The Diagnosis of Acute Myocardial Infarction*

LOUIS WOLFF, M.D.

I took the liberty of changing the title of this talk from "The Diagnosis of Acute Coronary Thrombosis," to "The Diagnosis of Acute Myocardial Infarction." When acute coronary thrombosis occurs, and is not followed by myocardial necrosis, pain is the sole or dominant manifestation of the attack. A similar clinical picture may characterize acute coronary occlusion due to other causes, such as subintimal hemorrhage, rupture of an atheromatous abscess, dissection of a coronary vessel, or coronary embolism. Furthermore, severe prolonged pain without other manifestations not uncommonly occurs in the absence of an acute change in the structural status of the coronary vessels. It follows, then, that the diagnosis of acute coronary thrombosis cannot be made clinically, and at best, is only a speculative possibility.

On the other hand, the evidence which forms the basis for a diagnosis of acute myocardial infarction is definite and concrete. In addition to pain there are the various manifestations of myocardial necrosis: fever, leucocytosis, increased sedimentation rate, and characteristic electrocardiographic signs. A diagnosis of acute infarction, furthermore, does not justify the assumption that acute coronary thrombosis is responsible for it. Infarct may follow acute coronary occlusion from any of the causes mentioned above, and in about one-half of the cases is unassociated with any acute change in the coronary vessels. A diagnosis of acute myocardial infarction, therefore, is based on definite evidence which is clinically obtainable, whereas its cause, if ascertainable, can be determined only at autopsy.

It has been said that the clinical picture of acute myocardial infarction is so distinctive that a third year medical student can make the diagnosis. This statement, uttered only a few years ago, brings into sharp contrast the attitude of the present day clinician with that of his forebears which prevailed at the beginning of the century, when the pioneer students of this disease boldly insisted to a skeptical profession that the diagnosis could be made ante-mortem. It is true, of course, that a third year medical student can make the diagnosis correctly in many instances. However, this should not obscure the fact that many cases are so atypical, and so many diseases mimic the condition we are discussing, that the diagnostic acumen required to successfully unravel the diagnostic problem far exceeds that possessed by the student, and even by some experienced clinicians. I am sure expert cardiologists at times erroneously make a diagnosis of acute myocardial infarction, or fail to make the diagnosis when the condition is present. I would estimate, from actual knowledge, that the condition is still underdiagnosed, contrary opinions not withstanding.

I have already intimated that difficulties in diagnosis arise because of atypical manifestations, and because many diseases simulate, sometimes very closely, acute myocardial infarction. The electrocardiogram, and other laboratory procedures, while of great help, do not always clarify the problem for us. Indeed, the various tests, including the electrocardiogram, may be more misleading than helpful. Correct diagnosis requires careful appraisal of all available clinical and laboratory data, and consideration of a long list of diseases and conditions which may simulate acute myocardial infarction.

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The typical textbook picture of acute infarction is known to all of you. The persistent severe crushing anterior chest pain with radiation to the left arm, followed by a drop in blood pressure, rise in temperature, and leucocytosis, and the characteristic electrocardiographic signs of myocardial necrosis, clearly establish the diagnosis. The skin is cold and clammy, and presents a greyish pallor. The patient is stricken during the pursuit of his usual activities, during sleep or while at rest, following a heavy meal, after strenuous or unaccustomed exertion, or some emotional upset. Trauma, severe infections, surgical procedures, anesthesia, and shock from hemorrhage or any other cause, and the use of certain drugs, for example, epinephrine and pitressin, may precipitate an attack. Although the disease is most common in men between the ages of 40 and 60, it occurs in all age groups and in both sexes. It is extremely rare however, in young women, and may be dismissed from consideration unless diabetes, established hypertension, or pronounced obesity is present. A strong family history of vascular disease, and a personal history of angina pectoris, hypertension, diabetes, and other manifestations of vascular disease, furnish the proper background for acute myocardial infarction, but one should not hesitate to make the diagnosis in the absence of all such historical data. If the classical picture just described was observed in every case, there would never be any difficulty in diagnosis. This is not the fact, however, and we must be prepared to encounter the infinite variations that are seen in this disease.

Much has been said and written about painless acute myocardial infarction, and it is not possible to give an authoritative answer to this question. My own experience, however, in cases with an established diagnosis of acute infarction, is emphatically opposed to the idea that asymptomatic acute infarction ever occurs, although I have seen painless infarction on rare occasions in cases of alcoholic intoxication, during surgical anesthesia, and in instances of acute infarction manifested by coma. In young subjects intractable vomiting may be the only symptom of acute infarction, and I have seen pronounced generalized weakness as the only manifestation of the attack. This patient had a previous history of weakness, without pain, on effort, promptly relieved by nitroglycerine. Instances of old myocardial infarction without a history of pain are not convincing, as patients not infrequently forget pain, as well as other symptoms.

Most of the confusion pertaining to this question is related to the patient's description of the disagreeable sensation which he experiences. A variety of terms are employed, depending on the patient's sensitiveness, his education, his articulateness, his imagination, his occupation, and many other factors. But whatever descriptive terms are used, the evidence is irrefutable that with rare exceptions, every patient with acute myocardial infarction experiences a disagreeable sensation, which almost always is in the anterior chest. Since many patients steadfastly refuse to refer to this disagreeable sensation as pain it is necessary to become familiar with its more common equivalents, such as pressure, constriction, tightness, heaviness, emptiness, bursting, weakness, burning, nausea, oppression, expansion, tearing, gnawing distress, ripping, and difficulty in breathing. Difficulty in breathing may be associated with pain or any of its equivalents, or it may occur by itself. It is one of the vaguest, and the most difficult sensation for the patient to describe, but careful analysis indicates that it is not a feeling of breathlessness. As you know, the terms indigestion and gas are frequently used by

patients, but these terms refer to pain or one of its equivalents, and reflect the patient's interpretation of the symptom. To avoid endless repetition the word pain will be used exclusively in the following discussion.

The pain, as already stated, is usually in the anterior chest and radiates to the ulnar side of the left arm. Although the substernal area, from the xiphoid to the suprasternal notch, is most commonly involved, the pain may arise anywhere from the upper abdomen to the top of the head, including the posterior thorax, and it may radiate to either arm, the neck, jaw, gums, or teeth, or it may be localized in the wrist, elbow, shoulder, the neck, gums, or teeth.

Frequently the onset of myocardial infarction is preceded by one or more brief or prolonged attacks of pain over a period of hours to 3 or 4 weeks. During this premonitory period the pain may be brought on by effort or may occur at rest, and is often so atypical that its true nature is not recognized until infarction supervenes. A diagnosis of angina pectoris during the premonitory phase is not adequate unless supplemented by "impending myocardial infarction." In some cases, although the history is typically that of angina of effort, the electrocardiogram shows unmistakable evidence of acute myocardial infarction. Therefore, patients with angina pectoris of recent origin should be kept under close observation, and frequent electrocardiograms obtained.

