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THE EFFECT OF SUNLIGHT UPON WHITE MEN.

(With Special Reference to Conditions in the West.)

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I must apologize to you, gentlemen, for inflicting my views upon you. I shall not be able to discuss the matter in question with that technical fitness to which you are accustomed, and I have no doubt my paper will be followed by severe criticism on that point. I do not hope to convince you all of the truth of my thesis—especially those of you who happen to be over forty. I am myself, however, somewhat convinced of the truth of my theory, and its importance is my justification for making my views thus public.

Perhaps I may begin with a statement of the movement of my own mind in the development of the thesis of this paper. I had been seeking an explanation of certain conditions prevalent in the west, as for instance, the prevalence of neurasthenic and uric acid conditions and the difficulty, especially on the part of women, for persons coming from the East to become acclimatized. I had spent a number of years in the semi-tropical Islands of Bermuda, and I was again and again impressed with the similarity of much in the west with what I had experienced in that country. And yet the climates were quite dissimilar. One day I was reading an article upon the effects of sunlight upon protoplasmic material, and it flashed across my mind that in this direction lay the solution of the problem. Though the west differs from the tropics in climate, yet they were alike in one important particular—both were regions of almost constant sunshine. "Sunny Alberta!" How we have loved the name, and gloried in our sunny skies! And well we might, for are not they the creators of our wealth? But what if this very sunshine, which is the hope and promise of our harvests, is at the same time the source of many of our bodily ills? If white men were not able to live in the sunny lands of the South, might they not be forced to abandon the equally sunny lands of the North? Acclimatization had proved to be

Read before Edmonton Medibal Society.

impossible in other sunny lands, could we hope that our land would prove an exception to this historic rule? Such were the questions that started my investigation of this matter.

In discussing this question we find the literature upon it very scant. Von Schmacel, a German, has made an interesting study of the pigmentation of the skin of races which have their habitat in sunny lands. There is also an ever increasing current literature upon the effects of light waves upon animal tissues, and especially of late as to the therapeutic effects of certain radio-active substances. Two Frenchmen, Bohn and Marre, have written upon the effects of sunlight on white men, and their theories have made a profound impression in Europe. Perhaps the most important contribution to the literature of the subject is a book I found in the course of my research called "The Effects of Tropical Light upon White Men" by Major C. E. Woodruff, U.S.A. It is to this investigation that I am particularly indebted for the technical part of this paper. Isaac Taylor's "Origin of the Organs" is also of great value.

I will discuss the following points:

1. The effect of light waves upon living organisms.
2. The pigmentation of the skin of races whose native habitat is under sunny skies as a defence against the destructive effects of sunlight.
3. The pathology of sunny lands colonized by white men.
4. Some practical suggestions as to therapeutics and the habits of white men living in the west.

1. A brief resume of our present knowledge of light rays may be helpful. You are familiar with the new conceptions of matter which have arisen as an outcome of the study of certain radio-active substances. Instead of the old conception of matter as composed of indivisible metaphysical units called atoms, the idea now holds that atoms are themselves composed of smaller particles called corpuscles or electrons, which dash to and fro within the atom and revolve with inconceivable velocity. You know how under the conditions of Crooke's tube an electric spark will produce a dissociation of these corpuscles which then rush forth in a stream and produce ether stresses which are known as Cathode rays. Certain substances such as radium seem to have the power of giving forth a constant stream of corpuscles, producing stresses which are known as Becquerel rays. We use the word "stress" because this seems to be what is produced when a stream of corpuscles is started or arrested—a stress is given to the ether which is carried outward with the velocity of light. These stresses follow one another at intervals, and the length of these intervals, or waves to use the old term, constitute or determine the character of

the wave. It must not be forgotten, however, that these waves are not movements of ether, which is an immovable substance, but simply stresses of the same as when a hammer falls upon an anvil imbedded in a base of concrete, the stress is carried from top to base though the anvil does not move.

Now the slowest and longest variety of waves we have discovered are called Hertzian. These, as you know, are made use of in wireless telegraphy. Waves shorter still affect the body as heat; shorter still, they have the power of affecting the chemistry of the retina of the eye and producing what is known to consciousness as light, or color. Beyond the spectrum there are shorter waves than the violet, which though they do not effect the retina consciously, produce affects upon certain sensitive substances and are used in photography. These rays are also of incalculable value in elaborating the energy of plant life.

A few years ago certain rays were discovered even shorter than the actinic rays of the sunlight, so short indeed, they proved to be, that they can penetrate certain substances without disturbing their corpuscular arrangement. These were called after their discoverer, Roentgen, but by Herr Roentgen himself "X" rays. Later, M. Curie and his clever wife made discoveries in the powers of radium, and found that this substance emits particles which flow in streams, which impart stresses of great velocity and rapidity. There is no need that I should do more than merely outline these familiar facts, but let us not forget that in all these different varieties of waves we do not have anything new. All are really of the same kind, and are produced in the same way, namely, by changes in the motions of the corpuscles which compose all kinds of matter.

Coming now to consider the effects of light rays upon living organisms, you are all familiar with the therapeutic value of certain kinds of rays. We know how effective they are in reducing growths of a malignant nature upon the surface of the body. They also seem to be able to penetrate some distance beneath the surface of the body, but there they rapidly lose their efficiency. We are not, however, so familiar with the destructive effects of the shorter rays of sunlight. We all know that they have an exceedingly stimulating effect upon living organisms, and are the source of all life upon our planet. We also are familiar, in a general way, with the fact that exposure to the direct rays of the sun, especially in hot climates, is prejudicial to health, and often fatally so. We know that white men have not been able to make the tropics their permanent home. More than this, we are quite familiar with the action of sunlight upon bacteria, which succumb more rapidly

to this than to almost any known antiseptic—so that perhaps the most effective disinfecting agency we possess is the exposure of a room or garments which have become infected to the rays of the sun for a short time. No bacteria are able to stand long such a bombardment. This is due to the extreme instability of the protoplasm of which bacteria are largely composed. Protoplasm is highly nitrogenous, and we have no substance so easily set off as nitrogen which is the basis of our most powerful explosives. In the temperature of the human body protoplasm seems to function most readily, but when the temperature is raised a few degrees trouble begins, and unless the rise of temperature is arrested and reduced the organism perishes.

You are acquainted with the distructive effect of radium. M. Curie has asserted that a pound of radium in a room would probably kill every person present by the blasting power of its bombardment. A small particle of this substance carried in a phial in the vest pocket produced a sore in the side which for weeks resisted every effort to heal.

Now the short, or actinic rays of the sun are very similar to those of radium and are also destructive, as seen in sunburn (which is really pathological), glacier burn and sun-stroke. In the latter it is probable that heat combines with light in producing brain paralysis, but in glacier burn heat is not a concomitant.

When we study the effects of sunlight upon living animal organisms we find them twofold. (1) The first effect is metabolism—increasing the oxygen-carrying capacity of the red blood corpuscles. (2) But when this process is long continued we have actual destruction of protoplasm and the derangement of its molecules. The latter is the immediate effect when the protoplasm is not protected by some aqueous medium.

The metabolic effect of sunlight is best studied in plant life. We must remember, however, that plants are the true children of the sun and we cannot determine everything regarding the effects of sunlight upon animal life by studying its effects upon plants; but we can learn something. In the marvellous chlorophyl of the plant we have the power of storing up the energy of the sun's rays, energy that animal life makes use of. In all plant life we find certain adaptive arrangements which have for their end the protection of the plant from too great stimulation from the sunlight. Every gardener knows how necessary it is for some plants to rest a while in the darkness in order to attain sturdy and vigorous life. The plant also seems to have the power of "stepping down" rays that would prove hurtful into forms more congenial, in some such manner as the electric transformer steps down the dangerous electricity

on the mains so as to protect our dwellings. It must also be remembered that while the protoplasm of plants and that of animals is the same, the function of plants is really to store up energy that the animal avails itself of. The plant must have sunlight in large quantities, it is necessary to its growth. But to man and animal life it is not so directly necessary. Animal life thrives with very little sunlight, or none at all. This is of course pointblank against popular notions as to the blessing of sunshine; but it is very doubtful whether sunlight is always directly beneficial to animal growth and development, and too much of it is certainly harmful, especially where nature has not provided a protection against it, as in the black and yellow races and some birds and animals. As this is rank heterodoxy let us think about it for a little while.

It is interesting, in the first place, to remember that animal life is by nature aquatic. Human life begins in an aquatic medium and at a certain period in pre-natal life it is equipped with gills. The rhythms of life, which have been studied carefully of late, seem to point back to a time when the effects of the tides were felt by our remote protozoic ancestors as vital stimuli. The majority of the cells that compose the human body are aquatic in habit and marine at that, requiring a saline solution in order to vigorous existence. Now, water absorbs the ultra-violet rays of sunlight and protects the cells which could not otherwise exist. The liquid in which the brain literally swims, is not only nutritive—it is also protective, like the hair upon the scalp from the destructive actinic rays.

It is interesting to consider the fact that most animals are like the cat, nocturnal in habits, passing the day in dens and the hollows of logs and trees, and holes in the ground, and coming out at night. This is also true of the natives of sunny climes. The negro is by nature a nocturnal animal, preferring to spend the day in sleep, and coming forth at night to sing and dance by the light of the moon. Animals that come forth by day are protected by fur and feathers from the sunlight, the parts most exposed being darker than the rest; while naked animals like the elephant and rhinocerous, have a black skin. Black ants live in the sunshine while white ants come forth by night. Ants place their eggs in the sunlight a short time every day, but when the light becomes oppressive they remove them to the nurseries on the south side of the hill where they get warmth without direct sun exposure. All these instances and, they might be multiplied, prove that nature protects animal life from too great exposure to the sunlight; that the animal spends his time preferably in the dark, indicating that while

sunlight in small quantities is probably beneficial, in larger measure it becomes hurtful and even positively fatal.

