body is changing continuously from birth to death.*

The child grows and develops, and the importance of this aspect of anatomy in preventive medicine and the promotion of *child health* has recognition both by the British Government in its report on Infant and Nursery Schools[13], and by the United States Government in the White House Conference Reports.[29]

In early maturity, and even before that, "senile" changes commence. From the age of twenty the blood supply to the right chambers of the *heart* becomes relatively less, which may account for sudden death in pneumonia in old people, and, as life advances, the anastomoses of branches of the coronary arteries increase.[28]

The *vertebral column* changes throughout life, and this aspect of its anatomy, as well as its mechanism and its possible variations have acquired a clinical importance that was not suspected a number of years ago.[3, 24, 31]

(5) *The human being has a mind as well as a body.*

Those of us who were trained in dead anatomy find it at first hard to realize the connection between anatomy and psychology. We learn, however, that the form and position of students' *stomachs* (that is, their anatomy) is altered by the banging of a door and by worry over possible failure in the medical course.[26] We learn also that the proper basis of a medical psychology, that is, one based on biological principles, is a knowledge of what parts of the *nervous system* are ready to act at birth, how and when other parts develop, how much children vary in these respects, and, to go farther back, how nerve pathways are laid down and employed before birth.

The important relationship between *mental defect* and the size, gross anatomy, histology and embryology of the brain is at last being systematically studied by Dr. R. J. A. Berry, formerly a Professor of Anatomy and now Director of the large Stoke Park Colony for mental defectives near Bristol, England.[4, 5, 6] Among the many important points that came to my notice during my visit to the Colony last summer was Dr. Berry's reference to the frequency, in mental defectives, of other defects, such as congenital cardiac defects, stunted growth, and a tendency to early death. We must, apparently, consider mental defect as part of a general defectiveness—the product of a fertilized ovum of poor quality.

Another relationship between anatomy and psychology is discussed elsewhere[22]—the work of Todd[27] on *skeletal maturation* as an index of physical maturation in general, and the value of this in the study of children who present educational, social or moral difficulties.

(6) *It is often more important to know where to look for information than it is to try to learn it.*

This belief is the hardest to inculcate, probably owing to the world-wide conception that learning facts is the same as education.

A student may have to help in or perform an operation on the *biliary tract*, and he is therefore shown pictures of some of the variations in this tract and in its arteries, and he is shown where he can find this information and other information of similar type, in McGregor.[23]

He learns a few of the commoner *accessory bones of the foot*, and he is told where he can find more information, in McGregor[23] and in Köhler[18]—an invaluable guide to anyone who is puzzled to know whether any radiographic finding in bones or soft parts is normal or pathological.

The general principles of *heredity* are reviewed, their medical importance is mentioned, and a few anatomical examples are shown. The student is told to inspect various books available in the Anatomy Department or Medical Library:—Hurst[15]—a short and simple introduction; Gates[10]—a more advanced and very informative book; Blacker[7]—designed for medical practitioners; Baur, Fischer and Lenz[2]—a standard reference book.

(7) *Textbook statements, however dogmatically made, are not necessarily true.*

Comparison of a current textbook with an earlier edition of the same book, or with another current textbook, or even with another section of the same book where different authors contributed, reveals many disagreements. No author or teacher can investigate even one per cent of textbook statements scientifically, that is, in detail on a sufficiently large number of subjects. Many statements are copied from book to book, and whenever any point is carefully investigated textbook statements of detail are found to require modification. (And yet many people find it hard to think of the anatomist as anything but a teacher of well established facts, and cannot understand why a medical school, to retain its class A rating, must provide time and facilities for the anatomists, as well as for other medical scientists, to conduct research.)

The correction of some traditional statements has a clinical bearing, for example the course of *nerves to the upper part of the rectus abdominis*, previously referred to in these pages.[20]

Some facts are stated by textbooks with much greater dogmatism than by the original discoverer of the facts. For example, *Head's scheme of the segmental distribution of nerves to the skin* is pictured in some books with apparently as great confidence as the nerve supply to the triceps.

Statements in anatomical, pathological and other textbooks regarding *sizes*, for instance of pelvis, and *weights* of organs, are often worse than useless, for they frequently omit essential information, such as race, age and cause of death, and they seldom give a proper range of normal variation. The erroneous ideas of "status thymo-lymphaticus" show how misleading autopsy data on sizes can be.[14,8]

Large British anatomy textbooks differ from corresponding textbooks in physiology, biochemistry, pathology and so on, in that few references to original sources of information are given. (Morris' American textbook[16] is more scientific in this respect.)

Students are therefore told about special works and monographs, available for inspection, for example Whitnall[30] on the orbit, and Rouvière[25] on the lymphatics. Specific references are made to numerous articles that form the basis of statements given to the students—not because they are expected to consult these articles, but to show them that, if they ever need an accurate

and up-to-date statement of detail, they must do more than consult even the latest edition of an ordinary textbook.

Regional Anatomy.

The above programme may suggest two questions:

"Does it not crowd out of the course numerous important facts of 'ordinary' anatomy—muscle attachments, bones, ligaments, and relations of structures to each other?" "Does it not make the student think that all facts presented to him are undependable and therefore not worth learning?"

On the contrary, the whole course is built round dissecting room work, which is more complete, for example in the joints, than at some schools where much more time is available. The above-mentioned general ideas are introduced where they are appropriate; and the student sees for himself that the statements in the dissecting manual and textbooks are in most cases accurate enough for his future needs. It is made quite clear that he must know well the prescribed facts of "ordinary" anatomy, visualized in the living body. He has to confirm as many as possible of these facts by feeling for structures in himself and others. While learning standard statements of surface markings of heart and liver, for instance, he is instructed how to find these organs in a living person by percussion. The anatomy student is not forbidden to use a scalpel because surgeons use one, and there seems to be no valid reason why he should not use percussion in "dissecting" the living body.

Much of the burden of learning can be lightened by the scientific method of using embryology up to the point where it becomes as hard to learn the embryology as to learn the gross anatomy.

Thus, one simple fact about embryonic relationships gives a clue to the relative positions of: femoral nerve, artery and vein at the inguinal ligament; obturator nerve and internal iliac vessels; internal mammary vessels and intercostal nerves; brachial plexus, subclavian artery and vein; and many other relationships. Such methods are well treated by Grant.[11]

Method of Teaching.

Owing to faulty school and college training many students everywhere think that the best teaching is the "spoon-feeding" of facts; but it is now commonly recognized that the whole medical course can do little more than set a student on the proper path, help him to learn for himself and try to induce him to think. I have found that the best use of lectures is to introduce students to parts they are about to study, to show them how to use their textbooks to see beyond the region they are studying, to emphasize important points, and to discuss difficulties that the students themselves present. Mimeographed notes economize time, and give students a chance to think while they look and listen.

Dogmatism.—There are so many opportunities for definite statements in anatomy that dogmatism has developed where it is not warranted. It is suggested that, where statements or opinions differ, the student should learn one view clearly stated, lest he go away knowing nothing; and many students, being human, prefer that outlook, for, as a certain Frenchman remarked, "People prefer the false to the vague".

It was this curse of dogmatism that was doubtless responsible for the complaint that I heard Sir Robert Jones, the orthopaedic surgeon, make in a lecture at one of the Scottish universities—that the students produced by that university were hard to win over to new ideas and methods.

Conflicting views are often more educative than plain facts. If, for example, a student is puzzled by a conflict between statements regarding rib movements in two books, the following questions can be asked him: "Do the writers of these books show how they arrived at their conclusions?" "Have you felt the movements in yourself and other people?" "What evidence, if any, can you obtain from skeleton and cadaver?" "What other method would you use to investigate the problem?" "Look at a radiograph of ribs and vertebrae: what difficulties of interpretation might arise in using this method?" One can, if the problem merits it, refer to books that might throw light on it; but in any case one can conclude the discussion by asking: "Do you know the obvious and important rib movements?"

Physiology.—It is doubtful if, outside a medical school, one would think of teaching the structure of a machine without mentioning how it works, as has long been done in British anatomy. To overcome this isolation, the student has in front of him, whenever he is studying any structure, a brief and simple note of its function, taken from an up-to-date source, for example Wright.[33] He is not expected to learn all this information for the anatomy class, because most details of function are in the province of the physiologist. Some aspects of function, however, belong to the anatomist, for instance the actions of muscles as distinct from the mechanism and chemistry of muscle cells. The physiology of joints is a much neglected subject in spite of the importance of joint diseases, and is most appropriate in the anatomy class. Boyd[9] and McGregor[23] give much better summaries of this than do systematic anatomy or physiology textbooks.

Pathology and Clinical Topics.—I was first impressed by the value of pathological and clinical illustrations when I was studying the sheep's heart under Prof. F. A. E. Crew, a medical graduate and at that time a zoology lecturer, now Director of the Edinburgh University Genetics Department. The anatomy and physiology of the heart were clarified and impressed on my mind by his brief description of human heart failure, and thereafter I noticed many more such instances in my own learning and in that of other students, long before I found out that two fundamental principles in educational method are:

(1) The student learns things more easily and more thoroughly if he knows why he is learning them;

(2) The best way of learning anything is to learn it in the way in which one is going to use it.

In anatomy and physiology there is an additional reason for pathological and clinical data, exemplified as follows:

The factors, for example pituitary endocrines, responsible for normal stature and stature variation have to be sought in the study of pathological giants and dwarfs.

To study bone growth one investigates the lines of temporary arrest of growth produced by transient illnesses.[12]

Some of the most valuable information regarding muscle action can be found only in the study of paralysis.

Information on lymphatic drainage is partly obtained by studying the spread of infection.

The real value of any arterial anastomosis can be found only by studying the "experiments" that Nature performs in disease, or the surgeon by arterial ligation.

A few examples may show how clinical and pathological topics can be introduced into anatomical teaching without robbing it of its scientific character, which seems to be feared by those anatomists who believe in teaching it as a pure science, which the student must later learn to apply to clinical problems.

Dislocation of Hip.—While the student is dissecting the hip joint, he is shown a specimen in which only the Y-shaped (ilio-femoral) ligament is intact. By examining the mechanism of dislocation and the reduction thereof, the attachments, strength and "fulcrum" action of the ligament are learned. It is pointed out how the rational, "anatomical" method of learning any method of reducing a dislocation is to understand its steps, not to learn it as a rule-of-thumb.

Abdominal Incisions.—When the student is dissecting the anterior abdominal wall, a diagram of standard incisions is shown, and he is expected to be able to state what structures would be met in such incisions.

Spread of Abscesses.—Attachments of muscles and fascia of the posterior abdominal wall are impressed on the mind by showing how abscesses from the vertebral column tend to spread, and asking the student to account for this anatomically.

Displacement in Fractures.—When studying the limbs he is informed that such displacements can to some extent be attributed to muscle tension —an illustration of the important fact that every healthy muscle has tonus. He is told what displacements are found after various fractures, and asked to name the muscles that are probably responsible.

Inguinal Hernia.—The inguinal canal illustrates Nature's method of strengthening weak areas, and the surgeon does well to imitate it where possible in abdominal incisions.

The danger of surgical interference with the nerve supply of the lower part of the internal oblique is pointed out. The student is reminded that nerve section leads to paralysis of muscle and its ultimate replacement by fibrous tissue, and he is told what Hunter knew well and many of his successors forgot, that "muscle is the only form of living tissue that can be applied for the continued support of parts without undergoing a passive stretching or elongation" (Keith[17]). Reference is again made to the importance of muscle (not ligament) in maintaining the arches of the foot.

Thomas' Hip Splint.—In discussion of lower limb joints a picture of the splint is shown, to illustrate the important fact that no joint acts by itself alone, without affecting others. It is pointed out that "Thomas was an anatomist and physiologist of a very rare kind" (Keith[17]). His anatomy was the anatomy of the living. He thought of movements, not simply individual muscles, and he made his splint of wrought iron, because "he realised that no two people are shaped alike" (Keith[17]).

Occipital Headache in Eye Disease.—The pure anatomy of the nervous system is extremely complicated. One may state, for example, that the naso-ciliary branch of the ophthalmic (first) division of the trigeminal nerve supplies branches to the eyeball, that the trigeminal nucleus extends from the pons to the second cervical segment of the spinal cord, that many fibres of the ophthalmic division, after passing through the ganglion and nerve root, end in the lower part of the nucleus. In addition one can state that the posterior primary ramus of the second cervical spinal nerve gives rise to the greater occipital nerve, which supplies the skin of the occipital region.

All these facts can be simplified by a diagram, but they are knit together and given life by pointing out how they can explain occipital headache in eye disease.[32]

This not only gives one reason for learning the facts, but shows how a simple biological (physiological) phenomenon can be applied. The student is reminded of the fact that, if one foot of a frog be gently pinched, the frog will withdraw it; but if the pinch be harder, he will move the opposite limb also, and perhaps other muscles of the body, owing to spread of excitation in the nervous system. Similarly, one can suppose that the stimuli from the diseased eyeball, ending in the lowest part of the trigeminal nucleus, send "overflow" stimuli to the second cervical nerve nucleus which receives stimuli from the scalp.

Possible Criticisms

All this scheme of anatomical teaching is little more than a return to an earlier form of teaching than the form that has been current in Britain for nearly a century; but it may prompt several questions, which may be briefly answered:

"Is not the student being taught to run before he can walk?" The ideas of pain, inflammation, tumour-spread, fractures, haemorrhage and arterial disease are used in so elementary a form as to be appreciated by a high school student. Moreover, the "watertight compartment" idea that anatomy, physiology and pathology must be finished before clinical notions are introduced, is disappearing everywhere. Its fallacy is obvious to me when I recall the beneficial experience of a period as out-patient dresser at the Edinburgh Royal Infirmary at the end of my first year in medicine.

"Is the student not tempted to spend time pursuing clinical topics instead of learning anatomy?" It is made clear to him repeatedly that he is here to learn anatomy, and not clinical or pathological facts. If he has difficulty in understanding a clinical example, he must not spend time puzzling over it, but review the anatomy with which it is concerned, and present his difficulty in class.

"Is there not a danger of his obtaining incorrect clinical ideas?" The examples given are either familiar to anyone with clinical training or are quoted from authoritative and recent books or periodicals. No attempt is made to give a complete picture of any disease, and where methods are mentioned, such as incisions or percussion, it is made plain that these methods, although widely used, are not in all cases those which their clinical teachers will recommend.

"Is not the amount of information presented to the students too great?" Such a question may be based on the fallacy that it must take three times as long to learn three facts as it does to learn one; but in any case the information which the student must learn is well within the capacity of students below the average ability of medical classes. It would be wrong to limit the available information to this minimum, because some students can learn three or more times the amount that others can.

Judgment of Students.

The student is necessarily judged largely on his ability to acquire facts and ideas. He is judged, not on one or two examinations, but on tests throughout the year, and by anatomy demonstrators who are clinicians, as well as by professional anatomists. Other matters count, however, in assessing his

fitness; for example whether he is a steady worker, dependable or erratic, careful or careless. Credit is given for his short records of dissecting room work, and for the questions, difficulties, criticisms and suggestions which he puts in writing in a "letter-box" in the dissecting room.

An effort is made to cultivate the power of observation and description, for instance of an animal's bone not previously seen; for it is striking how many students have learned anatomical descriptions and yet have made very poor attempts when required to give an original description in pathology or in a hospital ward. Ability in this respect counts in the assessment of a student.

In these various ways an attempt is made to decide whether a student is suitable to pass into the later years, and whether he is likely to be a satisfactory member of the medical profession.

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From the President-Elect

THE medical profession of Nova Scotia is looking forward with great pleasure to the meeting of the Canadian Medical Association in June. Seventeen years have passed since our last meeting in this Province and during this period the Association has made steady progress. From a struggling infant in 1921 it has become a creditable organization, second to none. In addition to general sessions there will be sections in Surgery, Medicine, Obstetrics and Gynaecology, Ophthalmology, Otology, Paediatrics, Urology, Anaesthesia and Rheumatic Diseases. The programme lists over eighty speakers including distinguished physicians from Great Britain and the United States. The Osler oration by Sir Humphrey Rolleston should be of special interest. The scientific and commercial exhibits will be important features—and already all available space has been booked up. The entertainment committee is well organized to look after the social features of the convention. From present indications it will be the largest medical gathering ever held in the Maritime Provinces. May I express the hope that as many as possible will contribute to the success of the meeting by their presence and take full advantage of the opportunity which comes too infrequently of extending a hearty welcome to our colleagues from all parts of Canada and abroad.