There are several features of acute infarction which are of value in differentiating it from other conditions. Not infrequently the blood pressure rises, at times markedly so, before it falls. The rise in temperature does not appear in the first 24 hours; subnormal temperature is common on the first day. Levels above 102° F. or 103° F. are not common, and normal readings are observed after 3-7 days in most cases. The pain hardly ever is accentuated by inspiration, swallowing, or bodily motion in the first 24 hours, and as a rule not until the third day, when complicating pericarditis may supervene. The pericardial friction rub, therefore, is not heard until the second or third day, and is ephemeral, lasting but a few hours or 1 or 2 days. The observation of gallop rhythm or pulsus alternans following an episode of chest pain should arouse suspicion of myocardial infarct. Increase in the white cell count is noted early in the attack, and seldom exceeds 15-18,000, though considerably higher levels are occasionally seen; leucocytosis does not persist for more than a few days. The sedimentation rate, however, shows a delayed rise, but may remain elevated for weeks or longer. Pronounced acute cardiac dilatation does not occur. Crepitant rales, or a small patch of dulness and bronchial breathing at the left lung base is common, but pleural effusion does not occur unless there is congestive heart failure, in which case the effusion is right sided, or is present bilaterally. In the absence of congestive failure pleural effusion suggests some other complication, or another diagnosis.

Despite the multiplicity of features which characterize acute infarction, the list of conditions which has to be considered in differential diagnosis is a formidable one: cervical radiculitis, acute mediastinal emphysema, diaphragmatic hernia, peptic ulcer and its complications, gall bladder disease, acute pancreatitis, pulmonary neoplasm, pneumonia, subacute bacterial endocarditis or other infections associated with chill, pulmonary embolism, acute idiopathic pericarditis, and dissecting aneurysm. Although the diagnosis of acute myocardial infarction may appear certain beyond any reasonable doubt, close scrutiny of the case, and consideration of the other possibil-

ities just mentioned, may require a change in diagnosis. A detailed history, and a thorough examination, limited only by the patient's condition, are safeguards against error, but consideration of the above list should be routine, especially if any unusual features are noted.

Owing to the limitation of time, I will make but a few general remarks about differential diagnosis, and will for the most part confine the discussion to pulmonary embolism, acute idiopathic pericarditis, and dissecting aneurysm, since these are primarily cardiovascular diseases, and often provide the greatest difficulty in differential diagnosis.

The history of a crick in the neck and reproduction of pain on motion of the cervical spine suggest the diagnosis of cervical radiculitis. In mediastinal emphysema peculiar crunching sounds are heard on auscultation of the heart. A history of weight loss, cough, and hemoptysis, and the demonstration by mere inspection of unequal contour or respiratory motion of the right and left hemithorax, point to the possibility of pulmonary disease. Diaphragmatic hernia may simulate acute infarction, but it is a common condition, and its presence does not exclude myocardial infarction. Localized upper abdominal rigidity and tenderness may occur in acute infarction as well as acute abdominal conditions, and pronounced cyanosis may be noted in perforated duodenal ulcer. Vomiting, diarrhea and abdominal pain do not necessarily indicate abdominal disease, as these often occur in myocardial infarction. Pronounced jaundice favors the diagnosis of infra diaphragmatic disease, although it is rarely noted in infarction. White pallor, instead of greyish pallor, should suggest some diagnosis other than myocardial infarction. Very high temperature, or persistence of fever beyond one week, and unusually high white counts, are not expected in cases of infarction. The diagnosis of acute myocardial infarction is open to suspicion if the electrocardiogram fails to show the characteristic signs of acute myocardial injury.

Pulmonary embolism is confused with acute myocardial infarction only when it produces chest pain or an abnormal electrocardiographic pattern. When the pain is pleuritic in type, or low in the axilla or posterior thorax, especially when associated with a pleural friction rub, it should not be difficult to distinguish between the two conditions. In many cases, however, the pain is anginal in character, location, and distribution, and the differential diagnosis depends on a detailed analysis of clinical and laboratory data. While pulmonary embolism is more common in the older age groups, as is myocardial infarction, there is no striking sex predilection, and the condition occurs for the most part in individuals who have been immobilized for any reason whatsoever, or who have sustained an injury or infection of the legs. The pain is intensified or assumes a pleuritic quality on inspiration from the very outset, and the temperature, as well as the white count, may be elevated at once. Vascular collapse, or paroxysmal auricular fibrillation, are prone to occur hours or days before the onset of pain, whereas this sequence seldom occurs in myocardial infarction. Hemoptysis and jaundice are much more common in pulmonary embolism than in myocardial infarction. Extreme dyspnea or cyanosis may occur in pulmonary embolism in the complete absence of abnormal physical signs in heart and lungs, but this combination is not noted in acute myocardial infarction. Gallop rhythm and a "pericardial friction" rub, when sharply localized to the pulmonic valve area, suggest pulmonary embolism. Crepitant rales, dulness, and bronchial breathing may be found anywhere in the lungs, and not predominantly at the left base

as in myocardial infarction. Pleural effusion may be noted even in the absence of congestive failure, and the fluid, if examined, is found to be sanguinous, or to have the characteristics of an exudate. Definite signs of phlebitis increase the probability of pulmonary embolism, but their absence by no means excludes it. The X-ray demonstration of pulmonary infarcts, and the electrocardiogram help greatly in the differntial diagnosis, but the evaluation of these tests requires highly specialized knowledge. Finally, it must be remembered that acute myocardial infarction and pulmonary embolism may coexist.

Acute pericarditis unassociated with rheumatic fever, pyogenic infections, tuberculosis, acute myocardial infarction, lupus erythematosis, and uremia, occurs as a benign condition of undetermined etiology. Its interest for us lies in the fact that the clinical picture and laboratory findings may mimic acute myocardial infarction so closely that the greatest care in differential diagnosis must be exercised, for the treatment and prognosis of the two conditions are strikingly different. A diagnostic problem is encountered only in those cases characterized by anginal pain.

Acute benign pericarditis occurs in all age groups, but more frequently in younger subjects than is true in myocardial infarction. There is no striking sex preponderance. It attacks healthy individuals, but is common in those with a history of joint pains or rheumatoid arthritis. Symptoms of an upper respiratory infection, often grippe-like frequently precede the onset of pain. The character, location, and distribution of the pain are similar to the pain of myocardial infarction, except that at its very onset it is intensified by inspiration, cough, bodily motion, swallowing, and the recumbent position. Moreover, the patient may complain of pleuritic pain in the axilla or back, in addition to the anginal pain. Dyspnoea is a frequent complaint, but is the result of pain on inspiration, as a consequence of which rapid, shallow respirations are observed. Pulmonary congestion and pulmonary signs are uncommon, but pleural involvement is invariably noted: a pleural friction rub, progressive thickening of the pleura as noted in serial X-rays, or pleural effusion; the fluid is exudative.