2. When we pass from the animal to human life we meet with a new factor, reason, which makes it difficult to prophesy much from the lower standpoint. Reason modifies instinct, and often flatly contradicts it. Men will pursue lines of conduct contrary to both reason and instinct when it lies in the pathway of desire. Nevertheless, we find that both nature and instinct combine, the one to protect and the other to seclude man from the sunlight. As we study the distribution of the races of men over the face of the earth one fact stands out prominently, namely, that nature has so provided that the skin of men is dark or light in proportion to the cloudiness of the land which is their native habitat. The degree of heat is immaterial, for we find that the natives of the arctic zone are equally dark with those of the semi-tropics, the former for protection from the reflex sunglare, the latter from the direct rays. Only in cloudy lands do we find white men at home This truth may be formulated into a law of whiteness, namely: "The whiteness of a people is in proportion to the cloudiness of the skies under which the people live." Cloudy and foggy lands have been ever inhabited by big blonds, sunny lands by little dark men. Compare the big yellow Swede with the little dark Italian. Think of the immense amount of intelligence and virile force which has come forth out of the fogs of Ireland and the north of Scotland to aid Britain in her conquests of war and of peace. The reason why men in sunny lands are dark is, of course, because the dark colors cut off the actinic rays of sunlight which are so dangerous to animal protoplasm.

We shall have to revise in the light of these facts, our ideas as to the unmitigated benefit of sunlight, at least for white people. In the earliest days of the race, when men followed instinct more than they do now, and were more robust, they avoided the sunlight as much as possible; they spent the day in the shade. And this is the case to-day with men of little culture. In spite of what the doctors say they persist in darkening their homes. A great deal of eye trouble which is becoming more and more prevalent among children is due to too great exposure to sunlight. The instinct of the mother is to put her baby to sleep in a darkened room, until some doctor gives that the door-step or the veranda is the place. Then you have a child stimulated to an activity and development far too rapid, and later on arrested development and anæmia. The custom too of planning hospitals so that every room is at all times flooded with sunlight is bad therapeutics, and many a patient, especially during convalescence, would make a more rapid recovery if

shielded from the iritation of the sun's rays. Were it not for the auto-hypnotic suggestion the recovery would be even more retarded. The patient is made to believe that sun-baths are a great thing, and "belief" helps; even though Christian Science is not legitimate practice. The truth is that while it is important that sunlight should enter every sick room at some time in the day, provision should be made by means of venetian and other blinds for shutting it off most of the time. Fresh air is, of course, imperative, and should be provided in hospitals by forced ventilation.

I do not think it will be necessary for me to spend time in demonstrating the truth of the law of whiteness given above. One needs only think of the distribution of the races of men over the earth. There is another fact equally demonstrable which is more to our purpose just now, namely, that white men have never been able to live permanently in sunny lands. This is a large question involving the migrations of the races in all human history. We cannot go into the question though here we find the strongest appui for our thesis. Studies in anthropology and archology seem to indicate that Persia, Egypt, Greece and Rome were all colonized by a fair faced Aryan race which succumbed to the climatic influences leaving nothing behind it but the precious heritage of the Aryan tongue and Aryan thought. The argument would seem to be conclusive. But think of India as a modern example. This is a sunny clime which has been ruled by white men for some generations. But no white man dares to live there for any length of time, nor does he attempt to bring up his children there. If he does so they quickly wilt. There is no third generation of whites in India.

Of more importance to ourselves is the presence of white men in North America, especially in those parts of the continent which are most exposed to sunlight. The natives of this continent were dark and red men. The people who now occupy it have mostly come from Europe, the more aggressive from northern Europe which is cloudy and the home of blonds Under the sunnier skies of America there has been developed an aggressive force which has been without parallel in the history of the world—so much for the stimulus of sunshine. There has also at the same time been developed a new disease, or rather a new phase of an old one, namely "Americanitis." So much for too great stimulus of sunshine. It is not hard work that breaks down the aggressive American and Canadian. Hard work is wholesome, most people do not have enough of it. It is nerve exhaustion, and this is due mainly to overstimulation from sunlight. Of course there are other causes operating,

the lack of simple living, etc., but I am persuaded that the chief cause is as I have indicated.

The mortality of blond men has been much greater than that of dark in the United States, and the continent is being peopled by a race of dark men. These survive, the others go down, or become unproductive and leave no descendants. The first feeling on coming from the East to this western land is that of increased well-being, and a greater inclination to activity. New comers exult in the climate and write glowing letters back east about it. But after a few years residence they begin to feel the effects of the constant stimulation, and often they break down and go back east. It is known that suicides and insanity are more frequent during the bright than the dark months of the year, and school teachers tell me that while on sunny days the children are brighter and quicker, they are much harder to manage than on cloudy days—just what we should expect.

The remarkable success of Sanatariums on the Atlantic coast may be explained by the comparative absence of sunlight there, and the consequent restfulness; and perhaps the most important part of Weir Mitchell's rest cure is the removal of the patient to a shaded room. Careful studies of western America in the sunny States reveal a prevalence of neurasthenic and apeptic conditions which are only relievable by a residence near the coast where the clouds "like a divine umbrella" give the sufferer release. This also explains the instability of the peoples of the western States, where all sorts of political and religious vagaries have their origin. It is a little too early for such epidemics in our Canadian west, but doubtless we shall have them before long.

The Britisher who has no nerves to speak of, takes a plunge in ice-cold water every morning, and goes forth to conquer the world with a cod-fish expression on his face which makes him seem an easy prey but he will stand more, and in the end get ahead of your nervous, high strung Yankee who produces results while the Britisher is thinking over what to do next.

Some years ago, Dr. Clouston, one of the greatest alienists Europe has produced, visited the United States and said some things worth remembering. "You Americans," he said, "wear too much expression in your faces. You are living like an army with all your reserves engaged in action. The duller countenances of the British population betoken a better scheme of life. They suggest stores of reserved nervous force to fall back upon, if any occasion should arise that requires it. This inexcitability, this presence at all times of power not used, I regard," said Dr. Clouston, "as the great safeguard of our British people. The other thing in you gives me a sense of insecurity and you

ought somehow to tone yourselves down. You really do carry too much expression, you take too intensely the trivial moments of life." These are the words of the great alienist, but Dr. Clouston did not tell the cause of this intensity—this "bottled lightning"—as someone has called it, kind of personality which characterizes the American people. It is climatic, and is due chiefly to the fact that a race of men is endeavoring to live and develop under skies to which its complexion is not suited. Professor James says that Americans must cultivate the habit of relaxation or perish; and he is right. Instead of strength Americans have what Clouston calls a sort of "irritable weakness" which produces results rapidly, as is the case in all over-stimulation, but at an awful cost. The problem is a great one, and demands earnest study. The death rate in the United States increases with the amount of sunshine. It has been remarked that consumptives in the later stages who come to the west go off more rapidly than those who stay east, and physicians in Los Angelos, California, have warned eastern doctors not to send such patients to that country. There is also a growing conviction that some nervous weakness is one of the disposing causes of tuberculosis—and this sunshine can only intensify. Of course here the complexion of the patient has its part in the problem and it is as important, as some one puts it, "to know what sort of a patient the disease has got as what sort of disease the patient has got." But I shall not pursue this matter further. I have placed it before you for your consideration. I believe it is worthy of the same, and I hope some one of you will immortalize himself by pursuing the question more fully than is possible for a layman like myself. I shall close with some practical considerations.

III. Let us keep carefully in mind the twofold effect of sunlight upon the human organism: First, increased metabolism and consequent larger excretion of carbonic-oxide: Next, nervous exhaustion due to over stimulus. Remember too that blond people more quickly succumb than dark. What then are the practical conclusions as regards the conditions of life in Western Canada?

Here we are living under one of the sunniest skies in the world, outside entirely arid regions. It is true the effects of the sun's rays are moderated by the latitude of our country, but this is true only of the longer rays of the sun. Of the shorter actinic rays so destructive of protoplasm, can it be that what has proved true of all other sunny countries, namely that white men have not been able to permanently colonize the same in the historic past will find an exception here? I cannot see how this can be,

loath as I am to accept this conclusion. Indeed you physicians are finding the truth of this conclusion in your daily practice. You are meeting with neurasthenic and other conditions due almost entirely to loss of nerve tone. Uric acid conditions seem to be especially prevalent and exceedingly stubborn to treatment. The etiology here is simply inability on the part of the nervous system to control the chemistry of the body. And this is complicated by the instinct to seek larger nutrition with the consequent overloading of the digestive canal. Anything which tends to lower nerve tone is a menace to the entire system and will manifest itself in the weakest part of the organism Many complaints whose origin is obscure may be laid in this country to lack of nervous vigour due to excessive sunlight. Personally I doubt very much whether white men will be able to permanently colonize the west. In two or three generations they will sell out and go east under cloudier skies. The only extenuating fact is the marvellous productivity of this country which will make it possible for men to move away after having made their pile. Meantime the practical question is what can be done to mitigate the effects of sunlight and make residence in the west more endurable. This question is of even more importance when we consider the interests of the rising generations whose energies are so occupied in growth and development that they are less able than adults to withstand extra pressure and over stimulation.

We must change our habits of life and learn to live here in much the same way in which they live in the tropics. We must not only protect ourselves as much as possible from the sunlight, but we must also cultivate habits of relaxation and rest. Early to bed and early to rise must certainly be the rule here, with a siesta at mid-day. You haven't time for that? Very well then, nature will see that you take time a little later when you can spare it less. Instinct has already done something to suggest accommodation to the conditions here. The typical home of the west, the bungalow cottage, all on one flat with a veranda—is the right sort of home to live in. Those who have dwelt in the tropics are struck with the similarity of the houses here with those in the south. Windows should be protected by green blinds which can be closed during the sunniest part of the day. In the south every one retires within the darkness of his home in the middle of the day, and this may be necessary here, and ought certainly to be the rule for young children during the summer. The formation of City Improvement societies in our cities and towns would be a good thing with a chief function of the planting of trees—especially about the homes of the people. Trees absorb large quantities of

sunlight and protect the dwellers beneath them. Our remote ancestors had a penchant for trees and spent much time swinging from branch to branch in umbrageous shades. It must have been good for them—for look at us.

In the interests of children certain changes in the length of the school day and the school year are imperatively indicated. The school day ought not to be longer than from 9.30 to 3 for older scholars, and 9.30 to 1 for younger; with recess at noon for the former and 11 for the latter. The School year should close not later than June 1st or even earlier would be better, at least in the lower grades, and all examinations for grade should be held in April as is the case with University examinations. It is a curious state of affairs that while we hold examinations for adult students in April when the forces of life are strong, we hold those for boys and girls in the month of July when they are exhausted. Teachers complain of this and assert that more students would pass, were the exams held earlier in the year. The month of June spent in school is in this country at least a positive waste of time; with young children it is much more —a source of nerve irritation and arrested development. Just as it is true that men live not by what they eat but by what they digest, so they are educated not by what they study, but by what they assimilate. Fatigue is the most deadly thing that children can suffer, as certain recent studies have shown, and they should be carefully guarded from the same. Attention, too, that supreme achievement of civilized man, is impossible when the nervous forces are at a minimum. I hope the medical men of this city will take up this matter in the interests and see if they cannot beat some sense into the brains of our educators. Personally I shall not hesitate to urge parents to take their children away from school at the beginning of the month of May—at least the younger children.