K. A. MacKenzie, M.D.,
Halifax, N. S.

Surgery Two Hundred Years Ago

H. L. SCAMMELL, M.D.

IT is a general belief that Surgery began with the advent of anaesthesia, continued in a crude manner until the introduction of antisepsis, and only reached its present admittedly high level on the wings of asepsis. Behind anaesthesia lies a Stygian gloom extending back to Ambrose Pare, whose flickering candle serves only to intensify the great gloom behind him again to Hippocrates. Of course there are the anatomists, whose record as surgeons is overshadowed by the dissecting room. Such in a few words appears to be the extent of the general knowledge of some surgeons regarding the history and development of their art. They think of surgery two hundred years ago as a system of butchery conducted amidst blood and stench by uneducated barbers and quacks. The pictures left us depicting the activities of the surgeon rather encourage this idea unless one remembers that there may be cartoons in oils as well as in pencil, and that the grotesque and unusual have always appealed to the artist as well as the beautiful. Nor is the bulk of the literature likely to dissuade him from this belief. There is a tremendous preponderance of books on medical subjects in this era, works steeped in tradition of ignorance, full of superstition, heavy and verbose, with a system of therapeutics as foolish as it is vile. Transferring the opinion one justly holds of this group to the surgeons, whose works are much less frequently met with, is an easy matter, and perhaps an injustice which can be understood. I freely admit sharing in this state of mind, and it is only of late that wider reading has induced me to reverse my opinion. Let me share what I found with you:—

In the first place I discovered a system of ideals as to education and professional ethics which some to-day may have equalled, but none surpassed. The leaders in their art were soundly educated. They believed in adequate training for the beginner and the constant widening of his knowledge by study and travel. They advocated well proven methods of treatment; and advised the desperate remedy for the desperate case only, on consultation first with the surgeons, and the patient or his relatives. The surgeon was admonished by his teachers to be humble and never boastful of his skill, considering himself singularly blessed in being permitted to alleviate human suffering. To read their words penned so many years ago is to read the language of the Bible, simple, concise and direct. It stands in brilliant contrast to the "vaporings", to borrow their own word, of the contemporary physician.

To begin with, a few words on Cancer from a surgeon of the Early Eighteenth Century. "It is observable", he says, "that old Maids and even married Women that do not breed, are very subject to Cancers in the Breast, this generally happens to them when they are turned of Forty years of age, at the Time when the Menstrual Discharge begins to decrease or disappear; though I have frequently known this Case happen to Persons not so far advanced in Years, even between twenty and thirty." And again: "Many have impudently boasted that they have been possessed of infallible Secrets of the Cure of Cancers; though at the same time it must be confessed with Hildanus and other capital Physicians who confirm the Opinion of Hippocrates and

Celsus, that no Physician has yet been happy enough to discern a Medicine from which he could promise any certainty of Cure in this Case. We have a very memorable Example of this in Anne of Austria, Mother to Louis XIV, late King of France, who labored under a cancerous Breast, and was not only attended by the Court Physicians, but by almost everyone in that Kingdom, who had any Pretensions to the Practice either of Physic or Surgery, particularly by those that boasted of their secret Art in curing Cancers: but notwithstanding all the Attempts of Art which the desire of gaining a Royal Reward could excite, no Help could be obtained for her; from which we may very fairly conclude, that there is no Help to be expected from any thing but the Knife." What a leap from that to the Twentieth Century! One more quotation on this subject and we leave it: "When you shall be of Opinion that the Cancer is so deeply rooted that it will be impossible to extirpate it entirely, it is far better to lay aside the Operation, than to torment a miserable Person without any Hopes of relieving him." I think this should be left without comment.

In glancing on these yellowed pages I find this old master speaking so well for himself, that I have but to quote him to prove him. Now you will think he has slipped badly when you hear that he has a short chapter headed, "Of ulcers supposed to be produced by magic or witchcraft". It consists of but two paragraphs. The first quotes those in the past who believed such ulcers existed and their treatment of them. "Some prescribe the Ashes of a Witch that has been burnt, others burn Stercus Humanum and sprinkle the Ulcer with the Ashes." In the second paragraph he "lays them low" in unmistakable language: "To say the Truth, those ulcers are usually affirmed to be the Effect of Magic, by unskilful and superstitious Barbers and Medicasters, which evade their art, thought at the same time they are easily to be cured by an experienced Surgeon, who can thoroughly investigate the true Cause and Nature of the Disorder. There have been even amongst the surgeons ill-minded men, who have falsely affirmed Ulcers to be the Effect of Magic, in order to enhance the Price of the Cure." What a wide awake old fellow this was!

Several years ago a doctor in Nova Scotia with a sense of humour, told me the story of what he claimed was the first blood transfusion given in the province. As I recall it, the place was in the County of Antigonish. A group of the local boys were home from College, one a recent graduate in medicine, and a barn dance was being held in their honour. So enthusiastic did the dancers become as the evening wore on, that stout timbers trembled and a scythe, hung on a wooden peg, fell. The blade of the scythe met the neck of the beau of the ball transversely, inflicting a wound of such a severe nature that exsanguination was soon rapidly approaching. However, the newly fledged surgeon rose nobly to the occasion and it is related that no human donor being on hand, a ram was called into service. So dramatic were the results that the victim was later able to resume his activities on the dancing floor, though he showed a decided tendency to butt the gentleman who sought to "cut in".

I took this story in the manner intended, and only recalled it on reading the literature on the subject of blood transfusion of two centuries ago. Astonishing to relate it was then an old story: "Notwithstanding these operations are seldom practised by our modern Surgeons, yet they were highly celebrated, and often performed, in the last Century, from the Year 1660 to 1680." "Almost all the patients who have been this way treated, have

degenerated into a Stupidity, Foolishness, or a raving or melancholy Madness, or else have been taken off with a sudden Death, either in or not long after the operations. These lamentable and fatal Consequences have brought the Art of Injections and Transfusions into Neglect at the present Day. Notwithstanding this, we shall give the young Surgeon an Idea of the manner." Animals as well as humans were used as donors, and it is needless to remark that blood matching was unknown. The method of transfusion was direct—vein to vein—and the connecting tube, "part of the carotid artery, or of the Ureter from an ox, calf, or lamb, or the windpipe of a Capon, Duck, etc." In closing the subject it is remarked that, "the first Injection of Liquors into the veins of Animals is generally attributed to the celebrated Sir Christopher Wren," but the author doubts it himself. One still wonders if our colleague's story is not a tradition handed down by devious ways from the time when blood transfusion in Paris had to be suppressed by an edict.

We shall now pass for a moment to gonorrhoea, a disease well known for centuries, and one of the first to be isolated, if not the first in England. Until bacteriology revealed its cause it was long considered a form of syphilis or vice versa, and in the minds of the laity the two are still confused. It is traditional that syphilis was carried back to Europe from the West Indies by the sailors of Columbus. Certainly it was present soon after at the siege of Naples and was known for many years thereafter as the Neapolitan disease. The two diseases served as a target for all the therapeutic armament of the centuries which followed. Not satisfied with the results from the use of mercury in syphilis nearly every known drug was exploited and many for a time lauded as specifics. It was a belief, no doubt popular, that contact with a virgin member of the opposite sex would result in the possessor losing the disease. Because he or she was unable to give it all away, the diseases spread rapidly through Europe. It is a tradition that Francis the First of France had Lues and one must regard Henry VIII of England with a "high coefficient of suspicion". However, two hundred years ago we find surgeons treating gonorrhoea in quite a modern manner. "Injections are also frequently thrown into the Urethra of the Penis in men under a gonorrhoea, in order to wash out the corrupt matter, and mitigate the Heat, Acrimony and Pain." The solutions so used were warm milk or "barley water", and for some mysterious reason they were sweetened with Sugar, Honey, or Syrup of Marshmallows. In the less acute stage the following prescription is given:

R Aqua Plantag. drams IV
Mell. Rosat. drams I
Sacch. Saturni ser. I
M. F. Injectio

The person interested enough to search the origin of the first and third ingredients will not go unrewarded.

Artificial eyes and teeth were at hand if required when the surgeon finished his work. The former were made of "silver, gold, or glass, stained or enamelled, so as to resemble the actual eye". It was directed that, "it will be frequently necessary for the Patient to wipe his artificial Eye clean, lest if any Gum or Sordes should gather upon it, the Fallacy might be thereby discovered". The artificial teeth were most frequently made of ivory. Compared with present day dentures they were undoubtedly heavy and difficult to use. Moreover, the art of fitting them to the person was not yet perfected if we may judge from the conformity of the features of George Washington in his por-

traits. Care of the teeth was beginning to occupy the minds of many, though some ideas of a cleansing programme are at variance with ours. Hydrochloric or sulphuric acid was used by the travelling dentists to whiten the teeth, but they and their methods were frowned upon by their more conservative brethren. One of these says: "One of the best Preservatives for the Teeth is to wash them with cold water, and rub them with the Fingers not only every Morning, but also in the Daytime and in the Evening, adding sometimes a little common Salt, which will both preserve them clean and white, and prevent them from aching and decaying." Had the tooth brush then been invented the system would have been perfect. Gold fillings were used when caries did occur.

Plastic surgery was in some features well advanced. Hare-lip operations were being done on infants five and six months old, though I cannot find the repair of a cleft palate recorded. Wounds about the face, so frequent in war, were most carefully dealt with and adhesive plaster used wherever possible to approximate the edges, rather than sutures which left a scar. In spite of crude methods as we understand them, results were very creditable in good hands. Healing by first intention was not unknown and naturally improved the result. Autogenous skin grafts, practised in Italy at a much earlier date, seem to have retired from favour. The naso-lacrymal duct when accluded was dilated in the same manner as to-day, and when this was found impossible, an excellent operation is described to restore its patency.

It would seem to be the general opinion to-day amongst many that practically nothing was known of abdominal surgery two centuries ago. We find, however, that war had taught the surgeons a number of things of importance which they applied in practice. (a) That it was highly dangerous practice to enter the peritoneal cavity deliberately; (b) that wounds of the small bowel were more dangerous than those of the colon; (c) that shock was a feature of abdominal injuries and was of prime importance in their treatment. Wounds of the intestine were closed with the Glover's suture. It was considered best in the interests of the patient to sew the wounded area of bowel to the wound in the peritoneum of the abdominal wall and allow the external wound to granulate. It was found by this means that about half the cases recovered, and as was remarked, though a faecal fistula was inconvenient, it was much preferable to death.

When one reads such records of past good work, it seems rather strange that progress thereafter was so slow. Many operations and surgical manoeuvers require but a step to bring them in line with present practice. The causes for the delay may have been the French Revolution and the Napoleonic wars, poorer economic conditions preventing leisure for study and experiment on the part of the learned professions. Speculation along such lines may be interesting but is rather futile. When the paleontologists tells us that the cultural development of man in ten thousand years consisted in the more elegant shaping and polishing of a few flint weapons and the discovery of bone as a material for fabrication, we are ready to forgive our more immediate ancestors their slow progress. It is certain that the past fifty years has added more to the knowledge of the surgeon of practical value than perhaps the previous thousand, and yet two hundred years ago we were standing on the treshold. We are now on the big river of progress. Where it will carry us no one can tell, but looking backward, it seems that the current of accumulating knowledge may sweep us within the next generation to things undreamed of at present.

A Message from the General Secretary

of the Canadian Medical Association, to the Medical Profession in Prince Edward Island, New Brunswick and Nova Scotia.

IT is with pleasure that I respond to the invitation to send a message, through the medium of the BULLETIN, to the medical profession of the three Maritime Provinces, in regard to the forthcoming annual meeting of the Canadian Medical Association to be held in Halifax.

While my connection with the Canadian Medical Association extends back twenty years, it is the Halifax meeting of 1921, perhaps more than any other meeting in the history of the Association, which is indelibly impressed upon my memory; and that is not strange, because it was at that meeting that the Canadian Medical Association came to the cross roads and a decision had to be made either to go forward or to disband. Yes, I use the word *disband*, which may come to many of the present readers of this BULLETIN with some surprise. I am not inferring that the suggestion was likely to have been accepted, but the fact remains that the Association was $18,000 in debt with practically no assets, and faced a future which seemed to present insurmountable difficulties. There are a great many readers of the BULLETIN who will remember how the problem was solved. The Association undertook to sell bonds to the extent of $20,000 to wipe out the indebtedness, and, at the same time, decided to double the annual fee which was then $5.00. With the proceeds of the bond issue, the liabilities were liquidated, and, although the Association had borrowed the money for a ten year period at five per cent. interest, it was all repaid within five years from the date of subscription. The spirit of the meeting in Halifax in 1921 scorned defeatism, and, from that day to this, the Canadian Medical Association has continued to make progress—worth-while progress, we believe—in the life and activity of the medical profession of Canada.

Halifax has long been known and noted for its genuine hospitality. Having spent some time with the profession there, during the past year, I am familiar with the plans which have been made for the entertainment of those attending the convention; and all who are fortunate enough to be present are assured of a very warm welcome and entertainment of a very high order.

The scientific program which now includes more than sixty contributions, is sufficiently varied and broad to command the interest of every man in practice, be he general practitioner or specialist. Those who can afford the time and expense to go to the meeting will be well repaid for whatever it may cost them.

One of the advantages of the plan of the Canadian Medical Association in moving its annual meeting about Canada is the opportunity it affords of easy access to the meeting for those reasonably adjacent to the city in which it is held. Naturally, we look for a very large attendance this year from the Maritime Provinces; but, incidentally, may I say that, having visited all the provinces within the last few months, it is gratifying to see the keen interest which is being taken in the meeting in all parts of Canada. The current issue of the *Vancouver Medical Association Bulletin* makes reference to the possibility of a special car being secured to bring a contingent from that city.

The Halifax meeting of 1938 will not find the Association facing the grave difficulties which it encountered seventeen years previously, but, once again, the Halifax meeting bids fair to mark another milestone in the life of the Association, as Federation which has been talked about for four years and which has already been acted upon by two provinces, may be consummated by the remaining provinces taking active steps to complete the chain across Canada. In Halifax, in 1921, we put our house in order. It is my hope that, while safe-guarding the integrity and autonomy of the provincial Associations, we may emerge from the 1938 meeting in Halifax with a national association more closely united in purpose and activity than ever before.

I hope it will be my pleasure to see YOU and members of your family at the Halifax meeting.

Cordially and faithfully yours,
T. C. ROUTLEY,
General Secretary.

NOTICE

Do not forget the Annual Meeting and Luncheon of the Canadian Medical Protective Association at the Nova Scotian Hotel on Thursday, June 23rd, at 12.30 o'clock. The principal speaker will be Professor V. C. Macdonald, Dean of Dalhousie Law School.

Radiation Therapy

PART 1.

S. R. JOHNSTON, M.D.,
Radiologist, Victoria General Hospital

SINCE the discovery of X-ray in 1895 and Radium in 1898, radiation therapy, in spite of many disappointments, has steadily advanced, until today its usefulness has spread into practically every field of medicine. It is true that radiation therapy has not always lived up to the expectations of the earlier enthusiasts, as for example, Francis E. Willard, who, in an article written for the Electrical Review in 1896 said, "I believe the X-rays are going to do much for the temperance cause. By this means drunkards and cigarette smokers can be shown the steady deterioration in their systems which follows the practice, and seeing is believing."

With such a rapidly progressing science, one can only speak of the present. There are many signs which seem to indicate that what is true today may have to be modified tomorrow. As an example, one may consider the increasing voltages used in X-ray therapy.

X-ray machines having a capacity of two hundred thousand volts are the most commonly used; voltages of five to seven hundred thousand volts have been tried, but their biological effect does not appear to differ greatly from the lower voltages. Today several machines of one million volts are in use in the United States, and in Europe machines with one million and a half volts capacity are being manufactured. Only time can tell how normal and pathological tissues will react to the short waves generated by these machines.

RADIATION IN MALIGNANT DISEASES.

In order to understand the action of X-ray and Radium on malignant tissues it is essential to have a clear idea of their mode of action.

It is well known that every type of tissue has its own sensitivity to radiation, and that tumours derived from these tissues show the same differences in sensitivity. In extremely sensitive tumours, for example, those derived from lymphoid tissues, the main action of radiation is directly on the malignant cells, the normal cells being more resistant, are spared. When such tumours are radiated the following changes take place: (a), arrest of all cell activity; (b), degeneration and destruction of cells, the nucleus breaks up, the cytoplasm becomes vacuolated, the cell dies and disappears.

In the case of resistant tumours, for example, epidermoid cancer, the defensive mechanism of the normal tissues plays the more important part, and treatment factors must be nicely adjusted to bring these forces into action. The normal tissues appear to have the power of adaptation to radiation, and when the dosage is correctly calculated, respond by fibrosis of the tumour bed and obliteration of the blood vessels, thus tending to diminish the vitality of cancer cells not already killed by direct action.

Many theories regarding the mode of action of radiation on tumour tissue have been advanced. While none of these furnish a complete explanation for the effects observed, there is little question that the stimulation of normal tissues is one of the most important factors.

METHODS OF TREATMENT.

One of the greatest advances in X-ray therapy has been the institution of what is known as the fractional dose method. This method has its chief usefulness in treating cancer at a depth. It is an attempt to apply heavy doses of radiation at a given depth without too much damage to superficial structures. This is accomplished by giving a comparatively small dose daily through one or several ports of entry, until the desired depth dose has been produced. This may take from several days to weeks, and will result in a definite skin reaction such as redness, swelling, pain and blistering. It has been shown that the occurrence of a sharp skin reaction is a fairly reliable indication that cancer cells within a reasonable distance from the surface have received a devitalizing dose. It will therefore be appreciated that such a reaction is a necessary accompaniment of treatment and s ould not be called a burn or considered the result of improper dosage.

A general or constitutional reaction is also to be anticipated when massive dosage is applied to the thorax or lower abdomen. The patient complains of lassitude, nausea and vomiting. Several theories have been advanced to account for these symptoms. Changes in sodium, calcium and potassium metabolism and interference with intestinal physiology, find favour with the majority. Relief generally follows the administration of fruit juices, with a generous carbohydrate diet; in more severe reactions, liver extract and vitamin B are helpful.