The heart signs are interesting, and of considerable help in the differential diagnosis. A pericardial friction rub is usually audible as soon as the pain begins, and then persists many days to several weeks. X-ray examination of the heart in some cases discloses conspicuous enlargement of the cardiac silhouette, suggesting pericardial effusion. Nevertheless the cardiac pulsations are usually visible, though feeble, and paracentesis yields a dry tap, or a small amount of fluid incommensurate with the great increase in heart size. The conclusion is warranted that striking, acute dilatation of the heart occurs in this condition. In spite of this, congestive phenomena do not occur unless there is cardiac tamponade consequent to pericardial effusion. The blood pressure in most cases falls but little. Without treatment the heart size rapidly returns to normal, despite the persistence of a friction rub and evidence of an active pericarditis.

Fever and leucocytosis are usually present, and may persist several weeks. The electrocardiogram resembles that seen in acute myocardial infarction, but is distinguished from it by some of its details, and by the rapidity of its evolution and return to normal.

Recovery always occurs, usually in days to one or two weeks, but recurrences are frequent in some cases.

There is often a remarkable identity in the clinical manifestations of dissecting aneurysm and acute myocardial infarction. Nevertheless, careful scrutiny will disclose signs which permit a clear distinction between them. Premonitory pain is much less common in dissecting aneurysm, and as a rule the pain at the very outset is severe and maximal. Back pain, especially when it involves the lumbar region and extends to the legs, should always arouse the suspicion of dissecting aneurysm. All accessible arterial pulses should be noted to detect asynchronism, inequality, or absence of pulsations, and if indicated, blood pressure readings in both arms and both legs should be obtained. This should be done as soon as the patient is seen, as abnormalities in the pulsations may disappear consequent to re-establishment of circulation in arteries occluded by the dissection, or when the blood pressure rises after initial shock levels. Bizarre neurological signs, and hematuria, are noted in dissecting aneurysm when the arterial tree of the central nervous system and kidneys is involved in the dissection.

Information of great value is obtained from examination of the heart and chest. The sudden appearance of an aortic diastolic murmur following an attack of chest pain is strong evidence of dissecting aneurysm. Finding a pericardial friction rub or the electrocardiographic signs of pericarditis soon after the onset of pain is not expected in acute myocardial infarction, but is consistent with acute benign pericarditis or dissecing aneurysm.

The latter is the more likely diagnosis if the patient belongs to the older age groups, has a history of established hypertension, and appears critically ill. If pericardial fluid is present, and paracentesis discloses blood, the diagnosis is so much more probable. Hemorrhage into the pericardial sac in dissecting aneurysm does not always produce cardiac tamponade at once and is consistent with survival. This is also true of bleeding into the pleural cavity, and if signs of fluid are noted a pleural tap is indicated. Left hemothorax in the type of case under consideration is presumptive evidence of dissecting aneurysm. Occasionally right hemothorax is noted. Finally, X-ray disclosure of a widened supracardiac shadow is additional evidence of dissecting aneurysm.

It should be clear that the differential diagnosis of acute myocardial infarction, pulmonary embolism, acute benign pericarditis, and dissecting aneurysm can be extremely difficult, and requires meticulous attention to details in the history, physical examination, clinical course, and laboratory findings. Little has been said about the X-ray and electrocardiogram, for, despite the invaluable aid which they furnish, specialized knowledge is required for their proper evaluation. Pain, fever, leucocytosis, abnormal cardiac and pulmonary signs, blood pressure abnormalities, and striking X-ray and electrocardiographic signs occur in all four conditions, but differences in detail are noted if the examination is thorough. We have mentioned some of these which are useful in differential diagnosis, in the discussion of each condition. A few additional remarks may be of some value.

Paroxysmal auricular fibrillation and parosyxmal auricular flutter occur in all four conditions. This is true of paroxysmal auricular tachycardia also. Paroxysmal ventricular tachycardia occasionally complicates acute myocardial infarction, but I have not noted it in the other conditions. High grade A-V block is a fairly common finding in acute infarction, is rare in dissecting aneurysm, but I have never observed it in acute benign pericarditis or pulmonary embolism. Pulmonary edema is common in acute infarction,

pulmonary embolism, and dissecting aneurysm, but is rare, or non-existent in uncomplicated acute benign pericarditis. Gross congestive heart failure may follow pulmonary embolism, myocardial infarction, or dissecting aneurysm, but does not occur in idiopathic pericarditis. However, if cardiac tamponade is produced by pericardial effusion, engorged neck veins, pulmonary congestion, a large tender liver, and subcutaneous edema will be noted. Finally, pericardial effusion which is large enough to be recognized easily does not occur in pulmonary embolism, is very rare in acute myocardial infarction, but is more frequent in idiopathic pericarditis and dissecting aneurysm.

In conclusion, the clinical picture of acute myocardial infarction may be so distinctive that a third year medical student can make the diagnosis, or it can simulate or be simulated by other conditions to such an extent that the great skill of the experienced physician is taxed to the utmost. All of the conditions mentioned have to be considered in the differential diagnosis, especially those which were discussed in detail. One should cultivate the habit, when examining a patient who appears to have acute myocardial infarction, of thinking, as a matter of routine, of the list of conditions stated above, particularly acute benign pericarditis, pulmonary embolism, and dissecting aneurysm. The additional effort required is well rewarded.

Arthritis, Psoriasis, Steroid Hormones and Bacteria.

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IN practically all fields of science it is considered good practice to give the simplest possible explanation of the various phenomena known to date and to use that theory as a basis for further study and experimentation until a simpler or more satisfactory idea is presented, or until some new phenomenon is observed which makes it no longer tenable. This paper attempts to explain a number of phenomena which at first glance may seem not only isolated but almost contradictory. For a number of years many observers have thought that in some way the presence of bacteria in the body, and the body's reaction thereto, must be in the background of both psoriasis and rheumatoid arthritis. These two conditions have been recognized as having some relationship or common aetiology. On the basis of this suspicion the author has been treating both psoriasis and rheumatoid arthritis with stock *sensitized* vaccines in doses far in excess of any he can find previously reported. Lest this be confused with any other vaccine therapy for arthritis, let it be noted that the *first* dose of sensitized vaccine contains more killed bacteria than the last dose of treatment ordinarily employed, and the final dose used by the author is twelve to twenty times the initial dose or 25,000 to 30,000 million organisms! The cases of psoriasis are being presented elsewhere.[1] In some cases results have been quite dramatic, in others improvement has been gradual but very definite, and in a smaller number of cases there does not seem to have been much benefit. These results have been extremely difficult to explain, and the writer has felt reluctant to present the cases of arthritis showing good results in view of the very evident lack of benefit in others. In recent months however two reports have been published which seem to explain the apparent inconsistency and give hope of a complete understanding of the conditions named.

Dr. Frederick Reiss describes his investigation of twenty-five cases of psoriasis as to possible adrenocortical disturbances.[2] He states: "Hypofunction of the adrenal glands has been favoured by many investigators. ". . . The possibility of an infectious agent as the cause of psoriasis has been suggested many times. ". . . There appears to be an indication that the pathogenesis of psoriasis seems to be associated with disturbed steroid hormonal production, the seat of which may be in the cortex of adrenals, but a pituitary relationship cannot be denied . . . ". . . The increased sedimentation rate indicates an infectious or toxic cause which seems to be highly possible, based not only on the observations that removal of septic foci is curative in certain cases, but also on the recent observations that psoriasis developed in five cases after vaccination against smallpox."