The windows of school rooms should be so arranged that the lower part can be darkened and the light come in from above. Walls should never be white, which reflects all the rays of the sun, but green, yellow or terra-cotta. Yellow, which is so pleasing to the children is perhaps the best color.

People must imitate those who live in the South in dressing in colors which intercept the dangerous rays of the sunlight. Where outer garments of light color are worn the under garment should be black or yellow. Animals and birds which have white fur or feathers have a black skin. There is no being on earth quite so happy and contented as a negro dressed in white. The habit of some women of going out in the daytime with neck and shoulders covered by a mere network is dangerous, and also the increasing habit of going about bareheaded in summer. In

the evening this is a good custom, but in the daytime it is positively foolish. The umbrella and parasol habit so much in vogue in the tropics would be copied here with advantage. These should be of black, yellow or green material, but never of white.

In social life ladies should confine afternoon calls to the later hours—between 4 and 7 and during the summer months it would be wiser to vacate these functions. The color of houses both outside and inside ought to receive attention in accordance with the color schemes indicated above. White should be avoided both without and within. During the day the sunlight should be let into the bedrooms in plentiful supply, but the blinds should be carefully drawn on retiring to protect the sleepers from the early sunshine which prevails in this country during the summer months.

The warm bath should take the place of the cold plunge so much affected by Britishers, as the latter is too stimulating. The nerves receive stimulation enough in this country without any such heroic treatment. It may be that I am opposing some pet theory of yours here—but I think the facts will bear me out. The warm bath taken in the middle of the day before the siesta or at night on retiring will be found most restful to the tired nervous system, and will relieve many insomnias.

It may be that light stimulants will be indicated where the digestive functious are arrested, but recent studies in the effects of alcohol make one hesitate to dogmatize here. In the south curry is used with apparently beneficial effects as an aid to digestion. This is an abnormal condition, but it must be remembered that the thesis of this paper is the fact that life in the west is for white men abnormal.

In cases of neurasthenia and other conditions due to loss of nervous control it is doubtful whether a cure can be effected here. Persons frequently come here from the east to find relief from these ailments, and it is interesting to trace the course with them. As I have observed it as follows. First a marked improvement due to increased metabolism. Then after a while a return of the old condition in an exceedingly stubborn form. In all such cases a prolonged stay under cloudy skies is the treatment indicated. The region of Puget Sound is the healthiest in the United States, and is an admirable region for recuperation for persons living in the west. Fortunatcly this is near at hand, and so are Vancouver and Victoria.

The question of nutrition for western people I have not gone into sufficiently to speak with any authority. But good nutrition is important to make up for exhaustion, and especially the nitrogenous foods. Cheese, eggs, milk, nuts, meat, and

cereals should be taken, and perhaps more often in smaller quantities than is the usual custom. The much maligned pork ought to receive the treatment it deserves and placed high up on the list of wholesome foods. Rice as a vegetable might take the place of the more bulky potato during the summer as a starch food. All tropical people use it plentifully but never with milk and sugar.

Lastly, it is doubtful whether persons of very light complexion should attempt to live in the west. To be a true inhabitant of Alberta one needs to have the complexion of a Cree or a Stoney.

It is true that sunshine has a darkening effect upon the skin, but the white race has never yet been able to get dark enough to stand a tropical sunshine. It has been like the Frenchman down east who was trying to see if he couldn't keep his horse without hay and oats. He had just succeeded he said, when "Sie horse, she die". Male adults are able to stand the sunshine for some time. Women go down under it faster. The children suffer most, both directly and indirectly; for children begotten by parents whose nervous force has declined cannot be a vigorous race. Nature balances accounts by producing sterility in the third generation. Before that you have a large increase in abortions and premature births.

I shall be glad to have this paper criticised. I shall be more glad to have your assistance in either substantiating or overthrowing the thesis. I hold no brief for this theory and should be delighted, for my own sake and that of the people of the west if it could be proved unsound. History is my great standby in this matter, and history speaks with no uncertain sound when she tells of attempts made on the part of white men to colonize sunny lands. We shall do well to heed her words. No observations of a few months or years can negative what she says.

Meantime the medical profession can do much to make life in the west more endurable. The public will take from you suggestions as to new habits of life rather than from a layman like myself. If my thesis is sound, we should face the facts and do what we can to meet the conditions involved. Certainly it is our duty to see that the educational regulations are changed so that the rising generation shall have a better chance to develope.

No fear that it will be bad business to make these facts public should deter us. I commend to you these words of John Morley:

"Things are what they are; they will be what they will be. Then why should we deceive ourselves?"

(Continued from Page Fifteen of January Issue)

MENTAL DEGRADATION THE RESULT OF ALCOHOL.

By ROBERT JONES, M. D., F.R.C.S. (Eng.)

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Sensory effects.—What are the sensory effects of alcohol? Alcohol blurs and dulls the sensibility, giving rise to loss of feeling in the extremities and when common sensation is affected nervous cramps often occur, in consequence of these, mistaken ideas are aroused and complaints made as to electricity, machines, or the gnawing effects of animals. It is these sensory disturbances which often originate delusions of persecution and violent retaliation on the part of both sexes. Women are more prone to these disturbances and to anomalies of sensation than men, hence the grocers' license is probably responsible for more women being in asylums than ever the publicans' license, as drinking in the one case is done openly and to some extent is controlled by public opinion, whilst in the other it is accompanied by deception, stealth and lying.

Motor effects.—Alcohol has a peculiar affinity for that part of the brain which is connected with the "muscular sense"—a sense which interprets the equilibrium of the upright position and that of the limbs. Even before ordinary sensation is affected the "muscular sense" is often attacked. At present not very much is known of the muscular element of thought, but the sense of distance, the feeling of solidity, of perspective, and of weight; also the delicate so-called "touch" required for fine mechanical work is essentially based upon the muscular sense, and alcohol is destructive to this, even in continued small doses. Mechanics, such as engineers, watch makers, instrument makers, even clerks and those who are dependent for their living upon a highly cultured and educated muscular sense are brought into asylums, and it is among the skilled craftsman, the best workers, that alcohol plays its worst havoc; and consequent distress is not limited to themselves for it involves those dependent upon them, who are frequently pauperized through their incapacity. It is inevitable that those who drink should suffer from tremors, and these occur in the muscles most used being evident even to the layman in the trembling lips, hands, and voice of those who indulge in alcohol.

General susceptibility to alcohol.—It is a true maximum that "what is one man's meat is another man's poison." Drink in small doses is literally death to some persons, whereas others

tolerate it in larger quantities. Those who have suffered from head injuries are especially prone to its ravages, and the brain worker, rather than the manual laborer, suffers the most, in fact, the stress upon a particular organ often determines the seat of least resistance to alcohol. As already stated, alcohol has a special affinity for the nervous system, although other organs suffer as well, for it frequently causes death through disease of the great glands of the system, e.g., the liver and kidneys. The heart also and the great blood-vessels may be affected, death resulting from apoplexy, cerebral softening, or general arterio-sclerosis. The determination of the organ attacked depends much upon the family tendency in the individual, and it is well known that there is for each person a *locus resistentiae minoris* which tests the strength of the chain in its weakest link. This is well exemplified in our own experience when we find one person becoming garrulous and silly under the influence of alcohol, another irritable, aggressive and noisy, whereas in a third the muscular system becomes mostly affected, as is evidenced by the utter inability to stand or move, although the same amount of the same form of alcohol has been partaken by each.

Further, through the unbridling of the inhibition, alcohol impels to other forms of indulgence, and many are the cases of rapidly progressive and fatal insanity, termed general paralysis, which are admitted into asylums, primarily the result of a deficient self-restraint, and of a sudden and passionate yielding to temptation. Children and young people are more susceptible than the old, upon whom alcohol in small doses has the least deleterious and the greatest therapeutic effects.

This susceptibility of persons to the effects of alcohol is the "personal equation" of the individual as it has been called, and it is a dominant factor in the incidence to or immunity from other diseases also.

One word may be said here about the vexed question of heredity, and whatever view is accepted as to the transmissibility of acquired characters all must be agreed that the delicate material of growth is unfavorably affected by intemperance. The children of drunken parents are themselves feeble apart from the neglect of offspring involved.

The tendency to convulsive forms of mental diseases such as epilepsy, chorea and hysteria when the father is a drunkard and to the more degenerate form characterized by idiocy, imbecility and dementia and the criminal type may be looked upon as established facts.

General results of alcohol.—It is difficult to state whether any special form of alcohol produces any particular effect,

but there is no doubt in my mind that the deleterious effects may be combined from the category of mixed poisons represented in the different alcohols. Beer drinkers get dull and demented, whereas spirit drinkers are more often cunning and suspicious. Such poisons as absinthe must exercise a hurtful influence quite apart from the effects of the alcohol served with it. The cheap spirits, whether called "whiskey" or "Australian brandy" variously manufactured from maize' molasses, rice or potatoes, or even from the destructive distillation of wood, produce very injurious effects. We know that the quantities of beer drunk by the poorer class cause considerable malnutrition, from the fermentation inducing gastric catarrh. All are acquainted with the wasting; dropsy, and lowered vitality brought about by spirit drinking, which hardens and destroys the fine mucus membrane of the alimentary tract and the various serviceable glands whose secretions pour through it. In this connection may also be pointed out the tendency there is in drinkers to die from consumption. Many drinkers take the infection in the different bar parlors where expectoration and other dirty habits are seen. We know the evil effects of alcohol in the subjects of surgical operations, also by the deaths that take place from slight wounds in confirmed beer drinkers. The statistics of Insurance Societies all tell the same story of the "bad lives" of drinkers as against the "good lives" of abstainers, which is an irrefutable and overwhelming testimony against alcohol. Of all the evil results of alcoholic intemperance the most sad and far reaching is insanity, and the statistics of the Asylums of London tell a gruesome story in this connection. Since the opening of Claybury Asylum in 1893, now nearly 13 years ago, the statistics of the first 12 years show that out of the 10,688 persons (4,739 males, 5,949 females), who have been received into this Asylum, no less than 1,057 males and 742 females have been admitted through drink, as an exciting or predisposing cause of their insanity, a proportion of 17 per cent. of the total or 22 per cent. of the men and 12 per cent. of the women. During this period a total of 43,694 persons have been admitted into all the Asylums of London, of whom 7,182 persons, viz., 16 per cent. were definitely ascertained to be through drink.