The borderline however, between what may be considered a normal reaction and one which results in serious and permanent damage, is very sharp and hence deep X-ray therapy, when given in accordance with the modern practice, should be considered a major procedure and should not be undertaken until all the facts have been considered and the dosage carefully planned.

THE CLASSIFICATION OF CELL TYPES IN ITS RELATION TO RADIATION THERAPY.

Although grading of tumours has been in existence ever since tissues have been studied with the aid of the microscope, it has only been recently that cell types have been graded in an attempt to group tumours in accordance with their radio-sensitivity. It would appear that microscopic grading has been misapplied and misused in an endeavour to place all things on a mathematical basis. Broders in 1919 began his study of cell types and confined his observations to one factor, namely, cell differentiation. There are at least sixteen other factors which affect tumour prognosis. 1. presence or absence of lymph node involvement. 2. fixation of growth. 3. anatomical location. 4. renal efficiency. 5. cardiac efficiency. 6. presence or absence of anaemia. 7. size of growth. 8. age and duration of growth. 9. presence of infection. 10. direction of growth. 11. cachexia. 12. individual resistance. 13. lymphocytic infiltration. 14. fibrosis. 15. hyalinzation. 16. accuracy of differentiation, because it must be remembered that different cell types may occur in the same tumour.

It is admitted that grading of tumours has advanced our knowledge of cellular structure and has formed a useful basis for group prognosis. Exception must be taken to the tendency to assess a specific value in a particular case, ignoring other factors, and making cell differentiation the basis of prognosis as to the curability by radiation therapy. To illustrate: a basal cell cancer is a radio-sensitive type under ordinary conditions. In the presence of infection, involvement of cartilage or bone, old age, and following inefficient treatment

it may become more resistant and more difficult to cure than one composed of squamous cells, a relatively resistent tumour. This is almost a daily experience of any one doing radio-therapy. Radio sensitivity is not synonymous with curability, a lympho sarcona is one of the most sensitive tumours and will melt away in a few hours under X-ray treatment, but it is doubtful if any of these growths have been cured. It must not be assumed because a pathological report states a given tumour is radio sensitive, e.g., group 3 and 4 of Broders classification, that it is curable by radiation.

With our present knowledge it would appear wise to accept the dictum of W. C. McCarthy, Pathologist of the Mayo Clinic, who, writing a short time ago on the misapplication of the Broders classification, said: "As yet there is no system of microscopic grading or classification which has absolute value in clinical prognosis; all of them are merely aids in creating the whole clinical picture of prognosis. From a practical standpoint I believe that all cancers regardless of microscopic grade or theoretic sensitivity should be treated as radically as possible; we do not know enough about either to do otherwise."

RADIATION IN INFLAMMATORY LESIONS.

In addition to the treatment of malignant conditions, radiation is also of value in various infections. To understand the influence of radiation in inflammation it is necessary to bear in mind a few essential points. Numerous experiments have made it clear that most bacteria are not directly influenced by doses of X-ray or Radium as are commonly employed. Microscopic examination of irradiated inflammatory lesions shows that destruction of leucocytes, especially lymphocytes, is the outstanding feature.

The most sensitive of all cells are the lymphocytes. The polymorphonuclear and the eosinophilic leucocytes are slightly less sensitive. As these cells are predominant in the defence of the body against infection it is reasonable to ask why their destruction is not harmful rather than beneficial. The only tenable explanation appears to be that the disentegration of leucocytes, liberates antibodies, ferments and other protective substances contained in their cells which are made more readily available for defensive purposes than when in the intact cells, and with the increased phagocytosis which follows, probably accounts for the favourable action of radiation. Radiation is more beneficial during the infiltrative than the suppurative stage. It is well known that many inflammatory skin conditions are cured. The reaction which follows irradiation of a boil or carbuncle is often spectacular. The tension is relieved by the destruction of leucocytes; pain and swelling disappear.

In chronic inflammations the mode of action is not so certain. These lesions are characterized by varying degrees of leucocytic infiltration, connective tissue proliferation and caseous or calcareous degeneration. Connective tissue cells are comparatively resistant to radiation and if the connective tissue proliferation is more pronounced than the leucocytic infiltration, radiation will have little or no effect.

IRRADIATION IN ENDOCRINOLOGY.

Radiation has proved effective in many cases of endocrine dysfunction. Its mode of action is not clearly understood, but it appears either to suppress excessive action of the organ, or to stimulate dormant action still inherent in the gland. This form of therapy is employed in functional disturbances of the parathyroids, pituitary and ovary.

The Significance of Oedema

J. W. Reid, M.D., M.R.C.P. (Lon.)

THE presence of oedema is an observation of utmost importance in medical practice and one which can never be regarded lightly. However little we may know of its mode of production it remains always a sign of serious deviation from normal health and as such must be explained in terms of disease.

Generalized oedema is most frequently encountered in nephritis, and yet the weight of opinion in these times is against disordered function of the kidneys as being the root cause of fluid retention. Fishberg speaks of a pre-renal deviation of water to the tissues, but how that is brought about and what factors are concerned is by no means clear. Some would maintain that oedema is part of a protective mechanism brought into play to preserve the fluid of the body when the secretion of urine is reflexly diminished in order to prevent a great drain of serum albumin.

Such a theory cannot account for the oedemas occuring in conditions where there is no evidence of kidney disease or of albumin loss. Epstein's osmotic theory of oedema, based on the reversal of the albumin: globulin ration in the serum of nephritic patients is interesting and has been supported by the success of his high protein diets in such conditions. But there are many cases which will not respond to protein, or to urea, though alkalies or some other form of treatment may be effective. Other cases without any particular form of treatment will suddenly show a subsidence of the oedema while albumin is still pouring out in the urine.

Chloride retention as a factor in oedema is still, apparently, a prevalent error. It is true that chloride excretion by the kidney is low at such times but there is no demonstrable increase in the blood, except in terminal uraemia, when oedema is often slight or absent.

The level of blood cholesterol has been studied in its relation to oedema in the hope of finding some cause and effect. But here again no definite solution of the problem is encountered since the cholesterol may be high when the oedema is diminishing or absent, and the reverse may also be true. Again, the blood cholesterol may be at a high level in other states and diseases for many years and neither oedema nor kidney disease become manifest.

All the recent investigations seem to point to the fact that oedema can no longer be blamed directly on disturbed kidney function, but that some noxious agent simultaneously produces a flow of water to the tissues and damages the kidney—a most unenlightening conclusion. One is forced to the thought that the research workers have so far lost touch with clinical medicine that they would speak of a post infectious attack of acute oedema with haematuria rather than of acute nephritis. But the physician who has observed the symptoms of the acute illness, can hardly think, after following such a case through years of varying manifestations of urinary disorder, that the scarred and shrunken kidneys which he finds on the autopsy table are not the organs at fault in that patient's disease.

To most of us at least, gross oedema will continue to focus our thoughts on the heart or kidney, though often enough investigation will reveal some

other cause for that complaint, for as a sign it is not, by any means, peculiar to disease of those organs.

The oedema of kidney disease occurs characteristically about the eyes and face in the morning, accumulating about the legs as the day goes on. But not all the oedema of the face is nephritic, for patients not infrequently complain of some puffiness about the eyes on waking, particularly very heavy sleepers and those who use alcohol. Mothers will sometimes bring a child because of marked of swelling about the eyes in the morning, and on investigation the urine, kidney function tests and blood chemistry are all normal. Such children are often extremely active, nervously irritable and very heavy sleepers. Perhaps some nutritional disorder is at fault in these cases, or a temporary metabolic disturbance, since no organic disease develops in them.

Sudden oedema occuring about the face in unusual areas, lending to the patient a ludicrous appearance are often angioneurotic in type. But it is unwise to take for granted a bizarre oedema lest one fall into embarassing error. Such oedema may occur about one or both eyes, or about the nose, lips, and chin, or occuring in the mouth cause such swelling of the tongue as to make speech and deglutition difficult and even, as in the glottis, require urgent treatment to save life.

The following experiences illustrate the error of spot diagnosis in any oedema of unusual type: A female patient in the early thirities, while convalescing from a minor surgical operation suddenly developed marked swelling of the upper lip. The enlargement was definitely limited by the naso-labial folds and the skin overlying was bright red in color. There was a feeling of fullness and discomfort in the area but no actual pain. The condition suggested from appearance an acute infection such as erysipelas, but the temperature and pulse were normal and inquiry revealed the occurance of previous similar attacks, explaining the true nature of the condition.

Another patient, a female aged fifty, woke in the morning with stiffness and soreness in the upper lip, not amounting to actual pain. Examination showed the lip to be pale in color and with very great swelling limited by the naso-labial folds. The onset was so sudden and the appearance so ludicrous that angioneurotic oedema immediately presented itself as the most likely diagnosis. An injection of adrenalin was given at once, but beyond some tingling in the lip there was no response and repeated injections failed to reduce the swelling. Closer investigation revealed the inflammatory nature of the condition, the infection having gained entrance through a small lesion in the nares. An accumulation of pus was subsequently incised and drained.

Marked oedema of the face is sometimes produced by aspirin or iodides in those who have an idiocyncrasy to these drugs. I recall seeing a patient who had nearly died from severe thyrotoxicosis while resident in Bermuda some twenty years before. Partial recovery had followed ten years of ill health during which time thyroidectomy was steadfastly refused. The thyroid storm had left her a permanent semi-invalid with cardiovascular degeneration and at the time of examination some thyroid enlargement and slight exopthalmos persisted. The gland was smooth and quite hard. The heart was only slightly if any enlarged, the arteries sclerosed and the blood pressure 190/100. A fine tremor was present in the hands. Potassium iodide in ten grain doses three times daily was prescribed. Following a single dose of ten grains there was a most marked reaction, with severe frontal headache, nasal discharge, pain and swelling of the parotid glands and oedema of the face. She recognized

the reaction as being due to the iodide, having had an exactly similar experience twenty years before. Needless to say the dose was not doubled, as used to be recommended by the older authorities in the presence of intolerance.

What the mechanism of oedema occuring in diseases of the blood may be is not clear, but its appearance in transient and irregular forms was not unexpected in pernicious anaemia and was sometimes observed in severe chlorosis. The following case is interesting not so much as an illustration of oedema as of an almost symptomless anaemia. The patient, a female aged 46. was seen in February 1938 because of oedema of the face. There was no other complaint, she feeling in excellent health, doing housework and bowling two nights a week. She admitted to a little dyspnoea on steep hills, but not much more she thought, than others who might be walking with her. She had had no previous illness whatever and only during the past few weeks had noticed transient swelling of the legs. Her sister had noticed that she was getting pale for some months past. The appearance of the face at first glance suggested acute nephritis by its combination of oedema and pallor; out in better light a definite greenish tint was clearly evident. The hair was brittle, a fissure was present in the left labial angle, the mucous membranes were colorless, the tongue rough and coated. Complete upper and lower dentures were present. The abdomen was negative, constipation or dyspepsia were not present and there was no bleeding from the rectum.

The lungs were normal. The pulse was 84 and regular. The heart was not enlarged, but a haemic murmur was present. Blood pressure 130/80. The nervous and glandular systems were normal. The menses were regular with no excessive blood loss. The urine was normal.

The blood was remarkable: the pricked ear exuded a straw colored blood in which the red cells were 3,400,000, the leucocytes, 000 and the haemoglobin 20% The films took almost no stain and showed the features of a microcytic, hypochromic anaemia.

A gastric analysis was not obtained.

A diagnosis of achlorhydric anaemia was made and treatment started with dilute hydrochloric acid, a teaspoonful in eight ounces of water with meals and thirty grains of iron and ammonium citrate three times daily after meals. The acid, according to Witts, need not be given in the absence of dyspepsia, and when given doses of twenty to thirty minims are as effective as the larger doses.

No revision of diet was required, as adequate meat, eggs and greens had always been taken. The oedema subsided in the course of a few hours. At the end of three weeks haemo globin the was 40% and at the end of seven weeks 80%.

The case illustrates the apparent insignificance of anaemia in some people and makes one wonder if we should not revise, or at least individualize, the indications for blood transfusions in haemorrhagic and other states. We used to be taught that when the haemoglobin fell to forty per cent in gastro-intestinal haemorrhage it was time to transfuse. Latterly it has been reduced to thirty per cent, and it would seem that if the patient's condition remains good and the bleeding has stopped, that nature's slower method of repair may be attended by less danger than transfusion, even if the haemoglobin is as low as twenty per cent.

The oedema occuring in leucaemia is of interest mainly because it is a troublesome and distressing complication of a fatal disease. The acute form not infrequently begins with ulceration into the buccal cavity accompanied by surrounding oedema, while in the chronic form the swelling may be local and

transient or affect the whole body and great effusions into the serous cavities are almost to be expected. There seems to be no correlation between the height of leucocytosis and the oedema, for one may see, as in a recent case observed under X-ray therapy, the development of gross anasarca with massive effusions in both pleural cavities at a time when the leucocytes had just fallen from two hundred thousand to thirteen thousand.

Cardiac oedema is essentially a gravity phenomenon, tending in the early stages to form about the legs and ankles at the end of the day, and to disappear after the night's rest. Such oedema may be formed centrally and gravitate to the lowest point, or it may be formed locally as the result of increased venous pressure. Probably the mental symptoms of heart failure are due as much to oedema occuring in the brain as to anoxaemia.

Swelling of the feet and ankles may be a very difficult sign to evaluate and conditions other than heart and kidney account for many of the cases one sees. Innumerable people complain of swelling of the feet and ankles at the approach of warm weather, a swelling which may amount to a pitting oedema or show as a uniform vascular engorgement. It may persist through the summer, or lasting a week or two clear up entirely as though the vascular system had adjusted itself to changed climatic conditions. The persistent cases are likely due to varicose veins, but in many no such cause can be demonstrated, the fault lying perhaps with some minor orthopaedic disturbance.

Where symmetrical oedema of the legs is encountered in a subject without albuminuria or congestive heart failure one must seek first for some local cause such as phlebitis or bilateral varicose veins, or for some tumor or other cause of pressure in the pelvis or abdomen. If these local and mechanical causes can be ruled out it may be found that disease of the liver or stomach is the explanation of the oedema. In some cases of cancer of the stomach, whether as a result of the anaemia or the cachexia, a well marked oedema of the legs may be present. If such is found in a man of cancer age suffering from dyspepsia the presence of a tumor of great malignancy is almost certain and its course to a fatal termination likely to be very rapid.

Where oedema affects one leg only, some local or mechanical cause will be found acting in the majority of cases, lymphangitis, phlebitis, varicose veins or tumor. The swelling of lymphatic obstruction is characteristically hard, as compared with the soft pitting oedema of nephritis and heart failure. Only in long standing oedema of varicose veins is a comparable hardness encountered, a firm non-pitting enlargement brought about by fibrosis and sometimes difficult to distinguish from myxoedema. It will be found to fill up the hollows about the malleoli and bulge over the tops of shoes, feeling like very firm fat and not indented by long and hard pressure.

The tropical form of elephantiasis is not seen in this country, but gross and chronic oedema affecting a limb or segment of a limb is sometimes met. Such cases are probably examples of hereditary trophedema, also called Milroy's or Meigg's disease. It is characterized by its non disabling, symptomless nature and its limitation sharply to a limb or segment.

Nutritional oedema must be very seldom seen in this country though it was common enough in Europe during the world war. It was apparently due to diets grossly inadequate in caloric value, without particular reference to any vitamine, occuring in those who fed on watery soups without little solid food, subsisting actually on water, salt and carbohydrate. It tended to affect the

extremities and improvement occured when they were placed on mixed solid diets without attempt at vitamine balance.

Beri-beri on the other hand is related to a definite vitamine B deficiency, and can apparently be cured and normal health maintained by the addition of the specific food factor to the diet already taken.

Cardiac and renal oedemas rarely appear in the arms until the late stages when diagnosis is obvious and death not far off. Oedema of one arm however is of definite diagnostic value. The hard enlargement of the arm following radical operation for cancer of the breast is a typical example of lymphatic oedema. Such unilateral enlargement usually signifies pressure and may be met quite early in the course of intra-thoracic new growth or aneurysm. Oedema of one arm if acute may be infective and sometimes gross swelling of the whole arm may follow a single insect bite of the hand in susceptible people.

A man in his middle thirties consulted his physician in February 1932 because of swelling of the left arm of recent development. Inquiry revealed that he had been troubled with some dyspnoea and discomfort in his chest on exertion for the past few weeks, not sufficient to cause him alarm, and with a dry cough of about the same duration which was attributed to cigarettes. His previous history was negative except for treatment for supposed Vincent's infection of the throat in 1917. He was not aware of ever having had syphilis or ever being treated for that disease.

On examination the left arm was found to be swollen, tense and oedematous, while on the left chest wall in the pectoral region were dilated veins of recent appearance. The pulse rate was one hundred, the rythym regular. The heart appeared to be enlarged, the left border one and one half inches outside the nipple line. No thrill was palpable at apex or base but abnormal pulsation was detected in the aortic area. There was no diastolic shock. An increased area of dullness was noted to the right of the sternum in the aortic area. The heart sounds were distant, without notable abnormalities and unaccompanied by murmurs.