The brilliant work of Dr. Philip S. Hench, who for some twenty years has studied the beneficial effects of pregnancy and jaundice on rheumatoid arthritis, has culminated in a demonstration which may be summed up by quoting from his own preliminary report.[3] "Certain clinical and biochemical

features of rheumatoid arthritis have been markedly improved by the daily intramuscular injection of either the adrenal cortical hormone, 17-hydroxy-11-dehydrocortico-sterone (compound E) or the pituitary adrenocorticotropic hormone, ACTH. Articular, muscular and other symptoms were lessened notably, and sedimentation rates were reduced when either hormone was employed; when the use of them was discontinued symptoms and signs of rheumatoid arthritis usually, but not always, returned or increased promptly. Dr. Hench states[3,4] "it has become increasingly difficult for me to harmonize the microbic theory with such amelioration (in jaundice and pregnancy), and again, "Perhaps the removal of a focus of infection, never a 'specific remedy,' is sometimes beneficial because it may initiate a helpful biochemical reaction which has nothing to do with germs or immunity."

Here then we have what are apparently three facts: (1) A considerable percentage of cases of psoriasis are benefited or cured by relatively huge doses of bacterial antigen. A smaller percentage of cases of rheumatoid arthritis are relieved either permanently or for a very long time by similar treatment. (2) Persons with psoriasis seem to have a disturbance of production of steroid hormones which Dr. Reiss suggests may be due to focal sepsis. (3) The administration of cortisone produces dramatic benefit in practically all cases of rheumatoid arthritis, although Dr. Hench seems to minimize any part played by bacteria in producing the need for cortisone.

The following theory would seem to be a reasonable explanation of these rather divergent facts.

Psoriasis and rheumatoid arthritis may each represent a diminished production of steroid hormones, often (but not necessarily always) due to circulating toxins from a bacterial source elsewhere in the body. This source may or may not call attention to itself by any marked reaction of the local cells to the presence of the bacteria; but the ability of adrenal cortex cells to produce one or more of the steroid hormones may be temporarily or permanently suppressed by toxins absorbed from that source. If the suppression is temporary and reversible then clearing up the source of toxins would permit a resumption of secretion of a normal amount of hormone. This would explain why symptoms sometimes disappear in cases of arthritis and psoriasis[1,5] when a source of bacterial toxins is removed by surgery or by a vaccine. But if the cortical cells are unable to recover their function, even when relieved of the burden of toxins, then the symptoms of insufficient hormone would naturally remain; and this may be what occurs in the cases which do not lose symptoms, even when surgery or vaccine treatment has been sufficient to remove the source of bacterial toxins. Apparently when enough cortisone is given, the symptoms of rheumatoid arthritis are relieved, regardless of lack of natural supply, but the natural source of cortisone may be insufficient when the artificial supply is discontinued.[3] If this reasoning is correct, then it should be found (when enough cortisone is available) that there are three types of cases of rheumatoid arthritis:

(1) Those where vaccine therapy (or surgical removal of focus of infection) enables the adrenal cortex to resume sufficient normal functioning to cure the symptom complex.

(2) Cases where recovery is only partial and some additional cortisone is needed to provide complete relief, but less is required after using the vaccine than previously.

(3) Cases where there is little or no ability of the patient's own cortex to resume function, and the entire supply of cortisone must be provided artificially throughout the patient's lifetime.

Such a situation would correspond to what we know about interference with production of insulin or of thyroxin by acute and chronic infections. If an analogous situation exists in the case of the cortex of the supra-renal then our prophecy will prove correct in the next few years. Meanwhile it can do no harm to increase the anti-bacterial resistance of rheumatic and psoriatic patients by adequate dosage of sensitized vaccine. The author's impression is that beneficial results will occur in at least as great a percentage of cases as from gold therapy, and with absolutely no risk of serious reactions from the treatment such as occasionally follow use of gold salts. If the experience of others corroborates his, then a goodly percentage of patients will gratefully declare their relief. A few brief case histories follow, to illustrate some good results in arthritis.

Case Reports

In most of these cases the only treatment other than vaccine was a prescription tablet which supplied daily about 20 grains of salicylate, 4 grains calcium gluconate, 9 grains sodium hyposulphite and traces of thyroid and parathyroid. This is not thought to have had much permanent effect on any cases, though it may have given some temporary relief from pain.

Sensitized vaccines differ greatly from other antigens, and are supposed to contain specific antibody as well as antigen. In some cases where there is reason to suspect sinusitis[6] as the focus of infection the mixture known as H. influenzae "Serobacterin" Vaccine Mixed (No. 4750), Sharp & Dohme, was used instead of or in addition to the usual treatment. This *usual* treatment may be briefly described as follows:

Product: Staphylo "Serobacterin" Vaccine Mixed (No. 4822) Sharp & Dohme.

Interval between Doses: Three days between smaller doses and five to seven days between larger ones. Doses should not be repeated or increased at intervals of over a month.

Give subcutaneously; not intramuscularly. A larger dose may be divided, giving half in each of two places.

Some local reaction is beneficial. If excessive, increase should be more gradual.

General reactions are rare. Slight ones are often beneficial. No serious consequences have been observed in 25 years of using this product.

Dosage: The following can be given at intervals suggested; .2 c.c.; .4 c.c.; .8 c.c.; 1.2 c.c.; 1.8 c.c.; 2.5 c.c. In resistant cases the 2.5 c.c. dose may be repeated at intervals of one to four weeks before giving 3 c.c. which is sometimes needed to produce optimal results.

D. B. Male. 50 years. Had pains in various joints and muscles for two or three years, recently becoming worse. Given tablets mentioned above and a course of sensitized vaccine. Felt some better in 3 days, stopped taking tablets in 8 days. Was much better in 20 days and still improving on the 27th day when he came for his sixth inoculation.

L. T. Male. About 55 years. Painful, crippling rheumatoid arthritis, hands distorted and finger joints swollen, besides pain in various other joints. Had gone to bed thinking he would not leave it. Had to be given codein to relieve pain during early weeks of treatment. Had several occasions when he reacted quite severely to his inoculations, with chills, temperature and sick feelings. However he gradually improved. Treatment began in late autumn and by early spring he was descending two flights of stairs and tending a coal furnace although the process hurt considerably. By mid-summer he was walking over fields at his summer home where he had not been able to go for three years, and by fall did some plowing with a small farm tractor. He has lived an active life since, though still having some deformity of his finger joints.

R. O. Male. 39 years. Having muscular pains which he called neuritis for about six weeks. Given tablets and vaccine. Felt much better in three days, and continued to improve, being to all intents and purposes cured at the end of a month.