When we consider the misery and degradation of the individuals themselves and the privation and poverty of those dependent upon them, also the economic aspect of losing the work and usefulness of 7,182 persons, mostly men and women in the prime of life, and to feel that there has been the further burden of their maintenance through the rates, upon the more sober and industrious section of the community who are thus

compelled to keep these persons—most of them for the rest of their natural lives, this aspect alone of the drink question may well cause us to pause and wonder what we can do to promote temperance.

Remedies.—This paper would not be complete without some few remedial hints, although such was not originally intended. The picture is so sad that an effort should be made to reconstruct our social scheme in this particular. We, as medical men have now abandoned the maxim of "the survival of the fittest" for "fitting the many to survive." There is only a certain limited amount of force and therefore of work in the world, but we can raise the potentiality of this by improving the individual as a working unit. If we can produce a favorable environment we can improve the unit, and may thus counteract some of the inherited frailties, vices of organization as they are termed, and in this way we can remove some fertile causes of drink.

In all the affairs of life, conduct counts for much, and "example is better than precept." The impressions given to the young by example and by social usage, instruction as to evil effects of alcohol, the value of clean lives, the care that should be exercised by everyone to keep his life and person clean—the importance of fresh air and light, of good food and how to select and cook it to the best advantage—allthese are inestimable auxiliaries in the cause of temperance. Increased facilities for healthy outdoor exercises and recreation, such as bicycling, and the controlling factor of public opinion as to the value of temperance in all things also assist the cause of temperance. Man is a gregarious animal and the conscious self is greatly influenced by the opinion of others. I have therefore great faith in "communal vigilance" and I believe in the enrolling of postulants in the cause of temperance, which encourages the feeling of brotherhood and that we are not alone in the cause. This community of purpose and effect helps to raise our cause to a creed and encourage the enlisting of further recruits. It is for this reason that I believe in Temperance Clubs, Bands of Hope and all such associations where children are taught to look upon drunkenness as "bad form" and a vice, and to despise it as well as the drunkard; where a healthy public opinion is formed among themselves and where each member is pledged to self-respect and sobriety. I also believe in lectures such as are held by our Diocesan authorities and by the various agencies united in the temperance cause. Further, I believe in the united action of all these agencies, so that pressure may be brought to bear upon the legislature to raise the health and vigour of the people, and to lessen disease and mortality

through the action of alcohol. The Legislature, usually blind and deaf when no political interests are at stake, has by the Inebriates' Act of 1898, extended in 1903, emphatically comes to our aid by enabling the Police Court authorities to send to certified reformaties, and by the Secretary of State's order to State reformatories, those characters who disgrace our streets and contaminate our youth. Until this period, these persons, through a long life of debauch, immorality, violence and crime, gave constant trouble to the police in the streets and to prison authorities when detained, during their innumerable penal sentences; and for them prison discipline in State reformatories for long periods is the only adequate treatment. Whether cure ever occurs in these reformatories is another matter, but the exhibition of this form of vice in our streets is thus done away with, and we are free to direct our attention to a more hopeful field, viz., the rising generation, in whose interests and that of morality, we earnestly appeal for a more vigorous control of the drink traffic and for the power to diminish the facilities for obtaining it which glare with specious temptation at nearly every street corner.

DISPLACEMENT OF STOMACH AS A CAUSE OF INDIGESTION.

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ANATOMICAL CONSIDERATIONS.—The stomach is situated in the upper part of the abdominal cavity and to the left side. Above it are the diaphragm and the liver; below it is a transverse colon. In the healthy adult its extreme length is about twelve inches and its width about four and a half inches. The cardiac orifice is situated one inch below the diaphragm on a level with the ninth dorsal spine, and corresponds in front to the seventh left costal cartilage one inch distant from the sternum. The pylorus lies at a lower level, and is nearer the surface. Posteriorly it is on a level with the twelfth dorsal spine, while in front its position may be designated by the point of intersection of a line connecting the bony ends of the seventh ribs with one drawn parallel to and midway between the medium line of the sternum and the right border of that bone. The fundus reaches as high as the sixth chondro-sternal articulation on the left side, being a little above and behind the apex of the heart. The lesser curvature runs obliquely downwards and to the right under cover of the liver, and corresponds posteriorly with the upper border of the first lumbar vertebra. The lower

border is extremely variable in position, but when the stomach is empty it may be denoted roughly by a line drawn across the abdomen between the bony extremities of the eighth ribs. The cardiac orifice is the most fixed part of the organ, being maintained in position by the œsophagus and the gastro-phrenic ligament. In addition to these attachments, the stomach is suspended from the liver by the gastro-hepatic omentum, and is securely fixed on the left side by the folds of peritoneum which connect it with the spleen. Below, it rests upon a cushion of intestines, and is supported in front by the liver and abdominal wall. The pylorus is the most movable part of the viscus, and has no special ligament, so that when displaced downwards it is chiefly held in check by the second portion of the duodenum, which is firmly adherent to the posterior abdominal wall.

The stomach may undergo displacement upwards, laterally, or downwards.

I. UPWARD DISPLACEMENT.—This can only occur on the left side, since on the other the firm fixed liver is interposed between the organ and the diaphragm. It is met with in all conditions that tend to shorten the vertical diameter of the thorax, and is therefore a common result of the atelectasis that ensues from a left pleuritic effusion or empyema, and of chronic interstitial inflammation of the left lung. Large ovarian tumors, uterine fibroids, hydronephrosis on the left side, meteorismus, and ascites all tend to push the stomach into the left concavity of the diaphragm, and the same condition ensues during the later months of pregnancy. An important predisposing cause of this form of displacement is to be found in that maldevelopement of the thorax which gives rise to an abnormally narrow costal net.

In cases of this description, the pressure exercised by corsets or tight clothes tends to force the lower four or five ribs inwards, and to depress the line of the waist until it may reach the level of the iliac crests, while at the same time the colon, stomach, and liver are pushed upwards. The effect upon the stomach of upward dislocation varies in different cases, in some the total capacity of the organ being reduced, while in others the pyloric portion becomes diminished in size and the fundus dilated. Occasionally the cardiac region is pushed upwards so forcibly that the lower end of the œsophagus is bent to the left, and the lumen of the fundus greatly reduced. In rare instances the whole or greater portion of the stomach gains an entrance to the left pleura through a rupture of the left wing of the diaphragm, and the upper and left parts of the abdominal cavity are entirely occupied by intestines.

Symptoms.—Upward displacement of the stomach is rarely accompanied by special symptoms unless the degree of dislocation is considerable. In most instances discomfort and fulness are experienced after meals, attended perhaps by nausea, flatulence, and palpitation. In more pronounced cases the torsion of the œsophagus and compression of the fundus prevent eructation of gas and vomiting, so that the feeling of oppression after food is greatly exaggerated, and the patient is unable to assume a recumbent posture without experiencing an alarming sense of suffocation. Upward displacement of distended fundus is apt to induce paroxysmal attacks of dyspnœa and palpitation during the period of gastric digestion, accompanied by giddiness, cyanosis, præcordial pain, and great irregularity of pulse. These symptoms are always most severe after the evening meal, and in cases of weak or diseased heart are apt to occasion severe or even fatal syncope. When the displacement arises from narrowing of the thorax and the creation of a low and long waist, the hepatic and splenic flexures of the colon are forced inwards and backwards, and the transverse portion of the bowel is not infrequently bent into the form of a V with the apex pointing towards and reaching within a few inches of the pubes. These changes in the position of the colon are productive of muscular insufficiency, and encourage stagnation and fermentation of its contents, which in their turn may lead to chronic colitis.

Physical signs.—Artificial inflation of the stomach shows that the fundus reaches an abnormally high level in the chest, and causes displacement of the apex of the heart to the right. Splashing sounds are obtained with difficulty, and the great curvature may lie so much above its usual position as to give an impression that the stomach is unduly small.

Treatment.—Care must be taken to correct as far as possible the conditions which are responsible for the abnormal position of the stomach. In the case of abdominal tumors or ascites, the removal of the growth or the fluid is at once followed by a descent of the organ, while in cases of meteorismus the exhibition of suitable aperients, the prohibition of green vegetables and fruit and a course of intestinal antiseptics, are usually followed by immediate improvement. When the distension results from chronic intestinal obstruction, the patient should be given a dose of castor-oil each morning before breakfast, pending the performance of an operation. In those cases where malposition depends upon an abnormal shape of the thorax, the wearing of tight corsets and of strings round the waist should be avoided as far as possible, and the patient should be taught some form of breathing exercise that helps to augment the capacity of the

chest. Gymnastic exercises which promote the muscular development of the chest and trunk are also of benefit.

Starch and sugars should only be allowed in moderation, and care should be taken to avoid any excess of fluid with the meals. Effervescent drinks are almost always harmful. Green vegetables should be taken sparingly, and the food must be carefully and thoroughly masticated. A dose of cascara, combined with euonymin and rhubarb, forms an excellent corrective of the constipation, but salines should be given with caution. When much respiratory or cardiac distress is experienced after meals, a carminative and anti-spasmodic mixture should be prescribed; and, in case of severe attacks, the patient should pass a soft tube into the stomach with the view of evacuating the gas which cannot escape through the displaced œsophagus. Intestinal fermentation may be corrected by means of cyllin, guaiacol, or salisylate of bismuth taken after meals.

II. VERTICAL DISPLACEMENT.—In this variety the cardiac orifice and the fundus retain their normal position, but the lesser curvature and pylorus are displaced downwards and inwards so that the long axis of the organ tends to become parallel to the spine. Three anatomical forms have been described—the *angular*, the *fish-hook*, and the *straight*.

(*a*) In the *angular form*, which is by far the most common the pylorus is displaced downwards, and is usually situated in the median line of the abdomen just above the umbilicus. The lower half of the lesser curvature runs transversely across the abdomen below the inferior border of the liver, while the upper part is more vertical than usual. The fundus reaches the fifth or sixth interspace, but the main bulk of the stomach is located in the left hypochondrium and in the left side of the abdominal cavity.