The respiratory system was essentially negative. A brassy cough was present. The trachea was in the midline and a definite systolic tracheal tug was noted. There was no impairment of percussion note anywhere over the lungs and no rales. The respiratory murmur at the left base was interrupted simultaneously with each cardiac systole. Kahn test four plus. Other systems negative.

Under bed rest, iodides and mercury marked improvement occured. The swelling of the arm disappeared and the cough subsided. The physical signs in the chest were unaltered when, six weeks later he resumed his occupation, in which he continued in fair health until his death some five years later.

The case illustrates the serious significance of such local oedemas as well as the importance of routine Kahn tests in all unusual affections of the skin and mucous membranes.

Historical Sketches of Hospitals and Alms Houses in Halifax, Nova Scotia, 1749 to 1859

MARGUERITE H. L. GRANT

(Continued from April BULLETIN)

AFTER the old Naval and Military General Hospital on Blowers Street fell into disuse, a new building for sick naval men was erected at the Dockyard in 1783, while one for the military was established on the Citadel shortly after the Duke of Kent left Halifax.

The erection of the naval yard, then called the careening yard, was commenced in 1758 under the supervision of Captain James Cook, an English navigator. A site was secured on February 7th, and the mast house was erected that year. A deed was granted in 1765 and the property outlined is the nucleus of the present H. M. Dockyard. In 1769 it was extended and improved, a wall of rubble stone and mortar surrounded the property, the gate having been completed in 1770.

In June, 1783, twenty acres more or less were granted by deed, by John Parr, Esq., Governor of Nova Scotia, to George Thomas, Esq., naval storekeeper, and John Haliburton, Esq., surgeon and agent for sick seamen, "for use, intent and purpose of the hospital for the reception of sick and hurt seamen of H. M. Royal Navy."

A portion of this forms the surroundings of Admiralty House and Grounds. The deed was signed by Richard Bulkeley and Arthur Goold, Registrar. The naval yard occupied about one half a mile of property on Water, formerly German Street, the hospital and yard were directly north of this, this hospital, called the Royal Naval Hospital, having been erected near Water or German Street, *on the road leading from the naval yard.* A fence also surrounded the hospital and grounds and the hospital gate was built in 1809. Admiralty House was erected in 1814 between the hospital and Gottingen Street: on Colonel Morse's map of 1784 the hospital is shown north of Fort Coote, which was north of the naval yard—"Fort Coote being a blockhouse with an Intrenchment thrown around".

The property ran close to the water's edge and the hospital was the most imposing building in the north end of the town. In 1783 it was pointed out to strangers as the glory of the architecture of Halifax, but before it was burned its glory was eclipsed by more beautiful buildings. The architect was Brooks who died in 1782. He left a son, deaf and dumb, who was said to have been intoxicated from the age of eight years until his death at the age of thirty.

There was a cemetery connected with the hospital and was that portion of the ground sloping to the street. In 1916 it was recorded that a headstone still stood near the western end which read: "Erected by Captain Banardiston, Officers and Crew of the H. M. S. Sphinx in memory of seamen and mariners who died of yellow fever".

A picture, "The Hospital and Entrance to Bedford Basin" may be seen at the Provincial Museum. It is a copy from the water colour sketch made

between the fourth and fifth of October, 1786, by Prince William Henry, the Duke of Clarence, afterwards William IV, in the private log book of "H. M. S. Pegasus" when commanded by him on a visit to Halifax. There is also a sketch of the careening or naval yard and showing Fort Coote located between the naval yard and the hospital and in the foreground the old shears, a gigantic apparatus used at the naval yard for throwing vessels for repair. This with other historic structures was demolished several years after the naval yard was removed to Bermuda.

In 1782 Dr. Haliburton was offered the leadership of the naval medical department and in 1789 he appointed Dr. Duncan Clark as a surgeon: he held this position again in 1798.

In 1802 reports were received on the condition of the hospital and repairs necessary. The shingles on the roof were decayed and blown off in several places—the chimney, doors, clapboards and water tables required repairing as well as the hospital fences and a new porch was necessary for the kitchen. The floors, cells and lower parts of the posts were rotten and the drains choked up from top to bottom. The shingles on the roof and lower parts of posts on the porter's lodge were also rotten. The fire hearths and plastering needed repairs—the shingles, doors and upper gates of the engine house were decayed, the lower gates and posts at water's edge were also in bad condition.

In 1813 the naval yard was an extensive establishment, ships were built and repaired and sixteen hundred men were employed there. The yard was in full operation under the Hon. Henry Duncan—Mr. Provo Wallis of Shannon-Chesapeake fame was master shipwright, and Alexander Anderson, the grandfather of the late Dr. Anderson was chief clerk, the following officers composed the staff:

W. I. Eppes, agent.
John Clifford, surgeon.
Mr. Robert Hume, M.D., Dispenser.
Mr. Samuel Head, M.D., assistant surgeon.

During the war of 1812-14 Captain Broke of the Shannon was taken to the Commissioner's House at the Dockyard on June 1st, 1813, and that same evening all wounded men were brought to shore and conveyed to the naval hospital, where they were cared for by Dr. Hume: those who died were buried in the naval cemetery.

In 1817 in the *Nova Scotian* is a reference to the death of Esther, wife of Dr. Rowland, surgeon of the Naval Hospital—"her loss was greatly felt as she devoted much of her time to the hospital, her voluntary help and comforts for the sick, in addition to the assistance which a well regulated hospital could supply".

In 1819 fire broke out in the hospital, which with several of the buildings, was totally destroyed. The following letter from Admiral Griffith describes the fire.

No. 33.

His Majesty's Ship NEWCASTLE,
Halifax Harbour,
16th November, 1819,
R 27 Decr.

Sir,

It is with much regret I have to acquaint you, for the information of the Lords Commissioners of the Admiralty, that about two o'clock in the morning of the 10th instant, the Naval Hospital at this Port was discovered to be on fire in the North end. The rapidity

with which the flames extended (a fresh wind blowing from the Northward at the time) baffled every effort to save any part of the building; and the whole was reduced to ashes in the course of two hours.

The great exertions of the Navy and Army, added to the prompt assistance afforded by the Town Brigade, were fortunately the means of preserving the other Buildings within the Hospital Walls, although the fury with which the flames burst forth, and were driven towards them, threatened their entire destruction. The fire is supposed to have originated in a room occupied by a woman who had been many years Nurse to the establishment, and who, in consideration of her distressed circumstances on the recent reduction, had been permitted to reside, pro tempore, in the apartment she formerly occupied. The unfortunate woman fell a victim to her carelessness.

No blame whatever can attach to Mr. McQueen, who has been left in charge of the buildings and Stores.

I have the honor to be,
Sir,
Your most obedient humble Servant,

EDW. GRIFFITH,
Rear Admiral. (L. S.)

John Wilson Croker, Esqre.
&c. &c. &c.
Admiralty.

The following minute refers to the Naval Yard.

Minute. Dec. 27. Own rect.
Copy to the Victualling Board.
The person appointed to take care of this should be sent home. Exd. M. W. C.

In 1819 the packet "Grace" brought notice to Halifax for the discharge of almost every person employed in H. M. Naval Yard and Hospital and the removal of the naval station to Bermuda. It was not an advantageous change, many persons were thrown out of work, yellow fever was prevalent on the island and on account of the climate many provisions were spoiled, which greatly added to the expenses of the Admiralty. In consequence of this removal the space remained unbuilt for many years.

The following amusing cutting is noted relating to a gate-keeper;

"In 1827 John Lawlor was gate-keeper at the Naval Hospital Grounds. He was a remarkably stout man and grew more so with advancing years—for convenience he used to ride about in a gig which was painted yellow. The horse was in keeping with the gig but not of the same colour. Mr. Lawlor had a servant man named Jerry who usually rode with him—as queer a fellow as could well be imagined. Both master and man were out almost every day, especially if there was a funeral. It mattered not who was to be buried—old or young, rich or poor, black or white—old daddy Lawlor in his yellow gig with his faithful Jerry by his side would invariably bring up at the rear of the procession."

A new hospital was erected in 1861 on the site of the former Royal Naval Hospital in the present Dockyard grounds—Henry Peters was contractor. From the hospital gate a road led to a similar one at the head of Hospital Wharf and half way down this grass covered declivity was the massive brick hospital, one hundred and seventy-two feet long by twenty-seven feet wide, facing west. The grounds were terraced and formed a walk for the patients who were convalescing. This new hospital which was called "Pegasus" still stands but has since been used as a training school for the navy.

In the early sixties the Naval Dockyard proper and the Naval Hospital Ground adjoining on the north extended from opposite the centre line of Gerrish Street, along Water Street past the Dockyard Lane (now Artz Street) and North Street to the southern boundary of the Military Magazine property, immediately opposite that of Wellington Barracks enclosure or to within a few feet of where the overhead bridge now crosses the railway tracks at the Shipyards. The northern and southern borders of Gottingen Street line of Admiralty House reached without break to Water Street, for Lockman Street, now Barrington, had not been extended across it.

At the Naval Hospital gate in the early sixties was one watchman, a courteous much esteemed old man, William Malone—he was supplemented by a sentry on guard and to-day at the Dockyard gate the sentry is still to be seen on duty.

After the Great War of 1914-1918 Admiralty House was converted into a Health Centre; this work is now being carried on at the Dalhousie Public Health Clinic on Morris Street.

Halifax in 1800 was very prosperous, the population was about 9000 and business and social activities were at their height. During his visits from 1794 to 1800 the Duke of Kent caused a large expenditure in the erection of barracks and a military hospital, which has since been burned.

A town house was built for him in 1798 which some years after his departure in 1800 was used as a Military General Hospital. It stood on the north-east slope of Citadel Hill, nearly opposite the entrance to Gottingen Street and at the rear of the North Barracks on Barrack Street, now known as Brunswick Street. "It was a very elegant building with a portico supported by corinthian pillars in front, all of which remained for many years after it became an hospital." Two large copper lamps, ordered by the Duke, hung in the front entrance, which later came into the possession of Dr. Gesner, physician and geologist, who presented them to the museum at Saint John, N. B. The architecture of the building was not at all in keeping with that of the military structures of the Citadel and outlying barracks, but this colonial edifice commanded a very fine view of the harbour and Bedford Basin, as the town was not then built up in that section.

"In 1855 the German recruits who arrived on the brig 'America', were marched to the garrison hospital on the glacis of the citadel for medical scrutiny."

This hospital stood for many years on the original site until November 10th, 1866, when it was totally destroyed by fire which broke out about 7 p.m. An alarm being sounded the soldiers called upon to assist the Union Engine Company under the command of Captain Patrick Lyons quickly responded, but as a strong wind was blowing from the north-east and as the water pressure was very poor in this section nothing could be done to save the building. The sick soldiers were removed to quarters provided for them. During the fire Captain Lyons had a narrow escape from death; he was struck by some of the flying bricks from a falling chimney and rendered unconscious.

In 1867 Bayers Field was purchased for the present military station hospital, which was erected in 1868 by the Government—it is located on the south end of Gottingen Street at Cogswell Street almost opposite the site of the old hospital. It was one of the finest military hospitals in America and cost $150,000.00; it was well equipped according to the most approved rules of sanitary service. It was erected by John Brookfield, the father of

S. M. Brookfield. In 1928 the city was very desirous that the building be sold by the National Defence.

That separate regimental hospitals existed may be noted in the following news of the Halifax Garrison dated March 7th., 1801:

> "the Lieutenant General commanding having found on Friday last, the medical stores on George's Island in a confused and dirty state, directs that the Assistant Inspector of Hospitals (Mr. Irwin), or in case of his indisposition, the apothecary of the Forces (Mr. Gordon), cause the rooms and fixtures to be thoroughly cleaned and the medicines properly arranged, for which purpose the commanding officer on the Island will give him the convalescents in the hospital, or the detachment under his command such assistance as either of those two gentlemen may require. Mr. Boggs, Garrison Surgeon, and Mr. Goldsmith, Hospital Mate, having charge of such sick of the Royal Fusiliers and Nova Scotia Regiment as cannot without danger be removed to *their respective regimental hospitals*, the Assistant Inspector will with all requisitions for medicines made by Mr. Boggs, if strictly conformable to the garrison orders No. 2 of the 19th., March, 1797."

In 1776 there existed on George's Island in front of the town a hospital for sick soldiers. It was at this hospital where some of the sick and wounded soldiers of General Howe's army, after the evacuation of Boston 1776, were placed under the care of Dr. Jefferies and two hospital mates, Mr. Goldsmith and Mr. Moorhead. In items from minutes of His Majesty's Council, 1778, the following is noted: "slanderous reports were circulated that General Massey in command of the Garrison at Halifax was responsible for the ill-treatment of sick seamen on George's Island". An investigation was ordered.

Dr. J. W. Almon who came to Halifax with Howe's forces remained a short time only, but before the close of the American war returned and was appointed surgeon to the Ordinance and Artillery which position is recorded as held by him in 1792.

Records of 1800 also state that a Dr. Gordon who had recently come from Prince Edward Island was appointed apothecary to the British Troops, at Halifax, under the command of the Duke of Kent. He was stationed at this hospital on George's Island, but after suffering financial reverses left for England with his daughters, May, aged seven, and Margaret, four and a half years, to secure aid, but died before arrival. His wife, aged thirty-four, with her young sons, was left in Halifax in straitened circumstances but shortly afterwards married Dr. Hugh Guthrie, twenty-one, a surgeon in the Worcester Regiment.

In 1801 the Assistant Surgeon Frederick Phillips died at this hospital and was buried in Halifax with full military honours. He was succeeded by William Jones.

In the early days there were several blockhouses south of the town, one was situated on the hill now known as Fort Massey. It was built in 1778 and named after General Massey, who was a commander-in-chief at Halifax. This fortification in the shape of a star covered the crown of the hill on Queen Street (about where Fort Massey Church now stands), and contained barracks and other buildings. These were later ordered by the Duke of Kent to be put in repair.

At this time the British troops had headquarters in New York and the following extract from a letter written by General Patterson in January, 1779, to James Gill at Halifax, in answer to one received from him on December

28th, 1778, may refer to Fort Massey Hospital which was probably located in or near these fortifications which were erected that year.

"Dear Doctor,

If there really is an hospital established for the artillery I desire that you will lend your assistance while you remain there introducting (as far as local circumstances will admit of) the same regulations as were established here and at Philadelphia... You know a well regulated hospital is a point I have much at heart... I have consented to Capt. Farrington's hiring a nurse for the hospital, if there is one existing."

The surgeon at Halifax was aged and infirm and unfit for the discharge of his duty. Mr. Nicholson performed the old surgeon's duty and General Patterson would not supercede him by sending another from New York.

In notes of the garrison dated March 16th., 1801, the following appears: "there not being room for the sick at Fort Massey such numbers of them as can be accommodated at the hospital at George's Island will be removed there on Wednesday next at two o'clock, Mr. Edghill, hospital mate, will remove to the Island with the sick of the Royal Newfoundland Regiment and take charge of them." Fort Massey Cemetery at this time was connected with the hospital. During the cholera outbreak in 1834 Fort Massey was made a burial place for some of the victims of the disease. Carts went around every morning collecting the dead who were buried in a trench with quicklime.

In further garrison news of October, 1801, it is stated that "the sick of the 11th and 40th Regiment are to be removed to the hospital of the Royal Nova Scotia Regiment at Fort Massey. A medical board to assemble to report upon every patient not proper objects for our hospitals."

Records of 1803 show that there were three hundred and twenty-seven of the 10th Regiment on the sick of the hospital. At this time the H. M. S. "Chichester" was in quarantine at the Dockyard with a number of sick soldiers of the 66th Regiment. Yellow fever was raging in the United States and West Indies and quarantine was in full force in Nova Scotia.

Dr. Boggs, formerly of the old military and naval general hospital on Blowers Street was now one of the garrison chaplins. Dr. Neales was surgeon-general to His Majesty's forces and Dr. Hazelton was Inspector of Hospitals. Dr. John Hogan was also one of the garrison surgeons.

In 1803 the following reference to the hospital is noted:

"Lieutenant General commanding detected a soldier of the 6th Regiment carrying spirits through the gate of the cemetery to the hospital at Fort Massey"... "Order No. 4 prohibited the introduction of spirituous liquors on any account whatever."

In 1803 it was stated that Fort Massey was the hospital of the 29th Regiment. Mr. Lemon was surgeon.

To go back again to civic hospitals—after the erection of The Royal Naval Hospital in 1783 and establishing of the Military Hospital on the Citadel shortly after 1800, we still find no records of private hospitals until 1814 when the Merchant Seamen's and Provincial Private Hospital was founded by Drs. Head and Anderson, and there is also evidence of a second private hospital on the waterfront about 1820, but no records seem to be available.

In February, 1815, Samuel Head and William Anderson, surgeons of Halifax, presented a petition to the House requesting financial assistance for the Seamen's Hospital which they had established in 1814. They stated

that during their professional practice, they had observed the great inconvenience arising to seafaring men and itinerant persons who were sick for the want of a comfortable and convenient asylum and that many lives were lost by their not being properly attended and provided for during illness, as many did not have the means to be accommodated in private boarding houses and others had to be sent to the Poor House whereby much expense and trouble was added to that establishment, although their ships were bound to provide for them.