J. H. P. Male. 35 years. Had pains in right hip and left shoulder for about one year, and had been having pimples, boils and carbuncles for about same length of time. Also had chronic irritated area on upper lip for over eight years. Various treatments for these conditions had given no relief. Was given mixed vitamins and a course of sensitized vaccine. In three weeks he felt much better, having had four inoculations. The rash on upper lip was the best for several years. At end of two months he was having no skin infections, was feeling very well, and the pain was gone.

C. H. Male. 40 years. Had pain for over one month in sacro-iliac region, extending down leg and localizing in hip and knee joints. Two weeks of diathermy treatment failed to benefit. Chief pain seemed to be in the hip joint. Had had sinusitis for over one year, and this was recently worse. Given tablets and both vaccine mixtures. Both sinusitis and painful hip gradually improved. At end of three months stated his nose "was clear in morning as it had not been for years." Still had periods of pain, but three weeks later was very enthusiastic about his condition. Returned three months later (six months after beginning treatment) to say his sinuses had been more blocked of late and had had some pains in his back for several days. These symptoms cleared up rapidly after a few inoculations. One year later the patient was very enthusiastic about his "complete cure."

Mrs. S. G. 41 years. Had arthritis in hands, wrists, and shoulders for about one year. Given tablets and because of distance her vaccine inoculations were eight to ten days apart. However after four doses in 32 days she reported improvement. This continued until after about three months she considered herself to be "much better."

Summary

(1) According to evidence recently published, both psoriasis and rheumatoid arthritis may be due to relative deficiency of steroid hormones from the adrenal cortex.

(2) In the author's experience some cases of each of these diseases are relieved or cured by sensitized vaccine, given in doses up to 30,000 million organisms, while other cases are not improved.

(3) The degree of success or failure may depend upon the reserve ability of the adrenal cortex to resume activity after being relieved of the toxic effects of focal infection.

(4) If this is true, then the treatment of the future may well consist of sensitized vaccine plus enough adrenal cortical hormone to make up for whatever deficiency exists in the natural supply.

(5) A few cases are briefly described as examples of the good results often obtained with sensitized vaccine.

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Presidential Address*

H. A. Fraser, M.D.

Sir Lionel Whitby, Doctor Anderson, Distinguished Guests, Ladies and Gentlemen:

As you are aware, it is the custom that the retiring president make a speech. I shall be brief, as I am sure Doctor Anderson has something very interesting to say to us. Another, the 96th Annual Meeting of the Nova Scotia Division of the Canadian Medical Association, is coming to a close. I trust you have all enjoyed your stay here. It is regretted that it was found impossible to accommodate you all within the confines of this beautiful resort, but it is hoped that you who had to stay elsewhere have been comfortable. We, on the South Shore, are convinced that The Almighty was very liberal with us and hope that you from other parts of the Province, on returning home, will not be too dissatisfied with your own countryside; Cape Bretoners not excepted.

There has been a great deal of work in arranging a meeting such as this and I must at this time express the appreciation of the Nova Scotia Division for the help of the local Society, and particularly their President, who has given so much of his time and effort, and has had so much to do with the success of this convention. I must also thank the ladies for their assistance and hope that, thanks to their efforts, the visiting ladies have enjoyed themselves here. Mrs. Keay deserves our sincere thanks for her part in arranging the musical programme. To Doctor Grant and his very capable assistant, Mrs. Currie, thank you for a job well done.

Let me also at this time express our appreciation to the management and staff of this resort, and others in the neighbourhood who have served us so well. The exhibitors are also to be congratulated on the calibre of their exhibits. We should be very much aware of the great contributions some of these drug houses have made in the field of therapeutics during the past years.

I am sure we have enjoyed the visiting speakers who have given so generously of their time and talents. We hope we will be privileged to see and hear them again in the not too distant future. On behalf of this Division I want to thank them for an excellent scientific programme.

The New Brunswick Division is represented here by Doctor Gordon Chalmers who is accompanied by Mrs. Chalmers. It was hoped that the Prince Edward Island Division might be represented, also Newfoundland, but this was impractical at this time. Thank you for coming and would you take back to your Division greetings from the profession in Nova Scotia. The four Maritime Divisions, working in harmony, should be able to accomplish great things in the future.

The British Medical Association is represented here, as you know, by their President, Sir Lionel Whitby. We are very glad to have Sir Lionel and his family with us, and I would ask that he take back to our colleagues in Britain our greetings and best wishes. We have all enjoyed meeting and hearing Sir Lionel and have certainly enjoyed Lady Whitby and their very charming daughter. At Saskatoon some of us were privileged to hear Doctor

*Delivery September 8, 1949, at the Annual Banquet of The Medical Society of Nova Scotia.

Hill, Secretary of the British Medical Association, and were very much impressed.

Allow me also at this time to officially welcome Doctor Jack Anderson, President of the Canadian Medical Association, and Mrs. Anderson. We will look forward to seeing them again next year in Halifax. I would also welcome Doctor Routley, Secretary of the Canadian Medical Association. Doctor Kelly has been missed very much and I must ask Doctor Routley to convey to him our regrets at his absence.

This has been a very active year for the Nova Scotia Division, though I must admit that some of your committee chairmen have done much more of your work than has your president. It has been a privilege and honour to serve in this office. I thank you all for your co-operation and trust that you will give Doctor E. F. Ross equally fine support during the coming year. As you know, the Canadian Medical Association will convene in Halifax in 1950 at which time Doctor Norman H. Gosse will be installed as president. Doctor Gosse is to be congratulated upon the honour which has been conferred upon him, and through him, upon our Division. I am sure he will carry out his very arduous duties with great distinction. Doctor Gosse will naturally expect the co-operation of every member during his year of office.

It was my privilege to attend the Annual Meeting of the Canadian Medical Association at Saskatoon, the home of our President. It was a very successful convention and all members from Nova Scotia who were there felt that the trip was well worth while. As you know, the Council of the Canadian Medical Association, which corresponds in some ways to our executive, meets for two days prior to general sessions. At these meetings the bulk of Association business is transacted. Discussion was very active and very interesting. The main topic was of course Medical Economics and the debate on the report of this Committee went far into the night. I will not venture to go into this subject. It has been well covered and you will no doubt hear more and more of it in the future.

What impressed me very much at Saskatoon were the meetings of the newly formed Section of General Practitioners. This section apparently came into being last year and this year has had its own place on the programme. There appears to be considerable concern on the part of the general practitioner as to his future. There has been, and still is, so much talk of certification in the various specialties that the great bulk of medical men, who are not certified in any special field, are beginning to feel that they are to be relegated to a rather lowly position in the medical scheme of things. In fact, many in this group feel that they are considered to be the lowest form of medical life. We, who are general practitioners, are, I am afraid, developing a very serious inferiority complex. This is not a happy or healthy state of mind. The general practitioner often sees the patient with nothing more than a few vague complaints, no definite signs and very few symptoms. It is often at this stage impossible to make a diagnosis. The patient asks for and needs treatment. Often this consists of reassurance of patient and family during period of observation of the case which may later develop into a real clinical entity, or clear up without a definite diagnosis having been made. This may not sound like very scientific medicine but it is very important medicine.