(*b*) The *fish-hook* variety is less common but much more important than the preceding one. The pylorus maintains its normal position, but its orifice is directed upwards. From this point the pyloric portion of the viscus runs vertically downwards to the head of the pancreas, and lies parallel and contiguous to the second part of the duodenum. The lesser curvature lies below the liver and the left half of the pancreas. The cardiac pouch is often dilated, and the great curvature may extend to the right of the median line of the abdomen. The acute angle formed at the junction of the first and second parts of the duodenum causes the stomach to act at a disadvantage, with the result that dilatation of the viscus often ensues, while its muscular insufficiency becomes further increased by the drag of the enlarged organ upon the fixed part of the duodenum.

(*c*) The *straight* variety is rare. In this form the pylorus is situated at or below the level of the umbilicus, and its changes of position are accompanied by much stretching of the duodeno-hepatic ligament. The stomach becomes elongated and its diameter diminished, while its long axis tends to assume a vertical direction. The liver is rotated backwards, and is often laterally compressed; the right kidney is loose, the spleen is depressed and deformed, and not infrequently the other abdominal viscera undergo a downward dislocation.

Causation.—Vertical displacement of the stomach is very rare in men, but is not infrequent in women. The conditions which favour its development are—(1) Severe pressure exercised upon the organ by the liver and spleen, owing to a natural or artificial constriction of the chest, and (2) extreme laxity of the abdominal parietes. According to Chapotot and other French authorities, the principal cause of the thoracic deformity is the use of a tight corset during the period of puberty, which tends to narrow all the diameters of the upper portions of the abdominal cavity, and to prevent their development during the growth of the body. The line of pressure extends from the sixth to the tenth ribs, and divides the thorax into two cones which have their apices at the waist line. The liver being composed of dense tissue, is often grooved across its anterior surface at the level of the ensiform cartilage, and tends to press the pylorus and lesser curvature downwards and inwards in the direction of the least resistance. On the opposite side the line of constriction crosses the stomach below the fundus, with the results that the cardiac portion of the viscus is forced upwards while the rest is pushed downwards and compressed by the spleen. In this manner the organ is sometimes moulded into two sacs, which are superimposed one with the other. This form of dislocation is greatly favoured by the lax condition of the abdominal wall that results from repeated pregnancies, or by attenuatior of the tissues in emaciated persons. All enlargements of the liver tend to press the stomach downwards and inwards, and if the spleen is also increased in size the stomach may be so squeezed between these two solid organs that it not only assumes a vertical position, but becomes so diminished in transverse diameter as to closely resemble a piece of large intestine (Kussmaul, Bouveret.) In this country, where tight corsets are less in favour than in France, and are rarely worn by young girls, the dislocation of the stomach more often depends upon some maiformatoin of the thorax or upon arrested developement of the organ itself. The rickety chest, which presents much narrowing of its transverse diameter with eversion of the costal margins, is almost always associated with downward

dislocation of the liver and pylorus, while in many cases of lateral curvature of the spine depression of the liver and diaphragm give rise to a vertical displacement of the stomach. Members of phthisical families who possess a long narrow chest are also unduly prone to suffer from a vertical stomach during adult life, the abnormally short diameter of the lower thorax in such persons giving rise to a permanent depression of the liver, and thus producing a similar effect to the corset chest. It is also possible, as Kussmaul suggested, that in certain cases a vertical stomach may result from want of development, since it is known that during fœtal life the long axis of the organ is almost parallel to the spine.

Symptomatology.—During the early stages of the complaint, and in many cases throughout life, the patient seems to be in no way inconvenienced by the abnormal position of her stomach; but, as a rule, the condition is associated with definite symptoms of disordered digestion, and may even be responsible for a permanent state of ill-health. The chief troubles are experienced when the motility of the stomach becomes affected. The acute angle formed at the junction of the first and second portions of the duodenum renders the passage of chyme into the intestine a matter of considerable difficulty, and this mechanical obstruction becomer gradually intensified as the progressive enlargement of the stomach exercises an ever-increasing traction upon the fixed point. Under these circumstances, a sense of discomfort, fulness, or oppression is experienced immediately after each meal, accompanied by flushing of the face and ears, palpitation and giddiness, while occasionally the peristaltic movements of the stomach give rise to severe pain of a cramping character, followed, perhaps, by vomiting. That the abnormal position of the organ is the cause of these symptoms, is shown by the fact that they are always relieved when the patient assumes a recumbent posture, and can be almost entirely prevented by the application of a firm binder to the abdomen, so as to support the stomach and diminish the traction upon the duodenum. When muscular insufficiency ensues from the vertical displacement, secondary gastritis is apt to supervene and to obscure the symptoms of the original disorder. In this condition the ingestion of food is followed within a short time by pain, distension, and flatulence, and in many cases by acid eructations and vomiting. Constipation is invariably present, and in some instances an intractable form of mucous colitis complicates the gastric derangement. Sooner or later emaciation accompanied by anæmia supervenes, and the patient finds herself unable to indulge in physical exercise without suffering from dragging pains in the abdomen and profound exhaustion. She

is also prone to become morose, irritable, and melancholic, and not infrequently exhibits a strong tendency to hypochondriasis. One of the peculiarities of the anæmia and its attendant debility is that while they remain unaffected by the administration of iron or arsenic, they rapidly respond to rest in bed and careful dieting. A peculiar and distressing symptom which it exhibited by many women who suffer from vertical dislocation of the stomach is a loud gurgling noise that accompanies the respiratory movements whenever the organ is filled with food. In such cases the act of inspiration is attended by a splashing sound in the abdomen, while during expiration a series of gurglings become audible, which may be heard at a distance of several yards. These noises become intensified if the patient yawns, coughs, or sneezes, but can be suppressed by loosening the corset, lying on the back, or by pressure applied to the abdomen with the object of pushing the stomach towards the diaphragm. Strumpell believed that the sounds were indicative of dilated stomach, but Glozier has shown that this condition is not necessary to their production. It would appear that the phenomenen is due to the partial constriction of the stomach aforementioned, which gives rise to the formation of two pouches superimposed one upon the other. The movements of the diaphragm and the abdominal wall during respiration cause the fluid present in the organ to regurgitate in a rhythmical manner from one sac into the other, and the splash is produced at each collision between the liquid and gaseous contents of the viscus. Occasionally the duodenum is dragged down to such an extent by the enlarged and dislocated stomach, that the opening of the bile duct becomes situated in an angle between the two limbs of the intestine. In such cases bile is apt to trickle constantly into the stomach, and to be vomited at intervals (Malbranc, Riegel), as much as three pints being sometimes ejected during the course of the day (Weill.) An excess of bile in the stomach is known to inhibit the action of pepsin (Bernard, Luber), and it has therefore been surmised that the emaciation which always accompanies this abnormal symptom is the direct result of disordered digestion. It is more probable, however, that the loss of bile to the system is the principal cause of the loss of flesh, since the establishment of a biliary fistula in animals is always followed by excessive emaciation. In addition to the characteristic bilious vomiting, the patient almost invariably suffers from flatulence, loss of appetite, distension ofter meals, and a constant feeling of nausea.

Physical signs.—The abnormal appearance of the chest will usually suggest the possibility of dislocation of the stomach. In

the majority of the cases the thorax is long and narrow, with a contraction of its lower aperture. The angle formed by the margins of the ribs on either side is much smaller than normal, and the costal borders may be almost parallel, and only separated from one another by 2 or 3 inches. When the deformity is due to tight lacing, a transverse furrow exists between the sixth and ninth ribs, while the lower aperture of the thorax appears somewhat expanded owing to eversion of the costal arch. On inspection, the epigastric region seems to be unduly flat, while the left hypochondriac, umbilical, and left lumbar regions are more prominent than usual, and give the abdomen an unequal or lopsided appearance. If the stomach be artificially inflated, it will be observed that the epigastrium remains unaffected, while the protuberance of the umbilical region and left hypochondrium is increased. On precussion the fundus of the stomach is found to occupy its normal position, and its upper border may reach as high as the fifth left interspace. The great curvature lies for the most part under cover of the ribs, but emerges near the tip of the tenth rib, and runs thence across the abdomen towards the pylorus, which is usually situated in the vicinity of the umbilicus. In the median line, only the left lobe of the liver and the pancreas intervene between the abdominal wall and the spine and here the forcible pulsations of the aorta may be both seen and felt.

In about one-half of the cases a moderate degree of hyperacidity accompanies the dislocation of the stomach, but this abnormal state of the gastric juice rarely gives rise to any special symptoms. Dilatation of the organ is usually followed by a diminution of the secretion, and when secondary gastritis supervenes, subacidity is almost an invariable feature of the case. When gastric displacement is accompanied by enteroptosis, the right kidney is found to be loose, the liver extends 2 or 3 inches below the costal margin and is unduly movable, and the hepatic flexure of the colon undergoes prolapse.

Diagnosis and prognosis.—Vertical dislocation of the stomach is usually confused with dilatation, but with a little care the two conditions may easily be distinguished from one another. In gastrectasis the capacity of the organ is greatly increased, the fundus is dragged down and occupies the lower part of the epigastrium, the umbilical and perhaps the hypogastric region, the pylorus usually retains its normal position, and the passage of a tube will show that the viscus contains food seven hours after a moderate meal. On the other hand, in vertical displacement, the fundus usually reaches the fifth interspace, on the left side, the lesser curvature lies below the liver, the pylorus

is encountered near the median line of the abdomen, and no evidence of food retention can be detected by the use of the tube. When painful peristalsis arises from traction upon the duodenum, the case may be mistaken for one of hyper-acidity or hyper secretion. Careful examination of the abdomen, however, will at once indicate that the stomach occupies an abnormal position, while exploration of the organ will prove that the gastric secretion is neither sufficiently acid or abundant to afford an adequate explanation of the symptoms.

Vertical displacement, if uncomplicated by motor insufficiency, does not possess much clinical importance; but it gives rise to gastric dilatation, chronic gastritis, or mucous colitis, it may initiate a state of permanent ill-health, accompanied by the symptoms that are characteristic of these several complaints. The regurgitation of bile is a matter of considerable moment, and unless carefully treated may give rise to fatal inanition.

Treatment.—The main indications are to prevent further displacement of the stomach, to support the organ, and to correct any secondary disturbances of digestion that may occur. Tight corsets must always be avoided, especially in girls who possess a long narrow chest and come of phthisical stock. In such cases the corset should either be short and loose, or replaced by a band of some warm firm material. Exercises undertaken with the view of strengthening the muscles of the arms, chest, and abdomen, are extremely valuable, and the patient should be taught to inspire deeply through the nose, so as to increase the capacity of the thorax. In almost every instance, a firm well-fitting belt should be applied to the abdomen, in such a way as to elevate and sustain the stomach. The belt should be applied in the recumbent posture, and be worn both night and day.