They stated that in June, 1814 they had purchased and fitted up a building in the South suburbs at the southern extremity of Steven's Lane (Water Street) near Steven's wharf as a private hospital, which from its retired and airy situation was extremely well adapted to obviate the evils above mentioned; that the place, as far as respect to the public, fully answered the purposes for which it was intended; that many persons from the country who had met with accidents, or who had fallen sick in town, were taken into the said hospital and underwent operations and otherwise received great advantages therefrom; that the building required great repairs, improvements and additions to render it fit for the purpose intended; that the sum of £1200 was absolutely necessary for the execution of a plan which was not completed. They had also in contemplation among other improvements the construction of public baths to afford the convenience and benefits of sea-bathing in cases where necessary and that on account of the dreadful ravages which smallpox was then making upon the lower classes, especially the negroes and Indians, they had for sometime vaccinated gratis all persons who had applied to them for that purpose at the hospital and would continue to do so. The petition was deferred for three months. Reports state the hospital was comfortable, healthful and well ventilated; properly qualified nurses and attendants were employed. That later as the hospital had become so largely patronized, it was improved and accommodation provided for over one hundred patients. Private rooms were afforded strangers, masters of vessels and persons from the country who found it necessary to have hospital treatment. A convenient slip was attached for landing the sick and wounded from boats and there was sufficient space for convalescents to exercise. Dr. Hume was also attached to this as well as the Naval Hospital, and his ability was highly spoken of.

In an assessment book of 1834 the hospital on Lower Water Street under Dr. Head was valued at £2100. Dr. Head was the son of Dr. Michael Head who came to Halifax about 1765.

It is interesting to note that in 1826 are accounts of an institute for the cure of stammering at Saint John, N. B., under Mr. Wemple, where patients from Nova Scotia were treated: a Mr. Thomas Burns, aged forty-two, afflicted with an impediment in his speech, was cured there in three hours. Mr. Thomas C. Haliburton (Sam Slick) who had known him for two years previously, noticed this impediment which seemed to be of long standing, his pronunciation being as painful to others as to himself. In 1826 he called on Mr. Haliburton while he was attending the Court of Common Pleas and the latter surprised to find that he was cured of stammering, issued a certificate in hope that others might receive the same benefit at the hands of Mr. Wemple.

Though crowded and unsuitable the Poor House Hospital was doing its share in relieving the sick, yet in 1813 there was very little organized charity in Halifax or throughout the province and the poorer classes were rapidly

increasing, begging from door to door was common and insistent. The poor were practically sold as slaves to the lowest bidder, that is, to be supported at the lowest cost to the community; this in many cases led to neglect and abuse—the children of the poor were sold to the highest bidder in order to place them in homes and so relieve the community of the responsibility of their support.

In 1820 the town was divided into wards and three or four gentlemen from each ward volunteered to visit the poor during the winter. The Society was known as the Poor Man's Friend Society and continued for about six or seven years. A soup house was established and other arrangements made to look after the needy and it was no uncommon sight to visit the Poor House and to see over fifty children being served a hot breakfast every morning before going to their lessons in the class rooms.

Besides this town refuge and the Poor Man's Friend Society other organizations developed later, such as the Charitable Irish Society, the St. Andrew's and St. George's Societies; the churches also assisted in inculcating the principles of personal giving.

During the early 19th century the Halifax Visiting Dispensary was also doing its share in relieving the sick of the poor inhabitants of the town.

The following cutting from an advertisement of a druggist in the *Gazette* of January 14th., 1802, may have preceded this dispensary. "Advice and instruction given gratis to the poor daily at his drug store on Granville Street from 10 until 3 o'clock and all favours gratuitously acknowledged."—Michael Head.

A dispensary had been projected by two of the medical practitioners of the town, John Stirling and William Grigor to be supported by voluntary contribution and the institution opened its doors on November 9th., 1829.

In the *Acadian Recorder* of Saturday, November 7th., 1829, the following advertisement is noted.

> "This Institution will be opened on Monday next and will continue so to be on every day except Sunday for gratuitous advice and the distribution of medicines to such poor persons as shall bring a recommendation from a subscriber... the room which has been hired for the purpose is on George Street opposite Mr. Dupuy's store."

The Dispensary was to be open for an hour each day and a medical gentleman would be in charge to give advice and medicines to those who were unable to pay from their own resources. These institutions were common in other countries but little known on this side of the Atlantic. "The awful ravages which small-pox has made (1827) will convince its necessity and recent correspondence which the Directors of the Institution have made with the London Vaccine Institution where frequent supplies of fresh and effective matter will be constantly obtained and relief will be extended from this institution to many a deserving person, who but for sickness would never have dreaded becoming an inmate of a poor house or a burden upon the public." It was further stated that this charitable work would also prevent the development of more serious illness by relieving the symptoms at an early stage of the disease. In 1830, fifty pounds were granted annually for the Dispensary, and in 1832 Drs. Stirling and Grigor petitioned the house for further aid towards the public Dispensary which they had established. After the room on George Street, the Dispensary of Dr. Grigor was situated on the eastern side

of Granville Street; it was destroyed together with old St. Matthew's Church in the fire of 1857.

In December, 1835 the following report was published showing the number of patients admitted into the institution since December 31st., 1834.

January,	1835	128	persons
February,	"	122	"
March,	"	144	"
April,	"	71	"
May,	"	175	"
June,	"	125	"
July,	"	201	"
August,	"	209	"
September,	"	178	"
October,	"	134	"
November,	"	125	"
December,	"	115	"
Total		1,728	

Signed John Stirling, William Grigor } Surgeons.

And on January 1st., 1836, we read

"that hitherto the establishing of a Dispensary has been held rather as an experiment in the community than an institution required by the numbers or necessities of the poor, but the experience during the last six years when 10,000 persons have received advice and medicines has amply shown its usefulness and importance, but much of its benefits have been counteracted by the inadequacy of its funds. The fifty pounds was not sufficient to meet the annual rent and medicine."

For several years a grant of twenty-five pounds was made to Drs. Grigor and Stirling in aid of the Dispensary provided they keep during the year a sufficient quantity of vaccine matter; this grant was later increased to fifty pounds.

In 1840 a petition from Drs. Grigor and Stirling stated that the Dispensary was still continuing to supply the poor with medical advice and medicines gratuitously, and that 1,150 persons were admitted last year. They also requested a grant to be able to carry on the benevolent object of the Dispensary.

The Dispensary was evidently unable to cope with the need of the town as about this time petitions were being made for a new hospital or a dispensary.

In 1852 Dr. Jennings petitioned for a grant to carry on an Eye Dispensary under his charge, which he had conducted for some time. It was recommended for the present that this class of patients be referred to the Dispensary under Drs. Grigor and Parker as the establishment of a general hospital was then in agitation.

Later in 1854 another petition was made by the Governors of the Dispensary, and in 1855 a request was made by Dr. Jennings for a new hospital or dispensary, or both. He pointed out the need of such as was shown by the epidemic of a malignant type of scarlet fever. Upon a requisition signed by Dr. Slayter, Dr. Jennings, Dr. Almon and Dr. Creamer, a special meet-

ing was held on January 20th., 1855. Dr. Slayter handed in a paper which was read relating to the establishment of a visiting dispensary. The doctors decided that one should be established according to the suggestions offered the Society in the paper just read, and a vote of thanks was offered the *Acadian Recorder* for the weekly column relating to medical literature.

This new dispensary, called the Halifax Visiting Dispensary, under Dr. Jennings, was opened in 1855 on Argyle Street near Moirs' factory, and the two dispensaries evidently carried on at the same time.

In 1857 the old dispensary of Dr. Grigor on Granville Street was burned in the great fire together with St. Matthew's Church. However, it carried on for several years when it was finally disbanded. The work was then continued at Argyle Street.

On December 13th., 1858, the Governors of the Dispensary assembled at their regular quarterly meeting to examine the state of the institution. They stated that unless relief and additional supporters came forward the Dispensary, which was greatly required, could only be kept open for a few months longer at the most as the balance on hand since October was six pounds, and that not more than twenty pounds in addition would be collected from the present subscription list. The Governors appealed to the sympathies of all who were able to bestow five, ten or twenty shillings annually for the Halifax Visiting Dispensary. Each subscriber of five shillings would have it in his power to claim the attendance of the medical officers for one of his poor neighbors who was unable to pay a medical practitioner, the payment of ten shillings would enable the subscriber to two, and of twenty shillings, to four tickets.

The Committee to whom were referred the petition of the Governors of the Halifax Visiting Dispensary (1854), the petition of the Society for the support of the House of Refuge in this city, each asking for a grant in support of those establishments and the petition of Drs. Jennings and Slayter recommending the establishment of a marine hospital reported in 1859 as follows:

> "Although your committee consider the granting of money out of the General Revenue to Institutions of this kind, of a character purely local and confined in their charities to this city to be unsound in principle, unjust toward the rest of the population and opposed to the general policy of this Legislature and although they believe that all Charitable Institutions of similar description either in the parent country, the Colonies and the United States are sustained solely by funds raised by voluntary contributions or assessment on the city or town where they are situated, yet as they are convinced from personal inspection and enquiry that these institutions, and especially the Visiting Dispensary, are useful and beneficial, they are unwilling that their usefulness should be curtailed from the want of funds sufficient for their maintenance. Your Committee therefore recommend the same sum as was granted in the last session of the Legislature, viz. £100 for the Visiting Dispensary and £50 for the House of Refuge, at the same time distinctly disavowing the principle of such grant so as to avoid their being drawn into a precedent hereafter.
>
> The annual grant of £50 to the old Halifax Dispensary having been deferred in Committee of Supply until this Committee should report, leads your Committee to conclude that the House thereby virtually submitted its claim to their decision, and considering that one Dispensary well sustained is preferable to two inferior ones—that the more active and effective management of the Halifax Visiting Dispensary has in a great measure superceded the necessity of the old establishment and that the function of the two may be and ought to be united, do not therefore recommend any further grant to that Institution, except in so far as it may be made to appear that the present superintendent has not been compensated for his past expenditure.

Your Committee concur with Drs. Jennings and Slayter as to the utility and desirableness of a *Marine Hospital* in this city, and hope their exertions will stimulate the inhabitants of Halifax to cooperate with them in so patriotic and praiseworthy an undertaking.

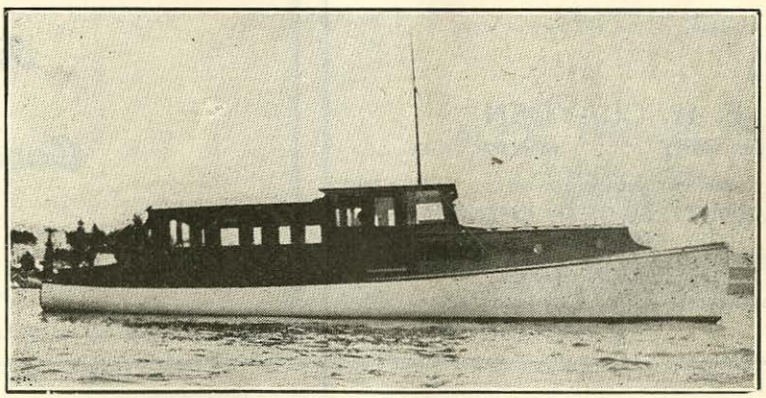
Edward Brown
Charles Tupper."

In 1876 a new dispensary was opened at the corner of South Brunswick and Prince Streets at a cost of $13,000.00. This work is now being carried on at the Dispensary at the Dalhousie Public Health Clinic on Morris Street, where a fine brick building was erected in 1923.

Though the Poor House and Dispensaries had been overtaxed, it was not until 1859 that the greatly needed hospital was established; it was then known as the City Hospital, later the City and Provincial, and now the Victoria General Hospital.

In the meantime the City had to meet many difficulties especially during epidemics of contagious diseases, which were frequently introduced through immigration and it was necessary to establish temporary hospitals from time to time.

To be continued.



THE NEW BRUNSWICK MEDICAL SOCIETY
Founded 1880

April 4, 1938.

To the members of the New Brunswick Medical Society.

Gentlemen:

As our Secretary, Dr. Kirkland, points out this Halifax meeting of the C. M. A. is almost as much our meeting as it is that of Nova Scotia.

What could be done to clear our calendar for this meeting and leave every member of the New Brunswick Medical Society free to attend has been done. It is therefore our hope that all of our members who can avail themselves of the opportunity will register at the Halifax meeting to greet visitors from beyond the Maritimes and to lend all possible assistance to our sister Society in discharging the obligations of the honor this year bestowed on her.

Yours very truly,

JOHN R. NUGENT,
President
New Brunswick Medical Society.

THE NEW BRUNSWICK MEDICAL SOCIETY
Founded 1880

March 31, 1938.

The physicians of New Brunswick, through the New Brunswick Medical Society, wish the Nova Scotia Medical Society every success in their conjoined meeting with the Canadian Medical Society to be held in Halifax, June 1938.

As usual the meeting of the C. M. A. will pay its biggest dividends on the social side of its programme and when the annual meeting is held in Halifax, an extra bonus of renewed and new friendships is always declared, owing to the hearty type of hospitality for which Nova Scotia is famous and which reaches its perfection in Halifax.

So anxious are we to share in this great meeting at Halifax that the New Brunswick Medical Society has decided to forego their usual scientific sessions at their own provincial meeting and further, we have postponed the business meeting of the New Brunswick Society, at Edmundston, until September 12th so that every physician in New Brunswick may be enabled to attend the C. M. A. meeting in Halifax without any fear of conflicting dates.

The doctors of New Brunswick are happy to co-operate with their colleagues in Nova Scotia in an attempt to make the attendance at Halifax a Maritime record. Already a considerable number of N. B. doctors have made arrangements to be in Halifax.

(sgd.) A. S. KIRKLAND,
Secretary,
New Brunswick Medical Society.

THE PRINCE EDWARD ISLAND MEDICAL SOCIETY

To the Medical Profession of Prince Edward Island:

I wish to thank the editors of THE BULLETIN, the very worthy publication of the Nova Scotia Medical Society, for this opportunity of addressing you through their columns.

On behalf of your Executive allow me to draw your attention to the forthcoming annual meeting of the Canadian Medical Association convening in Halifax, on June 20th, next. This will not only be largely a Maritime gathering, it will be a real opportunity for all Maritime physicians.

The phenomenal successes of the last Canadian Medical meetings in Charlottetown, and Saint John, will assuredly be repeated in Halifax this year, and as you know, from experience, this success can only be achieved by the whole-hearted cooperation of the Maritime Medical Fraternity. The only cooperation they require is your attendance, and we, your Executive wish to urge that as many Island physicians as possible avail themselves of this opportunity so near to our doors. We owe it to ourselves, our patients, and to the Halifax Committee, to be there, and I feel that Halifax, in keeping with the other Maritime cities can be depended upon to provide a program that will leave nothing to be desired.

We, of the Maritimes are not "convention saturated". As a result of this we look upon such meetings as "big things" and tackle them with more enthusiasm. Too, and with pardonable egotism, I must mention the well known "something" that is referred to as "Maritime hospitality". By combining this latter, with the aforesaid enthusiasm, we have a mixture that can result in nothing but a highly successful meeting. We should send a large representation. It will be well worth while.

Echoing the request of the Prince Edward Island Medical Society, when we were hosts to the Canadian Medical Association, that other Maritime Societies cancel their clinical sessions for the year, the Halifax Committee has made a similar request of your Society, and the Executive has decided to confine the activities for the coming season to a business meeting, to be held probably in Summerside, at the usual time.

It is hoped that this move will serve the purpose for which it is intended, namely that of inducing more of our members to attend the four day Annual Meeting of the National body, in Halifax.

Respectfully submitted,

A. W. ROSS,
Pres. Prince Edward Island Medical Society.

The Nova Scotia Medical Bulletin

Official Organ of The Medical Society of Nova Scotia.

Published on the 20th of each month and mailed to all physicians and hospitals in Nova Scotia. Advertising forms close on the last day of the preceding month Manuscripts, preferably typed and double-spaced, should be in the hands of the editors on or before the 1st of the month. Subscription Price:—$3.00 per year.

VOL. XVII MAY 1938 No. 5

OFFICE OF THE MAYOR
Halifax, Nova Scotia.

March 11th, 1938.

President and Members,
Canadian Medical Association:

As Mayor of the City of Halifax, I can state that the City is indeed gratified that you are holding your 69th Annual Meeting here next June.

Halifax, in June, is usually a fairyland, and considering the age of our City, with many points of historical interest, its health services which to you will be most interesting, its opportunities for golfing, boating, deep sea fishing, game fishing, etc., are such that any visitor cannot help but enjoy himself, as there is something for every member of the family.

We are looking forward to seeing you here and feel sure that if you come, it will be an occasion long to be remembered and we trust that you will make every effort to spare the time to come to Halifax June 20th-24th.

Yours sincerely,

WALTER MITCHELL,
Mayor of Halifax.

"WHERE do we go from here?" is a question asked by everyone at some time in their lives. The busy housewife, the mechanic, the farmer, the nurse, the professional man, all ask the same question; but all cannot answer it. The monotony of the daily grind will at some time pall and we look for a change of scene and recreation. The physical appetite requires a change; so does the mental. Human nature is such that change is at times not only necessary but imperative.