The general practitioner, or family physician, should see practically all patients first. He is the one who is in a position to advise on future handling

of the problem. He must decide whether this is a case he is capable of treating without assistance. If he feels help is necessary, he will not hesitate to call upon someone with more training and experience in this particular field. The general practitioner must assume enormous responsibility and often is called upon to make very important decisions regarding the welfare of his patient.

I feel that this present rather extreme trend toward specialization will eventually result in the raising of the standard of practice, as it applies to the non-specialist group. Out of this will emerge a general practitioner who is a general practitioner in every sense of the word. He will be a man trained well enough to do a good job in any community, no matter how large or how small. He will have a good working knowledge of medicine and all its branches. He will know his limitations and will not hesitate to call for help. Should this not come about, he must be prepared to become, sooner or later, no better than the general duty M.O. of war-time service who spent the greater part of his time conducting sick parades, inoculation parades, and in his spare time doing M2's.

I may be wrong but I would like to picture the general practitioner of the future as a man capable of, and permitted to do, a limited amount of general surgery or work in other field. He should, of course, be limited by his ability, integrity and judgment. In a Province such as ours a great deal of surgery must be done outside the larger centres, for various reasons, time factor, economics, etc. Statistics show that results as to morbidity and mortality compare favourably with larger centres.

A limited amount of surgery is good for the general practitioner and what is good for the general practitioner must, directly or indirectly, work for the good of all. The doctor is very apt to stagnate without the stimulus of surgery or some other specialty. The answer is, in my opinion, part time specialization. By this I mean the individual obtains extra training and eventual recognition, in some one field, say surgery, urology, cardiology, etc., and then carries on as before, with extra emphasis being placed on his chosen specialty. He is still a general practitioner and proud to admit it. Otherwise, in this modern world, the doctor is going to lose interest or feel he should go back to post-graduate school and become a specialist, with the result that a large group of people lose the services of a good family doctor.

Naturally training must be insisted upon and certain standards set up and strictly adhered to. Experience must be recognized. I am sure that a man who has been doing his own surgery for, say ten or fifteen years, must have acquired a considerable knowledge of surgery and should be given credit for this. In the near future it is hoped that this will be worked out to the satisfaction of profession and public.

There is perhaps too much distinction of the various fields of medicine. Some branches tend to be a little over glamorized. One man graduates and for various reasons sees fit to carry on in general practice. Another graduates and decides to take up some specialty. Both have very good reasons for their choice and both will be prepared and anxious to serve the public well. The great majority of us are very happy in our chosen fields and are honestly attempting to practise good medicine.

The general practitioner always has been, and always must continue to be, a very important member of the medical team. These are very critical times for our profession as is apparent by the interest in medical economics at

recent medical meetings, both here and elsewhere, and by the time given to discussion of this subject. We must not lose sight of the fact that we are all in the profession for the same reason, the combatting of disease and the relief of suffering, for only with this attitude are we able to continue to give the public the type of medical service they expect and deserve. Let us forget this, and any discussion we may have, or any action we may take, will be of little avail to those who will have to carry on in the future.

Free Treatment

Every Canadian who requires examination and treatment for venereal disease should have the best that medical science can provide. Free blood tests, free drugs and free clinics are being provided by health departments for this purpose. Sufferers from VD should consult a qualified doctor at once. Quacks and charlatans should be avoided.

Temper Tips

Nearly all children have occasional outbursts of temper and the wise parent deals with the problem carefully and gently. Patience and tact are required and the parent should be firm when the need arises. Above all, parents should not lose their own tempers while dealing with those of their children.

Cold Weather Comfort

Just because the mercury is shivering in the bottom of the thermometer tube is no reason why we should seal ourselves into airtight chambers these early winter nights. It is better to use an extra blanket or two and leave the window open than to risk colds by sleeping in dry, stuffy rooms.

In an Eggshell

Eggs are important in a well balanced diet. They are a source of protein which promotes growth and aids in the building and repair of muscles. The yolk contains iron which is vital for the blood, and vitamins which make healthy skin and eyes and stimulate growth and wellbeing.

Editorial Comment

THE 96th Annual Meeting of The Medical Society of Nova Scotia took place at White Point Beach on September 6th, 7th and 8th. The meeting was well attended, both by the doctors and by their wives. The facilities at the Lodge had been considerably increased since the last time the meeting was held there, and, although all could not obtain rooms on the Lodge property, the dining-room was more than adequate to the demands upon it. Many found sleeping quarters in nearby places, and most of these must have been comfortable since no complaints were heard. During the first day or two fervent prayers were offered by the local committee that the weather would remain fine. These prayers were almost but not quite effectual, for the weather held until Thursday when it rained nearly all day. This was unfortunate in that the Golf Tournament had to be called off and it would have been more unfortunate still had the afternoon been a free one for the members, as originally planned. The business sessions, however, had to be extended and the rainy afternoon was devoted to finishing the agenda. This was the third business session of the meeting and those who faithfully attended all three should have had prizes.

The scientific papers were of a very high order and it would be hard to single out any one of greater interest than another. Perhaps Sir Lionel Whitby's dissertation on "The Common Anaemias" might be mentioned, partly because a subject, usually presented as so complex, was made so simple and intelligible, and partly because the very enlightening diagram, intended to be drawn with chalk upon a blackboard, was finally draw upon a cardboard carton with crayon, in which form it served its purpose admirably and was later carried off as a souvenir by an eminent clinician.

The social side was not neglected, The local committee of ladies had been very active and two teas and a coffee party provided opportunities for doctors' wives from all over the province to know one another better. These gatherings were graced by the presence of Lady Whitby, Mrs. J. F. C. Anderson, wife of the President of the Canadian Medical Association, and Mrs. Gordon Chalmers, who had accompanied her husband, the immediate past President of The Medical Society of New Brumswick. Miss Barbara Whitby, daughter of Sir Lionel, was also with us. Before her arrival there had been some speculation as to whether or not this young lady would require a high chair in the dining-room, greatly to the amusement of the young lady in question, and her parents, when they heard the tale.

After luncheon on Wednedsay there was an address by Sir Lionel Whitby in which he discussed various aspects of the National Health Plan in Britain. This was a topic of great interest, dealt with in an unbiased and realistic way. The whole subject of Health Insurance in any form was much in the foreground. It loomed large in the Report of the Committee on Economics and provided the theme for the address by Doctor J. F. C. Anderson, President of the Canadian Medical Association, at the Annual Dinner on Thursday evening. Doctor Anderson gave a comprehensive and illumunating account of most phases of organized medical activity in the world to-day.

Another annual meeting of some significance was held on Wednesday evening by Maritime Medical Care Incorporated. This organization, initiated by the medical profession of Nova Scotia, brought in its first annual

report which indicated that good progress had been made, with bright hopes for the future. This should be a cause for some satisfaction on the part of the doctors of Nova Scotia. In such circumstances it is surprising to learn that some difficulty occured in finding a quorum for the meeting of the House of Delegates.