When anæmia and emaciation are prominent features of the case, rest in bed is essential, and should be maintained for a month or six weeks. Abdominal massage and electricity are useful adjuncts to some cases. The salts of iron rarely agree, but arsenic, nux vomica, and gentian are of value, and a dose of hydrochloric acid administered after meals is an important aid to digestion when the gastric secretion is diminished. Regurgitation of bile should be treated by lavage at night, while a dose of sulphate of sodium is given in hot water at an early hour every morning. Should these means prove ineffectual in relieving the bilious vomiting, it may necessary to invoke surgical aid with the view of stitching the lesser curvature to the under surface of the liver.

(Continued in March Issue.)

Clinical Reports

A CASE OF INTESTINAL RESECTION.

BY DR. GEORGE R. PIRIE, CALGARY, ALBERTA.

E. W., a Swede, aged 26, a strong robust man.

Previous history negative with the exception of a right Inguinal Hernia which had been coming down for the past two years. He had always been able to reduce it himself and had never worn a truss.

On Dec. 25, 1905, the Hernia came down and he could not replace it. He let it go for four days, during which time there was complete stoppage of the bowel and he continued on regular diet. On December 30, he drove forty miles to town and consulted his physician, who after several attempts found the Hernia irreducible. On January 1, 1906 he was sent up to Calgary

On admission to the Holy Cross Hospital, he was apparently suffering from very little shock. There was no increased temperature, and very little pain. A hard mass about the size of a medium sized potato was found in the right Inguinal region and extending down into the Scrotum. Its consistency suggested an Omental Hernia. Very little effort showed that the mass was irreducible. With the history of there having been no passage of the bowels for a week or more, the diagnosis of an incarcerated loop of intestine was made. From the few constitutional symptoms present, it was thought that there was no strangulation.

On January 2, an incision was made over the mass. The skin and sub-cutaneous tissues were normal in appearance. The Hernial sac was found to be very much congested and strongly adherent to the enclosed Intestine. A loop of the Ileum was found in the sac. Three strong bands of adhesions surrounded the Intestine; one at the internal ring, one at the external ring and one about an inch below the latter. These adhesions were separated and the enclosed bowel was seen to be very much congested and oedematous. At each of the three constrictions was a patch about an inch in diameter, which was gangrenous.

The bowel was drawn down through the internal ring, and a loop about ten inches in length was resected. The gut and its mesentry was cut in ar oblique direction according to the method described in Von Bergmann's System, Vol. 6.

In considering the question of Anastamosis, the Murphy button was excluded on account of the fact that the bowel above was probably loaded with Feces, and an early movement might tear the button out. Then too the patient's condition was very good and it was thought that suturing the cut ends would give him the best chance of recovery.

Inasmuch as the lumen of the cut ends was the same, the easiest and safest method seemed the circular end to end method. The intramesentric sutures gave considerable difficulty on account of the fact that the whole operation was performed through the Hernial incision. However, a satisfactory apposition of the cut ends of the Mesentery was accomplished with a continuous suture of silk.

Two cut ends of the bowel were then approximated, and a continuous suture of fine catgut through the mucus membrane restored the continuity of the bowel. The serous coats were joined by a series of silk sutures, inserted after the Czerny method.

The bowel was then replaced through the internal ring. There was no attempt made to close the opening into the abdominal cavity on account of the danger of a Fecal Fistula or Peritoneal infection. An Iodoform gauze tampon was inserted through the ring down to the wound in the Intestine and the lower part of the primary incision closed, without any particular effort to approximate the Oblique muscles.

The after treatment caused considerable thought as to how soon it would be advisable to allow the bowels to move, especially since he had not now had a motion for a week or more. It was decided however to keep them from moving for four or five days.

On January 6, a Soap Enema was given which was successful. Castor Oil was then administered, which moved the bowels very freely with little or no discomfort to the patient. The wound healed up nicely and the packing was removed altogether on the seventh day.

On the eighth day after he operation the patient was on regular diet. Two weeks later another operation was performed, closing up the Hernial opening, dissecting out the abdominal muscle as well as possible and suturing them with Kangaroo tendon. This wound healed by first intention. Three weeks later he was allowed out of bed, and made a rapid convalescence. In spite of warning to the contrary, he was hard at work on his homestead six months later, and is enjoying the best of health.

If one were to moralize on the above, it would be with reference to the lack of proportion between the Constitutional

and the Local symptoms. This case also suggests the expediency of not waiting too long trying to replace a Hernia. The local condition may be far worse than the constitutional symptoms would lead one to imagine.

The chief improvement which the operator might suggest after this experience would be to make an abdominal incision after this condition was discovered, and do the resection through that opening, maintaining drainage through the hernial opening if it were thought necessary.

CASE OF BANTI'S DISEASE.

BY DR. NICHOLLS, EDMONTON, ALBERTA.

Patient A. B. first came under my attention last January. He was engaged in missionary work and had to take very long drives in cold weather. He was not sufficiently warmly clothed, was very weak and langiud, had no appetite, had no energy, found it impossible to fix his attention on anything. Pulse slow, temperature normal, was very jaundiced and constipated. I gave him a regulated course of diet. Cautioned him as to the care he should take of himself, got the bowels moving freely, and had him take a saline each day. He kept me informed as to his condition regularly. The rest and improved care he took of himself led to an improvement. In June he came up to stay in the city and thus came under my attention. His appearance had improved, but slight jaundice still persisted. He had a ravenous appetite and was quite fleshy. He, however, complained of weakness. I made a thorough examination and found a very enlarged spleen, reaching down to a level with the top of the crest of the illum. I now made the diagnosis of Splenic Leukemia. His weakness kept increasing till he was scarcely able to walk though his appetite remained good. Next he was seized with a violent and persistent diarrhoea with a temperature running from 103° to 104½°. I had, in the meantime, obtained a blood examination. This showed no particular change in the corpuscular elements and only a slight diminution in red blood cells and leucocytes. There was no enlargement of the lymph glands. There were no hemorrhages.

I sent him to a Sanitorium and placed him upon frequent doses of the carbonate of iron and arsenic. I also placed upon an intestinal antiseptic. Each day he received cold baths and thorough massaging. The diarrhoea ceased gradually, the fever was eliminated, the patient's appetite improved and his strength slowly increased. The spleen decreased somewhat in size reach-

ing to about one inch from the level of the top of the Ileum.

Patient became well enough and sufficiently strong to return to his home in England, about a month ago.

A CASE FOR DISCUSSION.

BY FRANK G. SMITH, M.D., MAPLE CREEK, SASK.

The patient, a German, sex male, age 25 years, came to my office one morning in August suffering from violent pains in his leg and complaining of a dryness of the throat. On examination the pulse was about 80, temperature 99°, respiration normal, skin moist and face ashy pale in color. He appeared to have been ill for over a week but as he could not speak much English it was difficult to get much history.

That evening the temperatiure rose to 104°, pulse still 80, respiration normal, pain in legs very severe complained, of dryness of throat but the tonsils were not swollen, although pharynx appeared to be inflamed. Next morning temperature was normal and patient wanted to get up. I kept him in bed and that evening the symptoms of the previous evening appeared worse than ever. This went on for four days and then for a couple of days everything was normal both morning and evening and the patient was allowed to get up as he was feeling well in every way. Then the night before his intended departure from the hospital, the temperature again went up to 104°, and all the previous symptoms came back worse than ever. As the tonsils were inflamed and slightly enlarged and the pharynx also inflamed, I took a swab of the throat and sent it to Dr. Charleton, Bacteirological, Regina with request for an answer by wire. I isolated the patient and he got worse each day after this, although every morning his temperature would be normal and he would feel fine but at night it would rise to above 104°, and he would become very cyanosed.

On the third day of this recurrence I saw a slight line of membrane just visible low down in the pharynx and in twenty four hours it had spread over the tonsils, uvula and entire pharynx.

As soon as I saw the membrane I injected 4,000 units of antitoxic and repeated it in four hours as the patient was in a stupor and the cyanosis very much marked.

The answer to the swab came back in the evening, four days after I had sent it, giving the answer "positive for diphtheria." I had in the meantime given the patient 20,000 units of antitoxic in 4,000 unit doses and occasionally swabbed the throat with a strong antiseptic.

The patient was in a stupor for forty-eight hours but seemed to improve after each dose of the antitoxic and soon the membrane shrivelled and was coughed up. The temperature fell to 100° and the cyanosis disappeared, the patient rallying and taking some nourishment. In a few days he was in fair shape and would eat all that I gave him, but the temperature still remained a little above normal and he made no effort to sit up or help himself in any way. He complained of severe pain in the muscle of his leg and if I touched the ball of his right foot he would scream with pain. He did this even although I did it when he was sound asleep.

This went on for over a month and although I attempted to get him on his feet he would scream with pain and drop on his hands and knees. His appetite was enormous and I thought for a while that he was shamming but he wouldn't bear the bed clothes near his feet at all.

I examined him several times but could find nothing to give me any clue. The reflexes, motor and sensory functions were all normal but the patient simply wouldn't stand on his feet nor bear to have the right one touched on the sole. I kept him for two months, giving his leg massages and giving him Tr Ferri Mist internally. Then he wished to be sent to some friends of his at Regina. I had to let him go, although I had to drive him to the station and carry him into the cars.

The pains had nearly all gone but he could not stand much, less walk without support, although when sitting or lying down all the functions of the limbs seemed to be perfect.

To Our Subscribers

We have to report that "All goes well". Climatic conditions have been against us preventing some from receiving their journal and us from receiving reports, etc., in time for this issue. Many kind letters of congratulations have arrived from the West, East and the States. Our brothers in the Old Land have not had time to give their opinion.

Several suggestions have already reached us. One good one is that under the head of "Clinical Memoranda" might be mentioned many little items of interest which could not be expanded into written papers.

The paper on "Effects of Climate" we hope will bring forth comment. There is as yet little known regarding the geographical distribution of disease in North West Canada.

Already we have papers from well-known men and promises from others to help forward what they consider a needed journal, so we think the reading matter will be all that can be desired.

Some advertisers report they already have replies from the "Far West" which proves the necessity of such a medium in that respect

Shortcomings at the start we ask you to look on leniently and rest assured everything possible will be done to make the W. C. M. Journal worthy of your support.

—EDITOR

WESTERN CANADA
MEDICAL JOURNAL

Editorial

By a communication we have received from the Medical Council of Great Britain, we note that Nova Scotia has received recognition for Reciprocity. This brings us to a consideration of the state of such matters here, not as between Great Britain and Canada but inter-provincial.