We rush along to keep up with our neighbours. We rush along to pass them, until we exceed the speed limit, and then it is difficult to stop. Such is the trend of the present age. No wonder we tire.

No one realizes this more than the Doctor. The rapid advance and change in the Medical World rushes him along, as he tries to keep abreast of the times and assimilate these changes. Not only does he carry his own burdens, but he carries the worries and heartaches of his patients. So he asks again, "Where do we go from here?"

True, we cannot all go to California, Florida, or the Riviera for physical and mental rest; nor can we all go to Boston, Rochester, or Vienna for scientific refreshment. But we can all avail ourselves of the opportunities at hand.

We can go to Halifax in our beautiful Nova Scotian June. Then let us go. Let us see new faces. Receive new ideas. Let us compare the epidemics of Scatarie with the epidemics of Esquimalt. Let us discuss the profits of the fur trade with the fruit growers of the Niagara fruit belt.

Let us take our wives and families and go to the Canadian Medical Association in Halifax and receive new ideas, hear new facts, rest, and enjoy ourselves, and go back to our fields of labor refreshed and rejuvinated.

ALLISTER CALDER,
President,
Medical Society of Nova Scotia.

The Canadian Public Health Association.

A VERY hearty welcome awaits this Association when it meets in Halifax on June 20th, 21st and 22nd. It is a society composed of public health workers who have had professional training and is organized on a national scale. Active provincial divisions now exist in British Columbia, Alberta, Saskatchewan, Ontario and Nova Scotia. Its members no doubt look forward to the time when all the provinces will have the same. Its purpose is to improve conditions throughout this Dominion through the co-operation of official health authorities, thus increasing the effectiveness of medical officers of health, public health nurses, sanitary officers and other members of health departments.

This Association is organized to achieve its purpose by the appointment of committees such as the following.

Housing: A national committee under the chairmanship of Dr. R. St. J. Macdonald, McGill University, is working toward the establishment of standards of housing as related to health and has drafted a model by-law.

Duties and Responsibilities of Health Officers: A committee under the chairmanship of Dr. J. E. Davey, Deputy Medical Officer of Health of Hamilton, is forwarding the presentation of legislation for the requirement of trained personnel, stability of tenure of office, and the defining of duties.

Health Budgets: To provide health officers with exact information concerning health expenditures in Canadian municipalities and so give support to their efforts to obtain adequate funds for their own work, a committee is engaged in the collection and analysis of data concerning health expenditures.

Rural Health Administration: A committee under the chairmanship of Dr. J. T. Phair, Chief Health Officer of Ontario, is evaluating the several forms of rural health administration; namely, full-time county health units, provincial districts, and local (township) services. Advance in public health is dependent on more adequate rural services.

Standards for Nursing Services: A committee of the Public Health Nursing Section, under the chairmanship of Miss Laura A. Gamble, is giving attention to the question of how nurses can best be trained for public health work. There are more than 2,500 nurses engaged in public health work in Canada, the majority of whom have not had special training in public health. The need exists for determining the best type of training and the establishing of standards for services rendered.

Accident Prevention: The Association is contributing to the accident-prevention movement by an intensive study of accidents from the medical standpoint; i.e., physical condition of motor-car drivers, proneness to accidents, etc.

Milk Control: Including a study of pasteurization, the phosphatase test as a means of checking the effectiveness of the pasteurization process, and epidemiological studies.

Vital Statistics: The Vital Statistics Section of the Association brings together those concerned with vital statistics in the provincial, municipal, and federal departments of health, as well as members of the life insurance companies. Substantial contributions are the new Canadian death certificates, revision of the International List of Causes of Death, the development of a morbidity code, better teaching of vital statistics to medical students in the nine medical colleges of Canada, and the education of physicians in the importance of vital statistics.

To advance the movement for full-time rural health services, the Association will, in 1938, make an award to the rural municipality having the best health organization. Field visits of inspection will be made. This is being made possible through the co-operation of the American Public Health Association, which has had extended experience in the conduct of such contests.

There are more than 2,000 sanitary inspectors in Canada. The Association has established standards of education and training, with the conduct of annual examinations and the issuing of a certificate, C.S.I. (C.). This work was established in 1934 and is one of the most important activities of the Association. It is self-supporting.

The special fields of public health are represented by the following sections of the Association: Child Hygiene, Industrial Hygiene, Laboratory, Mental Hygiene, Public Health Education, Public Health Engineering, Public Health Nursing, Social Hygiene, and Vital Statistics and Epidemiology. Section meetings are held at the time of the annual meeting. In addition, a special mid-winter meeting of the Laboratory Section is held each year, bringing together more than 100 bacteriologists for the presentation of original

research in bacteriology and immunology. Special Section meetings are also called in Vital Statistics.

In addition to the foregoing activities it publishes:

1. *The Canadian Public Health Journal*: a scientific journal published monthly, bringing to practically every health officer and health department in Canada the new developments in public health. This is one of the most important contributions that the Association is making.
2. Bulletin of the Laboratory Section: presenting new recommended laboratory procedures.
3. Directory of all public health laboratory personnel in Canada, with the details of their appointments.
4. Reprint Series: publication of special articles.
5. Annual Report: publication in detail of reports of all committees.

H. W. S.

Canadian Public Health Association
Nova Scotia Association of Medical Health Officers

ANNUAL MEETING

Halifax, N. S., June 20th, 21st, 22nd, 1938.

A CORDIAL invitation is extended to all physicians and others, throughout Canada, who are interested in Public Health endeavours, to attend the conjoint meeting of the Canadian Public Health Association and the Nova Scotia Provincial Association of Medical Health Officers, which will be held in Halifax, on Monday, Tuesday and Wednesday, June 20th, 21st and 22nd. During the same week the Canadian Medical Association and the Medical Society of Nova Scotia will be in session. In planning the programmes, special pains have been taken to make it possible for the Public Health workers to attend the various sessions of the medical societies, and for the members of the medical societies to attend such of the Public Health sessions as they may desire. This reciprocal arrangement will, it is felt, mean increased strength to all four organizations.

The several committees in charge are attempting to provide a programme which will cover, as completely as possible, all health activities. Leaders in the Public Health field and prominent speakers from many parts of Canada and from portions of the United States as well, will be present, and it is hoped that the majority of our readers will make it a point to attend and to spend as much of the week as possible in our city. Tentative programme will appear in the next issue of the *Canadian Public Health Association Journal.*

The Public Health convention headquarters will be the Lord Nelson Hotel where ample accommodation has been placed at our disposal. Rates in this hotel are $3.00 and up, single with bath; $2.50 and up double with bath. Tariffs in other hotels may be found elsewhere. For rooms please communicate, at once, with Dr. D. J. MacKenzie, Pathological Building, Morris Street, Halifax, Chairman of Hotel Committee.

Entertainment will be provided, particularly for wives and friends of visiting members. Halifax and environs offer many attractions; boating and bathing for those who like the sea, motor drives to places of beauty and interest, and refreshing afternoon teas amid pleasant surroundings.

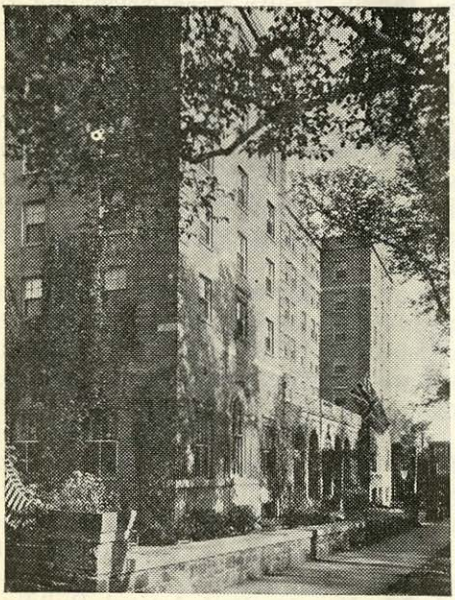
The Department of Health, the City Board of Health and the people generally, welcome one and all to our city. We predict your stay will be a profitable one, both educationally and socially; so much so that you will wish to return at a future date to see more of our beautiful province.

P. S. CAMPBELL, M.D.,
President Canadian Public Health Association.

Twenty-Seventh Annual Meeting
Canadian Public Health Association
in conjunction with the Annual Meeting of the Nova Scotia Health Officers Association

Halifax, June 20, 21, 22

Headquarters: Lord Nelson Hotel



THE week of June 20th will be a great medical week in Halifax. On Monday, Tuesday and Wednesday the Canadian Public Health Association will hold its twenty-seventh annual meeting in conjunction with the annual meeting of the Nova Scotia Health Officers' Association. During the same week the Canadian Medical Association and the Medical Society of Nova Scotia will be in session. The program of the week presents the field of medicine in all its aspects. Preventive medicine is an integral part of the practice of medicine. The prevention of communicable diseases of childhood, the control of tuberculosis, the provision of full-time health services, advances in venereal disease control, recent findings in poliomyelitis, as presented in the program of the Canadian Public Health Association and the Nova Scotia Health Officers' Association, will be of vital interest to the general practitioner.

The morning session on Monday, June 20th, will be under the direction of the Nova Scotia Health Officers' Association and will present a series of short papers on public health services in Nova Scotia. Two other sessions will be held on Monday, one in the afternoon and one in the evening. At the afternoon session of both associations, Dr. P. S. Campbell, Chief Health Officer of Nova Scotia, will give his address as President of the Canadian Public Health Association. The papers presented on Monday will include a symposium on full-time health services, recording the progress in the various Provinces, with particular reference to the Province of Quebec. A preliminary report of the functioning of the newly-established Cape Breton Unit in Nova Scotia, and the significant developments in New Brunswick in the formation of health districts, will also be discussed. Presentation will be made of the award to the full-time health unit in Canada having the highest standing as recorded in the rural health conservation contest conducted by the Cana-

dian Public Health Association in co-operation with the American Public Health Association, and an address will be given by Dr. Grant Fleming, Dean of the Faculty of Medicine, McGill University, and chairman of the Committee on the Rural Health Conservation Contest. Other contributors to this program will include Dr. Reginald M. Atwater, Executive Secretary of the American Public Health Association, and Dr. James Wallace, Field Director of the American Public Health Association.

On Tuesday morning two sessions will be held, one by the Section of Vital Statistics and Epidemiology of the Canadian Public Health Association, dealing with the control of acute communicable diseases; and the other presenting papers dealing with recent advances in various fields of public health. The session on acute communicable diseases will include the discussion of scarlet fever, diphtheria, typhoid carriers, and poliomyelitis.

The general session on Tuesday afternoon will afford the opportunity of a thorough discussion of the control of tuberculosis. Contributing to this symposium will be representatives of Manitoba, Ontario, Prince Edward Island, and Nova Scotia. The annual dinner of the Canadian Public Health Association will be held on Tuesday evening in the Lord Nelson Hotel. Addresses will be given by the Hon. Angus L. Macdonald, Premier of Nova Scotia, and by the Hon. Dr. Frank R. Davis, Minister of Health. At this session presentation of honorary life membership in the Canadian Public Health Association to several distinguished leaders will be made. A program of very special interest is planned.

On Wednesday morning a joint session will be held with the Canadian Medical Association. In view of the serious outbreaks of poliomyelitis in Canada, it was felt that this session would be particularly appreciated. The speakers will include Dr. Alan Brown, Physician-in-chief of the Hospital for Sick Children, Toronto; Dr. J. T. Phair, Chief Medical Officer of Health, Province of Ontario; and other specialists.

A cordial invitation is extended to every physician in Nova Scotia to attend the sessions on Monday, Tuesday and Wednesday, June 20th to 22nd, in the Lord Nelson Hotel.

R. D. DEFRIES, M.D.,
Chairman, Editorial Board
Canadian Public Health Journal.

Federation With Canadian Medical Association

Statement from Study Committee.

The Study Committee on Relations of the Medical Society of Nova Scotia with the Canadian Medical Association, appointed at the annual meeting at Pictou Lodge in July, 1937, wishes for the information of the profession in Nova Scotia, to give a brief account of its activities.

Two years ago at its annual meeting in Halifax, the Society adopted a report of its then Committee on Federation, which included the following recommendations:—

1. "That this Society reaffirm its endorsation of the principle of Federation, provided that a scheme can be evolved with satisfactory definition of the powers and functions of the federal and provincial bodies.

2. That, in view of the legislative enactments required in Nova Scotia, and in view of the necessity of further elaboration of the scheme, this Society should defer completion of Federation at this time.

3. That this Society appoint a Study Committee, as requested by the Canadian Medical Association, for collaboration with its sub-executive in further study of this matter.

4. That this Study Committee be empowered, at its discretion, to employ legal counsel in the preparation and completion of the necessary legislative amendments".

This Study Committee, with slight change in personnel, was reappointed in 1937 at Pictou Lodge.

In the two years intervening since the adoption of the above report, the proposal, as presented by the Canadian Medical Association, has been greatly modified. At present it permits the retention of our historic name "The Medical Society of Nova Scotia", with "Canadian Medical Association (Nova Scotia Division)" to be used as an alternative.

It provides that such members only as so desire may become members of the Canadian Medical Association, on payment of the prescribed fee.

Certain parts of the proposed Constitution and By-Laws, which were thought to contravene the principle of complete provincial autonomy, have been eliminated, or satisfactorily modified.

According to the latest draft of the Constitution and By-Laws of the Canadian Medical Association applicable to Divisions, any Branch (we are now a Branch) may become a Division in the following manner:—

1. By intimating to the Canadian Medical Association in writing that it desires to become a Division.

2. By agreeing to amend, where necessary, its Constitution and By-Laws to place them in harmony with the Constitution and By-Laws of the Canadian Medical Association.

3. By agreeing to collect from all of its Divisional members who desire to be members of the Canadian Medical Association such annual fee as may from time to time be set for membership, and remit same to this Association.

4. By agreeing to take such steps as may seem proper to the Division to increase membership in the Association.

It may be pointed out that we in Nova Scotia are at present carrying

out the provisions of paragraphs 3 and 4 above, under the conjoint fee arrangement which was instituted in 1937, and which is being continued in 1938.

The Committee has secured a legal opinion as to whether the Society may enter into the proposed arrangement with the Canadian Medical Association, and as to whether enabling legislation is necessary. This opinion is to the effect that the Society may proceed without fear of serious consequences from a practical point of view.

The Committee is of the opinion that the Federation proposal, as now put forward by the Canadian Medical Association, is acceptable to the Medical Society of Nova Scotia; and, inasmuch as enabling legislation is apparently not imperative, proposes to recommend that the Society should take the necessary steps at its annual meeting in June, 1938, to become a Division of the Canadian Medical Association.

With such action in view the following amendments to the Constitution and By-Laws of the Medical Society of Nova Scotia will at that time be proposed, due notice having been given:

Article I, Title.

Add these words—"This Society may also be known as "The Canadian Medical Association (Nova Scotia Division)".

Article V, Meetings.

(1) Add these words—"When the Canadian Medical Association meets in the Province of Nova Scotia, the regular meeting of the Society for that year shall be for business purposes only."

Article IX, Committees.

3. (a) Six lines from the bottom of Page 8, after the word "interests", insert these words—"shall nominate members to the Council of the Canadian Medical Association on or before March 31st in each year; shall nominate a representative on the Nominating Committee of the Canadian Medical Association; shall nominate a member to the Executive Committee of the Canadian Medical Association;" and shall fulfill....

After sub-section (d) on Page 9, add sub-section.

(e) "Such other standing committees as the Society may see fit to appoint."

Article X, Funds.

For section (1), substitute

"(1) Every member shall pay to the Society a fee not exceeding Ten Dollars annually."

For section (5) substitute.

"(5) The financial year of the Society shall end with the 31st day of December in each year."

The Study Committee, which is composed of Drs. G. H. Murphy, H. B. Atlee, K. A. MacKenzie, G. R. Burns and J. R. Corston, is desirous that the above statement be placed before the members of the Society at this time, in order to facilitate consideration of the Federation proposal at the forthcoming annual meeting at Halifax, June 21st, 1938.

PROGRAM

Sixty-Ninth Annual Meeting of the Canadian Medical Association to be Held in the Nova Scotian Hotel, Halifax

JUNE 20, 21, 22, 23, 24, 1938

in Conjunction with the Annual Meeting of the Medical Society of Nova Scotia

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Monday, June 20th.

9.00 a.m.	Registration.
9.30 a.m.	Meeting of the General Council.
12.30 p.m.	Luncheon.
2.00 p.m.	Meeting of the General Council.
6.00 p.m.	Meeting of the Nominating Committee.

Tuesday, June 21st.

9.15 a.m.	Meeting of the General Council.
12.30 p.m.	Luncheon.
2.00 p.m.	Meeting of the General Council.
2.15 p.m.	Official Opening of the Exhibit Hall.
7.00 p.m.	Dinner to Council.

Wednesday, June 22nd.

8.30 a.m.	Registration.
9.00 a.m.	General Session.
12.30 p.m.	Luncheon.
2.00 p.m.	Sectional Meetings.
8.30 p.m.	Annual General Meeting.

Thursday, June 23rd.

8.30 a.m.	Registration.
9.00 a.m.	Sectional Meetings.
12.30 p.m.	Luncheon.
2.00 p.m.	General Session.
2.00 p.m.	Address of the President.
2.00 p.m.	Meeting of Incoming Executive Committee.
7.30 p.m.	Dinner, Medical Society of Nova Scotia

Friday, June 24th.