All in all the busy days at White Point demonstrated very clearly the vigorous energy and great potentialities of the medical profession in this prof vince. If sometimes the vigorous energy found its outlet at unexpected times- in strange places, this perhaps could be put down to combined operations of "joie de vivre" and rugged individualism, both exellent qualities, when judiciously exercised and properly controlled.

We welcome to our pages this month for the first time a contributor from a neighbouring province. It is our hope that others may be encouraged to offer material for publication in our Bulletin. The four Maritime provinces among themselves could, if they desired, co-operate to produce a really ex- cellent journal. The New England Medical Journal could be mentioned as an example of a regional publication, and although, lacking such numbers of big medical centres and teaching hospitals, the Maritimes could hardly aspire to such high standards, they could without a doubt offer a periodical of which all could be proud, satisfying to its readers, and of its kind the best.

In the meantime Nova Scotia has cause to be grateful to those outside its borders, since without their contributions our diet of scientific papers would be meagre indeed.

M. E. B. G.

SCHEDULE FOR THE JOINT MEETING OF THE MARITIME DIVISIONS—CANADIAN ANAESTHETISTS' SOCIETY OCTOBER 26 AND 27, 1949

26 October, 1949—Naval Hospital

9.00 a.m	H. R. Griffith, M.D.,F.I.C.A., Associate Professor of Anaesthesia, McGill University, Chief Anaesthetist, Homeopathic Hospital, Montreal, "The Present Status of Muscle Relaxants."
10.00 a.m.	C. R. Stephen, M.D.,F.A.C.A., Assistant Professor of Anaesthesia, McGill University, Chief Anaesthetist, Children's Memorial Hospital, Montreal, "Agents and Techniques employed in Paediatric Anaesthesia."
11.00 a.m.	R. A. Gordon, M.D., D.A.,F A.C.A., Anaesthetist, Toronto General Hospital, Secretary, Canadian Anaesthetists' Society, Talk on C. A. S. with discussion by members.
1.00 p.m.	Luncheon at Camp Hill Hospital.
2.30 p.m.	Louis Lamoureux, M.D. , Consulting Anaesthetist, D.V.A., "Recovery Room and Oxygen Therapy." With demonstration of room in Camp Hill Hospital.
3.30 p.m.	R. A. Gordon, M.D., "Some Therapeutic Applications of Regional Anaesthesia."
8.30 p.m.	Reception at Medical Services Officers' Mess, Garrison Barracks, Halifax, N. S.

27 October, 1949—Victoria General Hospital

9.00 a.m.	C. R. Stephen, M.D., "Pharmacological Reactions of Newer Anaesthetic Drugs."
10.00 a.m.	Louis Lamoureux, M.D., "Geriatric Anaesthesia."
11.00 a.m.	Demonstration of the O.R. setup in Victoria General Hospital, C. C. Stoddard, M.D.
1.00 p.m.	Luncheon at Victoria General Hospital.
2.20 p.m.	H. R. Griffith, M.D., "The Use and Abuse of Cyclopropane."
3.30 p.m.	Round Table on Obstetrical Anaesthesia by New Brunswick Group

This Schedule is subject to change.

C. G. Mackinnon, M.D., Secretary
Nova Scotia Division
Canadian Anaesthetists' Society

Registration

96th Annual Meeting The Medical Society of Nova Scotia
September 6, 7, 8, 1949

"White Point Beach Lodge," White Point Beach, N. S.

Dr. H. A. Fraser, Bridgewater
Dr. R. G. A. Wood, Lunenburg
Dr. F.M. Fraser, Halifax
Dr. C. H. Young, Dartmouth
Dr. N.A.Morrison, Musquodoboit Harbour
Dr. G. D. Donaldson, Mahone Bay
Dr. C. C. Stoddard, Halifax
Dr. J. C.Morrison,Halifax
Dr. R. A. Moreash, Berwick
Dr. J. S. Munro, North Sydney
Dr. G. G. G. Simms, Pictou
Dr. G. B. Shaw, Shelburne
Dr. W. A. Curry, Halifax
Dr. J. J. Carroll, Antigonish
Dr. W. A. Hewat, Lunenburg
Dr. S. Marcus, Bridgewater
Dr. W. W. Bennett, Bridgewater
Dr' H. B. Havey, Stewiacke
Dr. W. J. MacDonald, Truro
Dr. C. S. Marshall, Halifax
Dr. R. M. MacDonald, Halifax
Dr. M. R.Macdonald, Sydney
Dr. J. S. Robertson, Halifax
Dr. H. J. Pothier, Weymouth
Dr. Hugh Mackinnon, Halifax
Dr. D. F. Macdonald, Yarmouth
Dr. H. G. Grant, Halifax
Dr. R. O. Jones, Halifax
Dr. E. F. Ross, Halifax
Dr. H. W. Schwartz, Halifax
Dr. Eric W. Macdonald, Reserve
Dr. T. C. Routley, Toronto, Ont.
Dr. H. J. Davidson, North Sydney
Dr. G. R. Mahaney, Bridgetown
Dr. J. F. C.Anderson, Saskatoon, Sask.
Dr. W. K. House, Halifax
Dr. V. O. Mader, Halifax
Dr. G. R. Forbes, Kentville
Dr. A. R. Morton, Halifax
Dr. E. I. Glenister, Halifax
Dr. C. B. Stewart, Halifax
Dr. H. F. Sutherland, Sydney
Dr. A. L. Sutherland, Sydney
Dr. H. C. Reardon, Halifax
Dr. C. P. Miller, New Waterford
Dr. W. G. Colwell, Halifax
Dr. J. P. McGrath, Kentville
Dr. R. M. Rowter, Bridgewater
Dr. H. R. Corbett, Sydney
Dr. C. J. W. Beckwith, Halifax
Dr. C. B. Smith, Pictou
Dr. S. D. Dunn, Pictou
Dr. W. H. Eagar, Wolfville
Dr. T. A. Lebbetter, Winnipeg, Man.
Dr. F. J.Granville, Stellarton
Dr. L. A. Rosere, Dartmouth
Dr. J. E. LeBlanc, West Pubnico
Dr. R. R. Prosser, Yarmouth
Dr. S. B. Bird, Liverpool
Dr. W. C. Rice, Windsor
Dr. G. K. Smith, Hantsport
Dr. W. D. Stevenson, Halifax
Dr. P. E. Belliveau, Meteghan
Dr. F. E. Walsh, Springhill
Dr. J. C. Wickwire, Liverpool
Dr. Louis Wolff, Boston,Mass.
Dr. J. C. Acker,Halifax
Dr. J. W. Reid, Halifax
Dr. G. W. Turner, Windsor
Dr. J. A. MacCormick, Antigonish
Dr. C. B. Cameron, Petite Riviere Bridge
Sir Lionel Whitby, Cambridge, England
Dr. C. W. Holland, Halifax
Dr. D. L. C. Bingham, Kingston, Ont.
Dr. D. S. McCurdy, Truro
Dr. B. F. Miller, Halifax
Dr. J. A. Noble, Halifax
Dr. R. F. Ross, Truro
Dr. D. C. P. Cantelope, Lunenburg
Dr. G. B. Nichols, Toronto, Ont.
Dr. F. A. Dunsworth, Halifax
Dr. E. F. J. Dunlop, Bridgewater
Dr. B. E. Goodwin, Amherst
Dr. C. K. Fuller, Yarmouth
Dr. A. F. Miller, Kentville
Dr. S. H. Keshen, Halifax
Dr. C. H. Smith, Liverpool
Dr. S. W. Williamson,Yarmouth
Dr. F. E. Rice, Sandy Cove
Dr. J. H.Fleming, Halifax
Dr. M. H. Little, Halifax
Dr. I. M. MacLeod, Halifax
Dr. H. S. Smith, Caledonia