At the last meeting of Premiers at Ottawa, the Premier of Manitoba was instructed by the Board of Trade of Winnipeg to bring up the question of Reciprocity. In answer to one enquiry regarding the result we received the following:

Dear Sir,

Replying to yc rs of the 6th, beg to say that it was discovered at the inter-provincial conference that under the Rodick Act, reciprocity was obtainable at present when the various provinces are agreeable.

Quebec and one or two other provinces, however, did not look with favor upon reciprocity and consequently nothing was done.

Yours truly,
R. P. Roblin.

To what is this lack of desire to discuss the subject due Is it the apathy of the profession or the public? From the fact that the Winnipeg Board of Trade requested that the question be brought up and suggested one standard of examination rather points that the general public would be in favor of such a step.

At present we find this position—*Manitoba.* The Manitoba College of Physicians and Surgeeons, having resigned its right to examine candidates for license to practise to the University of Manitoba at their last meeting, putting forward their claims again and asking to elect *half* the examiners who shall be men *outside the teaching staff of the University.*

Alberta.—The Supreme Court of Alberta has placed the College of Physicians and Surgeons *ultra vires,* ruling that the present College of Physicians and Surgeons of Alberta had no right to refuse or grant licenses until the College of Physicians and Surgeons of the N.W.T. is defunct.

British Columbia, like Alberta and Saskatchewan, has no Medical College but requires all candidates for license to practise, from whatever University or Province, to take the examination in all Medical subjects both primary and final. The examiners

are the members of the B. C. College of Physicians and Surgeons. Most of these are in general practice. At any time, examinations are uncertain and hard, even when the examiners are teachers of the subjects they examine and so qualified for their work. How much harder or easier must it be to satisfy those who are not in constant touch with the subject on which they examine.

Again, any candidate from the other provinces who desires a license to practise in Manitoba, from whatever University in Canada, must take the exam. for the degree of M.D. of Manitoba. This gives the candidate license to practise but does not confer on him the degree of M.D. (Man.), while the student of Manitoba who passes the same exam., without further examination receives the M D. degree *and* license to practise.

Provincialism never assisted progress in the right sense. The main object of Reciprocity is the elimination of the repetition of the tests of qualification. The dentists who were hampered in the same way by Provincial restrictions have succeded in obtaining a Central Examining Board for the whole Dominion. Various examining Boards and Councils simply multiply expenditure of money and energy, cause dissension and foster partiality. The fees should be sufficient to pay a strong and independent Board.

What is proposed is that there be a Central Controlling Medical Board for the Dominion whose duty should be to standardize medical education and the examination upon which a degree could be given by any University in Canada. This would allow the holder a Diploma to register and practise in any province of the Dominion. This Central Board would also examine or authorize the registration of any outside candidate. The Central Medical Council should have representatives of the profession from the Provinces and the Universities. Such a strong centralized council would do more for the strength of the profession than the present decentralized bodies and would do away with the springing up of Medical Colleges, poorly equipped and ill prepared to give the training necessary. It would bring the present Universities up to an equal standard and so put down petty jealousies. In fact, in every way it should lead to unity of the profession in the Dominion. Then being strongly united this Central Conucil could look after the protection of the profession—Take Quackery—In Canada where there are so many Medical members in the House this question could be easily settled. The Lawyers take good care their profession is sacred and rightly so The preparation and expense to become a doctor is greater than that of any other profession and yet no man's work is less guarded than a doctor's. Important questions are not settled by medical experts at

present but by those who have no trained knowledge on the subject. It would be just as absurd for a medical man to decide on intricate points of law as for a lawyer to decide on medical matters. There seems no doubt that such a union would enable the profession in every way to have more importance with the public. Now as always no one has more influence than the doctor because of his intimate personal relationship with the public. Let him add to that authority and he can easily then obtain all that pertains to the welfare of the profession and the public whom he serves.

The Dominion Central Council not being obtainable, would it not be well for the whole of Western Canada which seems at present in such an anomalous position to have one Board or College of Physicians and Surgeons for the Provinces of Manitoba, Saskatchewan, Alberta, British Columbia and The Yukon.

The medical profession is often, and rightly, accused of being particularly apathetic, even in support of its own measures. But for a medical man to keep up with the advancement of science and to attend to his practise means that there is little time left for other matters. Possibly this is the cause of the apathy. But let us be up and doing on this question. The issues at stake are great and we know "The gods help those who help themselves." It is impossible for the leaders alone to fight the question out and settle it satisfactorily to all. The rank and file must give their opinion or suffer. No prejudices, self-interest, petty jealousies, nor political partizanship should influence *one's* opinion. The co-operation of the profession on many points was never more needed than at this moment. If this new order of things can be brought about without injustice to present medical men and colleges and is thought best for the profession at large, let us then earnestly work together for this end. Let us, in the west, make our voices heard as to what we consider best. "Let every man be fully persuaded in his own mind" and then let him do his duty to that noble profession of which he is a member.

Our Local Editors

The following have kindly consented to act as Local Editors for their district: Dr. Fagan, Victoria, B.C.; Dr. Brydone-Jack, Vancouver, B.C.; Dr. Arthur, Nelson, B.C.; Dr. Mason, Calgary, Alberta; Dr. Lowe, Regina, Alberta; Dr. Matheson, Brandon, Manitoba; Dr. Chisholm, Fort William; Dr. Lineham, Dauphin, Manitoba; Dr. Thornton, Deloraine; Dr. Poole, Neepawa; Dr. Nichols, Edmonton, Alberta.

MEDICAL SOCIETIES.

Winnipeg.—At the regular monthly meeting, held January 4th, Dr. Chown read a paper on "Gall Stones."

Dr. Galloway exhibited a machine for the convenient and rapid manufacture of plaster of Paris bandages and gave a practical demonstration of its usefulness.

Thunder Bay.—At the last meeting of the Association the following officers for the ensuing year were elected: Hon. *President,* Dr. T. S. Smellie; Fort William, *President,* Dr. C. J. Chipman; *Vice-President,* Dr. H. E. Hall; *Secretary,* Dr. J. D. Chisholm; *Treasurer,* Dr. J. A. Crozier; Executive, Drs. J. N. McGrady and C. E. McCartney.

Brandon.—A meeting of the Medical Association was held last week when the following officers were elected for the coming year:—Dr. J. A. McDonald, *President;* Dr. J. S. Matheson, *Vice-President;* and Dr. E. C. Beer, *Secretary-Treasurer.*

Calgary.—At the December meeting of the Calgary Medical Society, the semi-annual election of officers for the society took place as follows:—*President,* Dr. E. H. Rouleau; *Vice-President,* Dr. J. S. McEachern; *Secretary,* Dr. E. Aull; *Treasurer,* Dr. D. Gow; *Committee,*—Drs. R. D. Sanson, G. A. Anderson and T. H. Crawford. When the Calgary Medical Society was revived something over a year ago. Dr. J. D. Lafferty, Registrar for the Province of Alberta, introduced a motion to the effect that the officers for this society be elected semi-annually in the hope that such a procedure would stimulate the interest in the work of the society. The result has been that the society is very strong indeed, the meetings being regularly attended by the majority of the medical men in the city, and good work is being done.

Lodge Practice and Contract Work.

The question of contract work, Lodge practice and medical not covered by the Dominion Statutes, has occupied the whole time of the regular November meeting, and of several special meetings. At the last special meeting a decision was held in obeyance until expert legal opinions could be had as to the interpretation of the Dominion Statute covering Medical contract work. As this was not forthcoming at the December meeting, the subject was laid over until the January meeting.

At the January meeting Dr. R. D. Sanson will read a short paper on Intestinal Obstruction, opening the subject for discussion.

HOSPITAL NEWS.

Brandon.—At the annual meeting of the Life Governors of the Brandon Hospital, the report for the year was presented. During the year not a single applicant had been refused admission. Present condition of main building needs to be remodelled and improved. This requires $4,000 to $5,000 to be collected by friends of the hospital.

Accommodation now for 120 patients needs to be increased. The number of patients admitted during the year was 1205—an increase of 173 over last year. . The cost per day for each patient was $1.18, and average cost per patient $22.17.

Maple Creek.—Annual meeting January 15th, reported:—115 patients admitted during the year; Maintenance of hospital, $2,500; Equipments $200; The secretary stated that there was the sum of $2,000 in the bank to the credit of the new hospital, which left $3,000 to be collected. The new building is to accommodate 20 patients and 5 nurses. Work is to start in the early summer.

Reports of other city hospitals and asylums will be given in the March Number.

The Railway and Marine Hospital at Port Arthur is erecting a new building which will cost $40,000.

The Regina Hospital Directors have decided to approach the City Council with a view to have a by-law presented to the ratepayers, authorizing the sum of $100,000 debentures for the purpose of erecting a fully equipped Municipal Hospital.

Early in May the Royal Columbian Hospital of New Westminster will be commenced. The building will cost $75,000.

A site has been secured in Edmonton for a new Hospital costing $75,000.

Strathcona has owned and managed its public hospital for some months. It seems that Municipal Ownership and management of hospitals will become the rule rather than the exception in Alberta.

HEALTH OF WESTERN TOWNS.

Calgary, Alberta.—The summary of contagious diseases for the year 1906 is as follows:—Scarlet fever 21; Measles 38; Diphtheria 46; Chicken-pox 10; Small-pox 1; Rotheln 1;

Typhoid 77. Of these the following cases were introduced by immigrants and parties from without the city, viz:—Small-pox 1; Scarlet fever 5; Measles 8; Diphtheria 10; Typhoid 28. The largest number of cases of scarlet fever occurred in June and was directly traceable to the introduction by a case from the East. Small-pox was brought in by an immigrant. Typhoid was traced to well water and to carelessness in nursing.

The Calgary Health Authorities request that *milk* be supplied in sealed bottles. They also desire more frequent tests but laboratory facilities are inadequate. *City water* reported pure. Increase is greatly needed in Scavenging Department. It is proposed to serve householders with notice as is done in Winnipeg.

VITAL STATISTICS.

Winnipeg.—The death rate of Winnipeg during 1906 was 16.138 per 1000 of the City's population. The total number of deaths was 1630.

Vancouver.—The deaths in 1906 were 424 as against 444 in 1905. One-ninth of this number was from Tuberculosus.

"THE REPRESENTATIVE COUNCIL OF THE UNIVERSITY OF MANITOBA.