8.30 a.m.	Registration.
9.00 a.m.	General Session.
12.00 a.m.	Luncheon.
1.00 p.m.	Annual Golf Tournament.
7.30 p.m.	Dinner, followed by presentation of prizes to winners at the Golf Tournament.

Alumni Dinners for those desiring to arrange them.

GENERAL SESSIONS

Wednesday, June 22nd.

9.00 a.m. Symposium on Poliomyelitis—
DR. J. T. PHAIR, Toronto.
DR. ALAN BROWN, Toronto.
DR. D. E. ROBERTSON, Toronto.

The Osler Lecture—
"Osler, the last phase, and his influence on medicine."
SIR HUMPHREY ROLLESTON, Surrey, England.

Surgical Clinic on Cancer—
DR. M. R. MACCHARLES, Winnipeg.
DR. WILLIAM BOYD, Toronto.

Thursday, June 23rd.

2.00 p.m. Address of the President—DR. LEGGETT.

The Results of Phrenic Nerve Paralysis in Pulmonary Tuberculosis—A study of 250 cases, 1930-1937.
DR. A. F. MILLER, Kentville, N. S.

Leukoplakia and Allied Mouth Conditions—
DR. DOUGLAS QUICK, New York.

Benign Lesions of the Oesophagus—
DR. E. E. CLEAVER, Toronto.

Diagnosis of Local Lesions of the Spinal Cord—
DR. FRED H. MCKAY, Montreal.

Friday, June 24th.

9.00 a.m. Symposium on Streprococcic Sore Throat; Epidemiology Bacteriology and Treatment—
DR. A. L. MCLEAN, Halifax.
DR. W. J. DEADMAN, Hamilton.
DR. P. B. MACFARLANE, Hamilton.

Spinal Cord Tumours—
DR. A. W. ADSON, Mayo Clinic, Rochester.

Observations on One Thousand Pre-eclamptics—
DR. F. C. IRVING, Boston.

Medical Clinic—
DR. J. C. MEAKINS, Montreal.

SECTION OF ANAESTHESIA

Wednesday, June 22nd.

2.00 p.m. Improving our Anaesthesia Services—
DR. E. W. LUNNEY, Saint John.

The Selection of The Anaesthetic—
DR. LINCOLN F. SISE, Lahey Clinic, Boston.

Fors Clavigera in Anaesthesia—
DR. WESLEY BOURNE, Montreal.

SECTION OF ANAESTHESIA—Continued.

2.00 p. m. Anaesthetic Complications Arising from Reflex Reactions during Abdominal Surgery—
DR. E. A. ROVENSTINE, New York.

A Comparison of Ether, Spinal and Cyclopropane Anaesthesia—
DR. J. C. HOUSTON, Charlottetown.

SECTION OF MEDICINE

Wednesday, June 22nd.

2.00 p.m. The Complications of Acute Haemorrhagic Nephritis With Report of a Case—
DR. L. C. MONTGOMERY, Montreal.

The Complications of Diabetes Mellitus with Special Reference to Their Cause and Prevention—
DR. A. A. FLETCHER, Toronto.

Illness Other than Diabetic Complications, in Insulin Patients—
DR. A. F. VANWART, Fredericton.

The Major Hereditary Ectodermal Dystrophies—
DR. H. R. CLOUSTON, Huntingdon, Quebec.

Thursday, June 23rd.

9.00 a.m. Unrecognized Hypothyroidism—
DR. G. K. WHARTON, London.

Mental Complications of Heart Disease—
DR. A. H. GORDON, Montreal.

Cardiac Emergencies—
DR. G. F. STRONG, Vancouver.

Roentgenology of the Heart—
DR. J. H. PALMER, Montreal.

SECTION OF OBSTETRICS AND GYNAECOLOGY

Thursday, June 23rd.

9.00 a.m. Diagnosis and Treatment of Common Disorders of Menstruation—
DR. E. V. SHUTE, London.

The Prophylaxis and Treatment of Puerperal Infection.
DR. JOHN FRASER, Montreal.

The Indications for Caesarian Section—
DR. ROSS MITCHELL, Winnipeg.

Sterility—
DR. W. P. TEW, London.

An Eleven-Year Study of the Prenatal Clinic of the Dalhousie Public Health Clinic—
DR. W. G. COLWELL, Halifax.
DR. A. L. MCLEAN, Halifax.

Etiological Factors and Treatment of Cancer of the Cervix.
DR. P. J. KEARNS, Montreal.

SECTION OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY

Wednesday, June 22nd.

2.00 p.m. Tonsillectomy Under Intravenous Anaesthesia in Children Suffering from Chronic Respiratory Diseases—
DR. KEITH HUTCHISON, Montreal.

Bronchiectasis in Relation to Nasal Sinus Infection and Tuberculosis—
DR. L. DEV. CHIPMAN, Saint John, and
DR. R. J. COLLINS, Saint John.

Carcinoma of the Nasal Accessory Sinuses—
DR. D. H. BALLON, Montreal.

Brain Abscess—
DR. WILLIAM V. CONE, Montreal.

Thursday, June 23rd.

9.00 a.m. A Comparison of Haemorrhage, Blood Pressures and Haemogram of 100 Ear, Nose and Throat Operations with Ether, Nitrous Oxide and Cyclopropane Anaesthesia—
DR. L. R. TEASDALE, Montreal.

A Clinical Lecture on Hoarseness (Coloured Lantern Slides)—
DR. PERRY GOLDSMITH, Toronto.

Problems in the Diagnosis and Treatment of Glaucoma—
DR. W. G. M. BYERS, Montreal.

The Use of Urea and Carroid in Chronic Otitis Media—
DR. G. E. TREMBLE, Montreal.

Asthenopia—
DR. J. F. A. JOHNSTON, Toronto.

Thursday, June 23rd.

2.00 p.m. A Study of X-ray Examinations—
DR. GEO. HILTON, Montreal.
DR. E. M. CRAWFORD, Montreal.

Facial Paralysis Complicating the Mastoid Operation, and How to Avoid it—
DR. J. A. SULLIVAN, Toronto.

Physiology of the Internal Ear. Vertigo of Otitic Origin, its Diagnosis, Treatment, and Demonstration of Tests—
DR. W. J. MCNALLY, Montreal.

The Neurological Aspect of Oto-Laryngogical Complaints—
DR. E. F. BROOKS, Toronto.

Severe Haemorrhage from the Naso-pharynx—
DR. B. V. BRADLEY, Toronto.

SECTION OF PAEDIATRICS

Wednesday, June 22nd.

2.00 p.m. Otitis Media from the Paediatrician's Point of View—
DR. GEO. CAMPBELL, Ottawa.

Allergy in childhood—
DR. T. M. SIENIEWICZ, Halifax.

The Diagnosis of Heart Conditions in Early Childhood—
DR. A. P. HART, Toronto.

(Program for this Section incomplete.)

SECTION OF RADIOLOGY

Wednesday, June 22nd.

2.00 p.m. A Re-evaluation of X-ray Technique and Diagnosis—
DR. E. A. PETRIE, Saint John.

Carcinoma of the Sigmoid Colon—
DR. A. C. SINGLETON, Toronto.
DR. M. M. R. HALL, Toronto.

Gastro-Intestinal Diagnosis—
DR. RICHARD SCHATSKI, Boston.

X-ray Therapy—
DR. J. E. GENDREAU, Montreal.

Thursday, June 23rd.

9.00 a.m. Radiological Investigation of Diseases in the Region of the Hypopharynx—
DR. E. H. SHANNON, Toronto.

The Role of Radiology in the Diagnosis and Treatment of the Primary and Secondary Lesions of Carcinoma of the Breast—
DR. W. A. JONES, Kingston.
DR. R. C. BURR, Kingston.

Lipiodo—Bronchography—
DR. J. GOSSELIN, Quebec.
DR. J. E. PERRON, Quebec.

Bone Tumours—
DR. C. M. JONES, Halifax.

SECTION OF RHEUMATIC DISEASES

Thursday, June 23rd.

9.00 a.m. The Clinical Approach to the Rheumatic Diseases—
DR. A. A. FLETCHER, Toronto.

The Aims and Objects of the Canadian Rheumatic Disease Association—
DR. W. S. BARNHART, Ottawa.

Rheumatic Fever—
DR. J. C. MEAKINS, Montreal.

Diagnosis of Chronic Arthritis—
DR. J. W. MERRITT, Halifax.

The Management and Treatment of Rheumatoid Arthritis—
DR. G. DOUGLAS TAYLOR, Montreal.

SECTION OF SURGERY

Wednesday, June 22nd.

2.00 p.m. The Band Operation—A detailed description of its technique (Lantern Slides)—
DR. W. L. BIGELOW, Brandon, Man.

Fracture of the Neck of the Femur—
DR. W. E. GALLIE, Toronto.

Fractures of the Morphological Neck of the Humerus in Children—
DR. L. J. AUSTIN, Kingston.

Fracture of the Jaw—
DR. FULTON RISDON, Toronto.

Some Remarks About Ligaments—
DR. DONALD MAINLAND, Halifax.

Thursday, June 23rd.

9.00 a.m. Some Surgical Aspects of Tuberculosis—
DR. C. A. MCINTOSH, Montreal.

Duodenal Ulcer—
DR. ROSCOE R. GRAHAM, Toronto.

Carcinoma of the Breast—
DR. J. G. MACDOUGALL, Halifax.

Peripheral Arterial Disease—
DR. H. M. ELDER, Montreal.

Heparin and Thrombosis—
DR. D. W. G. MURRAY, Toronto.

Bursitis—
DR. H. K. MCDONALD, Halifax.

SECTION OF UROLOGY

Wednesday, June 22nd.

2.00 p.m. Horseshoe Kidney—
DR. K. P. HAYES, Halifax.

Principles of the Treatment of Urinary Infections by Medication—
DR. D. R. MITCHELL, Toronto.

Recurrent B. Coli Infection in Women—
DR. S. A. WALLACE, Kamloops.

Common Surgical Conditions of the Female Bladder Neck—
DR. MAGNUS I. SENG, Montreal.

Management of Ureteral Calculi—
DR. COLIN CHISHOLM, Toronto.

Thursday, June 23rd.

Treatment of Hydronephrosis—
DR. C. B. STEWART, Winnipeg.

Obstruction of Bladder Neck Following Prostatectomy—
DR. F. G. MACK, Halifax.

Cysts of the Kidney—
DR. F. S. PATCH, Montreal.
DR. LORNE G. WOOD, Montreal (by invitation).

Chronic Prostatitis, (non specific) with special Reference to Symptomatology—
DR. EARLE R. HALL, Vancouver.

Aberrant Renal Vessels with Report of Cases—
DR. GORDON A. WINFIELD, Halifax.

PROGRAM

Ladies Entertainment

C.M.A.—1938—Halifax

Monday, June 20th.

9.00 a.m. Registration.
4.00 p.m. Tea and Reception for ladies attending Canadian Public Health Association and Canadian Medical Association—Lord Nelson Hotel.

Tuesday, June 21st.

9.00 a.m. Registration.
10.00 a.m. Drive to Waverley via Waverley Lakes and Bedford Basin.
11.30 a.m. Coffee at Green Acres.
4.00 p.m. Tea at Dr. and Mrs. R. E. Mathers, "Fintamara", Jollimore.
8.00 p.m. Dinner at Nova Scotian Hotel.

Wednesday, June 22nd.

9.00 a.m. Registration.
10.00 a.m. Drive to points of interest.
2.25 p.m. Excursion—Harbour, Bedford Basin, North West Arm.
9.00 p.m. Ceremonial, Canadian Medical Association.
President's Reception and Dance—Nova Scotian Hotel.

Thursday, June 23rd.

12.30 p.m. Buffet Luncheon at Ashburn Golf Club.
4.00 p.m. Garden Party at Government House.

Friday, June 24th.

10.30 a.m. Yachting, Golf, etc.
2.00 p.m. Shore Drive—Airport—Brightwood.

OR

Golf at Brightwood, Dartmouth.
4.30 p.m. Tea at Brightwood.

NOTE: All functions on Daylight Saving Time.

Dalhousie Refresher Course

PRELIMINARY ANNOUNCEMENT

The Dalhousie Refresher Course Committee has decided to hold this year's refresher course during the week of August 14th. This is to enable Dalhousie Graduates in Medicine to take advantage also of the Reunion which is being held that week.

The programme is shaping up for the course and it is hoped that it will equal in quality any of its predecessors. Already Dr. Ravdin, Professor of Surgery and Head of the Harrison Department of Surgical Research, University of Pennsylvania, has promised to be with us. It is expected that in Medicine some outstanding physician who is being sought to provide added attraction to the Reunion will be available for the usual Refresher Course teaching as well.

The local part of the programme is also being developed, and as in other years, the Committee will welcome suggestions looking to the improvement of the Course.

The fact that the Reunion is a Dalhousie one and is being held the same week, will not in any way affect the status of physicians who are graduates of other schools. In Medicine no distinction is made or will be made. We welcome them all: and in the extra-medical university activities of that week, arrangements will be made whereby non-Dalhousians—if there is any such thing among men who are registered for a Dalhousie Course—will be extended the same Reunion privileges as those who are peculiarly hers.

Will those who have ideas as to how the course could be made more valuable to them kindly let us hear from them?

N. H. GOSSE,
Chairman, Refresher Course Committee.

82 Spring Garden Road,
Halifax.

Plan Your Halifax Visit as a Real Holiday

IF you like the outdoors, if you like the tang of salt sea air and cool breezes beneath a warm sun, if you like to smell the freshness of vegetation in its first full leaf, if you like golf and sailing, and sandwiches generously sprinkled with ants and sand, then the annual meeting at Halifax should appeal to you for these reasons alone and apart from the scientific lore to be got, the acquaintances, old and new, to be met. There will be formal functions too, the President's reception and ball at the Nova Scotian Hotel, the Garden Party at Government House, the formal dinner to the visiting ladies with the wives of the Nova Scotian doctors as hostesses, the tea at the beautiful summer residence of Dr. and Mrs. Mathers on the shores of the North West Arm. Less formal will be the coffee party at Green Acres, with the drive around the famous Dartmouth Lakes, the buffet luncheon at Ashburn, the excursion over the waters of Halifax Harbour, the ladies' golf tournament at Brightwood, the yachting parties, the other luncheons and dinners, the many private functions already being planned. For the younger guests the grounds of the Waegwoltic Club, on the North West Arm will be always open with swimming, boating, tennis and quoits. There will be a special dance and luncheon as well as invitations to all the senior functions in which they may be interested. Of particular entertainment to the men will be the daily luncheons at the Nova Scotian Hotel where prominent local speakers will give brief talks on topics of general interest. Besides the annual dinner will be the Annual Meeting and Dinner of the Nova Scotian Medical Society to which all are invited and the dinners of other provincial societies now being arranged.

City merchants will display their most attractive wares to entice shoppers and all Halifax will take part in a real Nova Scotian welcome to her guests.

NOTICE

The Annual Meeting of the Medical Society of Nova Scotia will be held at Halifax in conjunction with the Canadian Medical Association. The schedule decided upon is as follows:

Executive Meeting: June 21st, 10 a.m. (Daylight Saving) Board Room, The Clinic.

First Business Session: June 21st., 8 p.m. (Daylight Saving) Tea Room, Nova Scotian.

Second Business Session: Thursday evening, June 23rd., (Daylight Saving) Nova Scotian Hotel.

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

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Chief Health Officer - - - - - DR. P. S. CAMPBELL, Halifax.
Divisional Medical Health Officer - - DR. C. J. W. BECKWITH, D. P. H., 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. C. E. A. DEWITT - - - - - - - Wolfville
1st Vice-President - - - DR. R. A. MACLELLAN - - - - Rawdon Gold Mine
2nd Vice-President - - - DR. H. J. TOWNSEND - - - - - - Louisburg
Secretary - - - - - - - DR. P. S. CAMPBELL - - - - - - - - Halifax

COUNCIL

DR. L. M. MORTON - - - - - - - - - - - - - - - Yarmouth
DR. C. B. CRUMMEY - - - - - - - - - - - - - - - Trenton
DR. B. S. BISHOP - - - - - - - - - - - - - - - Kentville

MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

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

ANTIGONISH COUNTY

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

CAPE BRETON COUNTY

Tompkins, M. G., Dominion.
Fraser, R. H., New Waterford.
Francis, Bernard, Sydney Mines.
Sutherland, Harvey, Glace Bay.
McLeod, J. K., Sydney.
O'Neil, F., Sydney (County, South Side)
Murray, R. L., North Sydney.
Baird, R. P., 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 (Mcpy.)

CUMBERLAND COUNTY

Bliss, G. C. W., Amherst.
Gilroy, J. R., Oxford.
Hill, F. L., Parrsboro, (Mcpy. and Town).
Cochrane, D. M., River Hebert (Joggins)
Walsh, F. E., Springhill.

DIGBY COUNTY

Doiron, L. F., Little Brook, (Clare Mcpy).
McCleave, J. R., Digby.
Harris, W. C., Barton, (Mcpy).