Dr. D. F. MacInnis, Shubenacadie
Dr. H. A. Creighton, Lunenburg
Dr. Margaret E. B. Gosse, Halifax
Dr. K. M. Grant, Halifax
Dr. D. M. MacRae, Halifax
Dr. A. L. Murphy, Halifax
Dr. L. R. Morse, Lawrencetown
Dr. H. B. Ross, Halifax
Dr. L. M. Morton, Yarmouth
Dr. R. M. Zwicker, Lockeport
Dr. W. L. Muir, Halifax
Dr. O. R. Stone, Bridgetown
Dr. K. A. MacKenzie, Halifax
Dr. J. F. L. Woodbury,Halifax
Dr. N. H. Gosse, Halifax
Dr. E. K. Woodroofe, Chester
Dr. D. S. Robb, Shelburne
Dr. G. E. Chalmers, Fredericton, N. B.
Dr. F. J. Hogg, Antigonish
Dr. H. D. O'Brien, Halifax
Dr. J. W. Merritt,Halifax
Dr. C. H. Reason, London, Ont.
Dr. L. A. MacLeod, Liverpool
Dr. A. L.Cunningham, New Germany
Dr. J. B.Crowe, New Germany
Dr. J. R. Corston, Halifax
Dr. R. H. Stoddard, Halifax
Dr. C. M. Kincaide, Halifax
Dr. G. B. Wiswell, Halifax
Dr. H. C. Read, Halifax
Dr. C. M. Harlow, Halifax
Dr. A. H. Barss, Rose Bay
Dr. G. A. Barss, Rose Bay
Dr. G. M. Smith, Windsor
Dr. C. L. Gosse, Halifax
Dr. W. I. Bent, Bridgewater
Dr. H. D. Lavers, Truro
Dr. G. E. Ffrench, Halifax
Dr. H. C. Still, Halifax

NOTICES

On the 26th and 27th of October, the Maritime Divisions of the Canadian Anaesthetists' Society are holding a convention in Halifax.

They have been fortunate in securing four of the outstanding speakers and authorities in Anaesthesia.

The program is arranged so that it may be of the most benefit to all, especially those who do part-time Anaesthesia along with their General Practice.

These meetings are open to all members of The Medical Society of Nova Scotia, and the Committee believes that this will be an opportunity for all to solve so many of the Anaesthetic problems that continually beset us.

C. G. Mackinnon, M. D.
Secretary
Nova Scotia Division Canadian Anaesthetists' Society

Medical Services Officers' Mess
Garrison Barracks
Halifax, N. S.

The President, Officers and Members of the Medical Services Officers' Mess cordially invite all medical men attending the Refresher Course, and their wives, to an informal reception to be held at the Mess Quarters, Garrison Barracks Gymnasium, at 8.30 p.m., October 26th.

C. G. Mackinnon, M.D.
Secretary
Medical Services Officers' Mess

Safety First

Cuts, bruises and burns occur in the best regulated households and the wise homemaker keeps a well stocked first-aid kit on hand to deal with such minor emergencies. Prompt treatment may prevent a small hurt from developing into a major infection. Your family doctor will be glad to advise you as to what first-aid supplies should be kept in the home

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A Weighty Matter

Want to reduce? If you do, you'd better consult your doctor before trying to get rid of superfluous fat. Even if loss of weight is desired there are certain foods the body must have to keep it functioning properly. Self-imposed diets often weaken the body without getting rid of much weight. Your doctor is best qualified to say what foods you can safely do without.

Faithful in a Few Things

Every child needs to be given small responsibilities at an early age. These will help him develop a sense of responsibility which will make it more easy for him to cooperate in more important duties as he grows older. Consistent training without continual nagging is essential in developing a healthy mental attitude in a growing child.

Catch Them Early

It was formerly thought that the condition of a mother's teeth must deteriorate during her pregnancy, but it is now known that there is no good reason to believe that the process of bearing a child must hasten tooth decay. But neglect of the teeth before and during pregnancy often causes much unnecessary suffering. Dental defects should be treated early in pregnancy and the teeth should be kept in good condition throughout the period.

Safety From Disease

Thousands of Canadians are alive today because they were immunized in their childhood against such diseases as smallpox, diphtheria and whooping cough. Smallpox has been practically wiped out in Canada by vaccination, and diphtheria and whooping cough are being checked by toxoid and vaccine. Immunization is safe, sure and practically painless. See that your child is protected.

Seeing is Believing

Every year Canadian workers suffer damage to their eyes because they neglected to take precautions against the harmful effects of high intensity light from welding torches, blast furnaces and arc lamps. Safety goggles that offer complete protection against such hazards to the sight should be available in every plant. Your sight is precious. Don't risk it needlessly.

Flying Danger

By far the majority of industrial accidents affecting the eyes are caused by flying particles. And industrial health experts assert that in the great majority of these cases injury could have been prevented if the proper precautions had been taken. Almost every industrial accident involving the sight of a worker is due to neglect on the part of someone. Your sight is precious. Take advantage of the protective equipment supplied on your job.

Hand in Hand

It's no secret that good humor and good digestion go hand in hand. Tense nerves and frayed tempers at the dinner table very often lead to digestive upsets and, in the case of children, to the creation of a stubborn feeding problem. Troubles that loomed large on an empty stomach often look far less forbidding after they have been shelved during a good meal.

Right Recreation

Thousands of Canadians who spend their working days behind a desk or a typewriter very often spend their leisure time reading or playing cards. Doctors point out that this means they are using the same muscles in their spare time as they are during their working hours. What they need is physical recreation . . . a brisk walk, a swim or a few holes of golf. Recreation is essential for good health. Make sure you take time out regularly for healthful relaxation.

The Elusive Vitamin

The one essential food that is not available in even a good diet is vitamin D. This is the vitamin that builds strong healthy bones and teeth. Without it a child's limbs or ribs may grow soft and curved. Every child needs vitamin D every day throughout the growing years. It is available in liquid, capsule or concentrate form for only a few cents a day. The sunshine vitamin is necessary for proper growth and development. Don't deny your child this necessary food.