GUYSBORO COUNTY

Chisholm, D. N., Port Hawkesbury, (M.H.O. for Mulgrave).
Sodero, T. C. C., Guysboro (Mcpy).
Moore, E. F., Canso.
Monaghan, T. T., Sherbrooke (St. Mary's Mcpy).

HALIFAX COUNTY

Almon, W. B., Halifax.
Forrest, W. D., Halifax (Mcpy).
Payzant, W. A., 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

Muir, J. A., Port Hawkesbury.
Grant, T. E., Port Hood.
Proudfoot, J. A., Inverness
McNeil, A. J., Mabou, (Mcpy).

KINGS COUNTY

Bishop, B. S., Kentville.
Bethune, R. O., Berwick (Mcpy. and Town).
de Witt, C. E. A., Wolfville.

LUNENBURG COUNTY

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

PICTOU COUNTY

Blackett, A. E., New Glasgow.
Chisholm, H. D., Springville, (Mcpy).
MacMillan, J. L., Westville.
Crummey, C. B., Trenton.
Sutherland, R. H., Pictou.
Whitman, G. W., Stellarton.

QUEENS COUNTY

Murray, D. K., Liverpool.
Smith, Harry, Mill Village, (Mcpy).

RICHMOND COUNTY

Digout, J. H., St. Peters, (Mcpy).

SHELBURNE COUNTY

Corbett, J. R., Clark's Harbour.
Fuller, L. O., Shelburne.
Banks, H. H., Barrington Passage, (Barrington Mcpy).
Lockwood, T. C., Lockeport.
Churchill, L. P., Shelburne, (Mcpy).

VICTORIA COUNTY

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

YARMOUTH COUNTY

Hawkins, Z., South Ohio (Yarmouth Mcpy).
Caldwell, R. M., Yarmouth.
Lebbetter, T. A., Yarmouth (Wedgeport).
Siddall, A. M., Pubnico Head, (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 April 1st., to May 1st., 1938.

During the month, 234 tissues were sectioned and examined, which with 36 tissues from 9 autopsies, makes a total of 270 tissues for the month.

Tumours, simple	22
Tumours, malignant	41
Tumours, suspicious of malignancy	1
Other conditions	170
Tissues from 9 autopsies	36
	—270

Communicable Diseases Reported by the Medical Health Officers for the month of April, 1938.

County	Cerebro Spinal Meningitis	Chickenpox	Diphtheria	Influenza	Measles	Mumps	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	V. D. G.	V. D. S.	Whooping Cough	Infantile Paralysis	German Measles	Diarrhoea	Erysipelas	TOTAL
Annapolis	..	..	..	..	4	..	1	1	..	..	..	..	1	21	..	..	..	..	28
Antigonish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Cape Breton	..	8	11	6	7	5	..	2	54	..	1	1	1	..	..	1	..	..	97
Colchester	..	4	..	..	5	8	..	..	..	..	..	..	..	..	..	..	..	..	17
Cumberland	..	3	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	5
Digby	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Guysboro	..	3	..	..	..	12	..	1	..	..	..	..	..	..	..	..	..	..	16
Halifax City	..	7	4	..	13	5	..	..	9	..	2	..	..	..	..	..	..	2	42
Halifax	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Hants	..	..	..	4	..	10	..	..	2	..	..	..	..	..	..	..	..	..	16
Inverness	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	3
Kings	..	..	..	6	7	2	..	1	..	..	..	3	1	..	..	..	..	..	20
Lunenburg	..	..	..	..	9	..	..	..	..	..	..	..	..	..	..	..	..	..	9
Pictou	..	..	..	..	..	2	..	..	2	1	..	..	..	..	..	..	..	..	5
Queens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Richmond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Shelburne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Yarmouth	..	..	..	45	..	2	..	12	2	2	..	..	..	..	..	..	..	..	63
TOTAL	..	25	15	61	46	46	1	17	73	3	3	4	3	21	..	2	..	2	322

Positive cases Tbc. reported by D.M.H.O.'s. 29.

RETURNS VITAL STATISTICS FOR MARCH, 1938

County	Births M	Births F	Marriages	Deaths M	Deaths F	Stillbirths
Annapolis	19	16	5	24	16	2
Antigonish	12	13	0	8	6	0
Cape Breton	37	31	56	21	14	3
Colchester	27	25	7	9	12	4
Cumberland	35	31	13	27	15	1
Digby	21	28	5	23	23	0
Guysboro	12	21	4	9	8	2
Halifax	104	99	53	68	62	8
Hants	30	31	3	20	8	1
Inverness	18	11	1	13	12	1
Kings	33	26	9	17	17	2
Lunenburg	25	21	9	19	17	2
Pictou	30	38	19	26	32	2
Queens	8	11	4	8	2	0
Richmond	12	9	1	5	5	0
Shelburne	14	12	1	10	6	1
Victoria	6	5	6	4	1	0
Yarmouth	32	22	6	17	17	0
	475	450	202	328	273	29

Personal Interest Notes

Hospital Advocated for Annapolis.

AT a special meeting of the Town Council on Thursday evening, April 28th, Dr. I. R. Sutherland and Dr. G. R. Mahaney were present and asked the Council for co-operation and aid in the starting of a hospital in Annapolis Royal. They stated that the situation in regard to hospital accommodation had become acute, that the Digby Hospital is now overcrowded, and that unless steps are immediately taken to put up a new hospital here, the Digby one will be enlarged and continue to leave Annapolis badly handicapped as to hospital facilities. The plan is for a new bungalow building with fifteen beds to start and to cost about $5,000. The mayor said that he did not know whether legal restriction by the Public Utilities Board might prevent the Town giving the concessions asked for, but he thought the sympathy of the Council was with the movement and they would do all they could. A resolution to this effect was unanimously adopted.

Medical Clinic for Baddeck.

The home and school club of Baddeck met during the first week of April; the main discussion was a plan to have a general medical clinic conducted for Baddeck public schools. Both Dr. C. J. W. Beckwith and Dr. F. R. Davis, the Minister of Public Health, will be consulted on the new project.

Stringent effort to be made to combat tuberculosis at Indian Reserve.

Every child at the Mill Brook Indian Reserve, Truro is to be examined for tuberculosis. Information to this effect was given by B. B. Fox, Indian Agent at Truro, who stated that he had been advised by Dr. J. J. MacRitchie, Halifax, Divisional Health Officer, Nova Scotia Government, that he would be in Truro the second week of May to start the work of examining the Indian children. The school children will be examined first and then the other children of the Reserve. Dr. MacRitchie will be assisted by the Reservation Health Officer and by Miss McDougall, County Health Nurse.

Professor Dreyer resigns post at Dalhousie.

Professor N. B. Dreyer, head of the Department of Pharmacology at Dalhousie for a number of years, has resigned his position to become director of research for the Sandos Chemical Company of New York, one of the biggest organizations of its kind on the continent.

A native of South Africa Dr. Dreyer has been associated with Dalhousie since 1923, with the exception of four years from 1927-1931 as professor of physiology at McGill University, Montreal.

On first coming to Halifax, he directed the department of physiology. Since returning from McGill he has been professor of pharmacology. Keenly interested in university life, he has been active in badminton and golf. Dr. Dreyer is a member of Phi Kappa Pi fraternity.

He holds baccalaureate degree in arts from the Cape and Oxford, also

a master's from Oxford, M.R.C.A. (Eng.), and L.R.C.B. (London). He was a member of the Dalhousie Senate. Dr. Dreyer left for New York on April 27th.

Dr. T. W. MacLean, formerly of Scotsburn, Pictou County, who has been a patient at the Nova Scotia Sanatorium for the past twenty months, is visiting at Truro.

The annual meeting of the Halifax Branch of the Medical Society of Nova Scotia was held on Wednesday, April 27th, at 8.30 p.m., and, as usual, took the form of a dinner at the Nova Scotian Hotel.

The officers of the Society for the coming year are as follows:

President—Doctor C. W. Holland.
Vice-President—Doctor C. E. Kinley.
Secretary-Treasurer—Doctor C. M. Bethune.

Members of the Executive and Representatives to the Executive of the Medical Society of Nova Scotia, Doctor E. F. Ross, Doctor A. M. Marshall, Doctor A. R. Morton, and Doctor W. J. Barton.

Dr. and Mrs. W. A. Hewat of Lunenburg recently returned from a trip to Boston and New York.

Dr. and Mrs. F. S. Messenger of Middleton spent Easter in Boston.

Dr. and Mrs. G. A. MacIntosh of Halifax have returned from a month's holiday in the Southern States.

Dr. and Mrs. E. G. Young of Halifax have left to spend several months in England. Later, they plan to go to the continent, where Dr. Young will read a paper before the International Physiological Congress which meets in Zurich on August 14th.

Dr. S. H. Keshen of Halifax has returned from New York where he and Mrs. Keshen spent Easter. Mrs. Keshen remained in New York to spend a fortnight with her sister, Dr. Evelyn Rodgers.

Dr. and Mrs. R. P. Smith of Halifax have returned from a short trip to New York.

Congratulations to Dr. and Mrs. W. D. Piercey, formerly of Halifax, on the birth of a daughter on March 27th, at Richmond, London, England.

Dr. S. L. Walker, who has been residing in Truro for the past few years, has taken up residence at the Odd Fellows' Home at Pictou.

Airplane Clinics.

About one-third of the deaths among the Indians is due to tuberculosis, according to a report of the Vital Statistics Branch of the Dominion Bureau of Statistics. Many of the deaths occur in the first year of infancy and among

the young people up to twenty-nine years of age. Children of school age suffer greatly from this dreaded disease.

During the past few years many of the reserves in the out of the way parts of Canada have been visited by plane. Medicine and supplies were flown in and sick and injured Indians brought out to hospitals.

Now progress in stamping out diseases, especially tuberculosis, to which the Indians appear most susceptible is making its greatest strides through the attention given the children in the schools.

A complete diagnostic outfit including an X-ray and electrical generator to operate it, was recently flown by chartered plane from Prince Albert to Indian residential schools at Lac La Ronge and Beauval in Northern Saskatchewan where tuberculosis clinics are conducted. This was the first time that the facilities of a modern clinic were brought to the Indians by planes.

A large number of the residential schools have been surveyed so that all the pupils have been examined, many of them by X-ray. The school principal and his local medical advisor have had the benefit of the advice of a competent specialist and results are promising.

This new clinic of the air will be of great assistance to the five hundred doctors and dentists who have the task of protecting the health of about 115,000 Indians living in some eight hundred separate communities in Canada.

OBITUARY

The BULLETIN extends its sympathy to Dr. J. Emile LeBlanc of West Pubnico in the death of his father, Isaac H. LeBlanc, who passed away at his home at Little Brook on April 4th in his eighty-second year. The deceased was one of the most prominent citizens of Digby County. Prior to his death he was Magistrate for Digby County, and clerk and treasurer for the Municipality of Clare.

"Good-by, Mother"

"GOOD-BY, MOTHER, GOOD-BY, DAD"—and your son is off; another ambitious young fellow starting out to make his way in the world.

He is leaving to take his first real job. He will be absolutely on his own—away from the guiding influences of home and school. You know he will come through all right. But you wish you could do more than give the vague admonition "Take care of yourself, son."

You can. You can give him a very practical suggestion.

. . . *Suggestion*

Arm the boy with the name of a doctor in the city to which he is going; your family physician will be glad to help. Then point out the advantage of making intelligent use of the doctor's services.

. . . *In Illness*

If illness comes, your boy should have a doctor whom he can call without delay. For that is the best way to keep little illnesses "little."

To illustrate, the lad who battles a cold-with-fever alone in a hall bedroom, has only youth on his side. There is always the chance that pneumonia or some other serious illness may develop. But the moment his doctor enters the sick room, the picture changes. Now your boy has an ally—and one with the resources of modern medical science at his command!

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Urge your young folks to find a doctor promptly in the new world they have chosen to conquer, and to avail themselves of his knowledge, experience, and friendship whenever the need arises. He, perhaps, can be their greatest help in avoiding the ill-health and sicknesses that so frequently interfere with the hopes and ambitions of youth.

SEE YOUR DOCTOR

From Vital Statistics

Why does the death rate from one disease go up in one province and go down in another?

This question will lead to many other questions when one begins to analyse the vital statistics of the whole Dominion.

The report of the third quarter of 1937, covering the first nine months of the year, has just been issued by Hon. W. D. Euler's Department and the figures give conclusive proof to the need of a wider knowledge of public health.

Typhoid fever is the first disease on the list with 180 deaths during the first nine months, equal to 240 for the year. That means a practical stand-still for in 1936, the number was 243. The natural question here is why so many deaths when typhoid fever is supposed to be a vanishing pestilence. As contaminated water and milk are the chief causes of infection, lack of sanitation and absence of milk pasteurization must have been responsible, so that it should have been possible to prevent most of these deaths. The next question that arises is why should Quebec show half of all the deaths in Canada from typhoid fever?

Possibly the reason is that Quebec's health protection, from the standpoint of water and milk, is behind that of other provinces. This would seem to be confirmed by the mortality figures for enteritis, which carried off 3,301 persons in Canada, of whom 2,042 were in Quebec, as compared to 415 in Ontario. Of the 3,301 deaths from enteritis during the first nine months, 2,425 were in the summer and of this number 1,675 were among infants under one year.

Of the diseases confined almost exclusively to children, the figures for the first nine months were measles, 643; scarlet fever 191; whooping cough, 561; diphtheria, 211. In all of these communicable diseases Quebec's figures are again out of proportion. Why should that province lose 198 children from measles as against Ontario's 25? Why should there be 95 deaths from scarlet fever in Quebec and only 37 in Ontario; 156 from diphtheria in Quebec and only 18 in Ontario; 310 from whooping cough in Quebec and only 85 in Ontario? One reason is that Quebec's proportion of children is so much larger than that of other provinces. As to measles, Saskatchewan was worse than Quebec, per capita, having had 190 deaths. Alberta and British Columbia also had over 100 each. On the other hand, that non-preventable disease, infantile paralysis, claimed 104 victims in Ontario as against only 17 in Quebec during the first nine months of 1937.

Why should Quebec have more than twice as many tuberculosis deaths than Ontario—2,227 as against 1,040, out of a total Canadian mortality of 5,277?

On the other hand, among certain adult diseases, Ontario had much the worse showing. Of 8,866 deaths from cancer in Canada, 3,374 were in Ontario, 2,260 in Quebec, 776 in British Columbia, 537 in Manitoba, 521 in Saskatchewan, 516 in Nova Scotia, 436 in Alberta, 343 in New Brunswick and 103 in Prince Edward Island.

Why should Ontario have had nearly 45 per cent of all the cardiac deaths in Canada? For the same reason that Quebec leads in children's diseases, Ontario has more deaths from cancer and heart diseases, having a larger proportion of the population in the advanced age groups. Ontario had 8,743 deaths from diseases of the heart and arteries as against 5,237 in Quebec.

Vital statistics, indeed, present a wide range of problems to those interested in the progress of the race.

The Medical Museum

An attractive cabinet has been secured and it is now possible to take excellent care of a large number of objects of historical interest. An appeal is now made to the profession to assist in collecting old and rare specimens of medical interest and send them in either as donations or loans. Assurance can be given that they will be safely stored and cards of acknowledgement will be attached to each article. It is hoped that the collection will be of sufficient interest so place it as an exhibit at the June meeting of the Canadian Medical Astociation. The success of this venture depends on the wholehearted cooperation of the members of the Medical Society of Nova Scotia. Please give this your attention and send something along as soon as possible. Articles may be sent to Dr. R. P. Smith, Pathological Institute, and acknowledgement will be made in the BULLETIN from time to time.

K. A. MACKENZIE,
Special Chairman The Committee Medical History.

What Every Woman Doesn't Know—How to Give Cod Liver Oil.

Some authorities recommend that cod liver oil be given in the morning and at bedtime when the stomach is empty, while others prefer to give it after meals in order not to retard gastric secretion. If the mother will place the very young baby on her lap and hold the child's mouth open by gently pressing the cheeks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. It is most important that the mother administer the oil in a matter-of-fact manner, without apology or expression of sympathy.

If given cold, cod liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves. As any "taste" is largely a metallic one from the silver or silverplated spoon (particularly if the plating is worn), a glass spoon has an advantage.

Cn account of its higher potency in Vitamins A and D, Mead's Cod Liver Oil Fortified with Percomorph Liver Oil may be given in one-third the ordinary cod liver oil dosage, and is particularly desirable in cases of fat intolerance.

Spring Fever Explained

Scientists at Purdue University, in Indiana, have come out with a timely explanation of "Spring fever". They say, as has always been indicated by the name and maintained by the victims, the thing is a disease, not mere laziness.

When one has an overpowering desire to seek out a grassy slope in the warm Spring sunshine, and sprawl upon it with hands behind head, watch the white clouds scud across the blue sky, and doze comfortably, one is really suffering from insufficiency of lime in one's system. The remedy, however, is not repair to one of Mr. Farley's new post office buildings and gnaw on the cornerstone; it is to eat more milk, eggs, fruit and fresh vegetables. (Purdue is an agricultural school, too.)

While this explanation of Spring fever will be of help to victims of the disease in fending off the misguided proddings of their consciences, it may be expected certain unfeeling persons, related by marriage and so on, will continue their unfeeling attempts to stir sufferers into action.—*Portland Oregonian.*