(*From Medical College Editor.*)

To the University of Edinburgh belongs the honor of instituting the first Students' Representative Council. Its example was followed almost immediately by the other British Universities and subsequently by many of the leading institutions of learning on this side of the Atlantic. The Representative Council of the University of Manitoba is the youngest daughter of the parent Council of 1884.

The University of Manitoba may well be called conglomerate. It is a collection of educational institutions fully recongized both from the standpoint of Faculty and students. In view of these facts, the University students—I do not mean as college students —were "Like drift spars which meet and pass upon the boundless ocean plain." The students drift into their classics, sit for an hour or two side by side, and the lectures over, fold their note books, like the Arabs their tents, and "silently steal away."

Being persuaded of this absence of corporate life, the students more and more came to see that some organization was imperative if the students of the affiliated colleges were to be students of the University.

This feeling found expression last November when the Medical students invited each college to send four delegates to a meeting called to consider the possibility of forming a students Representative Council.

The invitation met with favor at once. At the first meeting the delegates, though unanimous for a Representative Council, did not consider it wise to proceed to organization until they had a more intimate knowledge of Students' Councils. To this end the Secretary communicated with the leading universities of the United States, Eastern Canada and the Old Land. The second meeting was a most enthusiastic one. St. Boniface, St. John's, Medical, Manitoba and Wesley, all had their delegates present. A sub-committee, consisting of Mr. Bernier, St. Boniface; Mr. Daly, St. John's; Mr. Hart, Medical; Mr. Riddell, Manitoba; and Mr. Shipley, Wesley, drafted the constitution which was afterward approved by the student body of the various colleges.

The object of this student movement is the promotion of a University spirit; to have a medium of communication between the students, the University authorities and the general public; to have also a Court of Appeal in any matters effecting University organizations.

At present the Council is composed of five members from each academic year, making a total membership of 20. Each college has four representatives. The Constitution calls for five officers, viz:—President, 1st Vice-President, 2nd Vice-President, Secretary and Treasurer. The Executive Committee for the first Council is as follows: President, W. H. Hart, B.A.; 1st Vice-President, W. A. Riddell; 2nd Vice-President, H. Bernier; Secretary, H. MacIntosh; Treasurer, J. C. Adamson.

The Council has held its first meeting, and from the feeling of unanimity which existed in dealing with the various matters, one can imagine that both the Faculty and the Students of Manitoba University may derive mutual benefit.

Announcements

Original Articles, Letters and Reports should be addressed to "The Editor," P. O. Box 450, Winnipeg.

Letters relating to Sale and Advertising Department should be addressed to "The Manager," P. O. Box 450, Winnipeg.

Local Papers containing reports or newspaper clippings should be marked and addressed to "The Local Editor."

Anyone desiring the address of the Local Editor for their district, can obtain same by applying to "The Editor," P O. Box 450.

It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession be sent.

Letters, whether intended for insertion or private information, must be authenticated by names and addresses of the writers not necessarily for publication.

Correspondents not answered by letter are requested to look at "Answers to Correspondents" the following month.

Editorial and Business Office

8 Commonwealth Block, Winnipeg, Canada.

General Medical News

The Nurse's Home in connection with the Winnipeg General Hospital was formally opened on the 1st, of February. Miss Wilson, Lady Superintendent, assisten by Miss Lumsden and Dr. Campbell, Medical Superintendent, received the guests.

The Council of Vancouver is giving $5,000 to the Sanatarium for Tuberculosis, so Dr. Fagan's efforts are meeting with the success they deserve.

A new magazine, "The Canadian Outdoor Life," published by the National Sanatarium Association has just appeared. All the profits from the sale go to the maintenance of patients in the Muskoka Free Hospital. Subscriptions $1.00. Secretary and Editor, J. S. Robertson, 28 Adelaide St. W., Toronto.

Dr. Thompson, Regina is the Chairman of the Health and Relief Committee. He stated lately that the Regina doctors were all at his back to inaugurate a new Sanitary Scheme. which they are hopeful will make Regina one of the healthiest cities.

The Saskatchewan Health Department, owing to the number of cases of small-pox—some slight but some severe (considering the exposure to contagion very wide spread)—have issued a circular urging on the people the importance of vaccination and giving information to allay any fears as to the untowards results that are supposed to follow vaccination.

We hear that hospital abuse has begun in Montreal. People with means going there for advice.

"The Medical Times" gives the cost of Medical education in England as at the very least $4,800 to $5,000.

The Jubilee Hospital, Victoria, B.C. has completed its Sun Room which was given by the "Daughters of Pity."

St. Joseph's Hospital, Victoria, B.C., have decided to spend $75,000 on improvements.

Professor Wm. Osler, when addressing a Medical Society Meeting in Baltimore, recently, said that his experience at Oxford had shown him that American students were not as well prepared as the British students. In the United States sufficient attention was not given to classics.

The College of Physicians and Surgeons, Manitoba, is having a plebiscite on the subject of Reciprocity taken.

The Government have decided to improve the Leper station at D'Arcy Island, B.C.

The Isolation Hospital and Nurses' Home in connection with the Vancouver General Hospital is now completed.

Several cases of small-pox were reported at High River, Alberta, and Reston, Man. They were quarantined.

Personals

The French Government has elected Dr. Arthur Rosseau, of Montreal; Dr. C. S. Grondin and Dr. Arthur Simard, of Quebec, Officers of the Academy.

Miss Bingman, the popular lady superintendent of the Edmonton Hospital, has resigned her position. Miss MacIsaac of Toronto has been appointed to the vacancy.

We regret to say that Dr. Harry Watson, Medical Officer for the U. S. Immigration Department, is seriously ill in St. Boniface Hospital.

Dr. Stephens, of Yellow Grass, paid a short visit to Toronto.

Dr. T. O. Grain of Selkirk, was unanimously chosen as the candidate for the Liberal-Conservative party of the constituency of Kildonan and St. Andrews.

Dr. Keely of Humbolt has taken Dr. T. J. Grey into partnership.

Dr. Wilson of Alix, Alberta, had his office destroyed by fire lately.

Dr. Hislop of Edmonton made a short visit East lately.

Dr. Cash, M. P., is to introduce a bill in the Federal House to meet the car shortage difficulty.

Dr. Gunne, M.P.P., Dauphin, will again be the party's candidate.

Dr. Hardy of Morden, President of the Manitoba College of Physicians and Surgeons, is seriously ill.

Drs. Mewburn and Galbraith, Lethbridge, have dissolved partnership. Dr. McNally of Toronto now assists Dr. Mewburn.

Dr. Wright's office and home at Oak Lake, Manitoba, have been burned.

Dr. Cairns of Disley has moved to Lumsden.

Dr. Cluff of Winnipeg, has been appointed resident pathologist to St. Boniface Hospital.

Dr. Howden of Norwood, Alderman, has been elected chairman of the Health Committee. We regret to hear that he is now ill at the St. Boniface Hospital.

Dr. McLurg, Battleford, returns January 12th accompanied by his bride.

Dr. Deane, Maple Creek, left January 5th for Montreal.

Dr. Allen, Vancouver, has returned from Chiliwack and is now able to resume practice.

Dr. Brydone-Jack, has been elected an Alderman and Chairman of the Board of Health, Vancouver.

Dr. Stewart of Newdale, who is removing to B.C., has disposed of his practice to Dr. Kippen.

Dr. Livingstone of Winnipegosis was in Winnipeg attending the funeral of of the late Mr. Duncan McArthur, his wife's father.

Dr. J. O. Todd, Winnipeg, is visiting hospitals of New York and Chicago, after which he goes to London.
Dr. Davidson of Cartwright, Man., was elected to the Council of the Board of Trade.

Dr. Ernest Hall, Victoria, B.C., is a candidate in the interest of the Canadian Labor party in B.C.

Dr. H. E. Langis, Vancouver, has gone to the South of France.

We are glad to report that Dr. Ainley, Calgary, has recovered from his recent attack of typhoid and is back at work.

Dr. L. S. McKidd, of Calgary, is now pursuing a course of study abroad. He is at present in Vienna.

Dr. Geo. McDonald, City Health Officer, Calgary, has returned from New York where he took a course of static electricity.

Dr. George Pirie, Calgary, is visiting his parents at Hamilton.

Dr. Frank J. Ewen, who has been assistant at the Brandon Hospital for the Insane has resigned and started practice in Hartney.

Dr. Bigelow has moved from Hartney to Brandon.

Dr. Lowther after long absence has resumed practice in Brandon.

Dr. J. E. Tyndall, a well-known Medical man from Rathwell has taken up practice in Brandon.

Dr. J. B. Chambers, B.A., of Minto, Man., has been appointed Assistant Superintendent at the Hospital for the Insane at Brandon.

Marriages

Dr. P. W. Fuller, Lethbridge, was married to Miss Edith Whitney, December 17th.

Dr. Leney, Winnipeg, was married on the 19th of December, to Miss Shearer, Bloomfield, Pennsylvania.

Dr. Irwin, Hartney, was married on the 1st of January, to Miss McIntosh, Prince Albert.

Births

On December 18th, 1906, the wife of Dr. Wm. Turnbull, Winnipeg, of a son.

OBITUARY

Dr. J. C. Hardy, one of the best known physicians of Moose Mountain district, died January 14th, after an illness of two weeks. Dr. Hardy was a graduate of Edinburgh and London. He practised first at Cannington Manor, then at Carlyle, Saskatchewan. He also acted as Justice of the Peace for his district. He leaves a wife and one child.

Dr. J. D. Cameron, M.D., McGill, Assistant Gynaecologist to the Royal Infirmary, Montreal, died January 4th ,of typhoid fever, aged 38 years.

News has been received of the sudden death of Dr. Sinclair, at Colborne, Ontario. Dr. Sinclair was formerly a resident of Winnipeg from 1878 till 1882. In 1882 he returned to Toronto to practise. He remained there until 1896, when he left to take up a practice in Rossland, B.C. Dr. Sinclair took an active interest always in political and municipal matters. His death occurred while visiting his relatives in Colborne. Dr. F. A. Sinclair of Winnipeg is his only surviving son.

Review

Sanitary Ret. Dr. Eassel.—Emiges uber den Schlaf im Kindesalter. Deusche Medizinische Wochensohrift No. 36.

The writer of this article expresses the opinion that even physicians with a large clinical experience seldom require to give children hypnotics which is a proof that they usually enjoy a good sleep except perhaps for some slight indisposition causing temporary wakefulness.

The amount of sleep necessary for children is discussed. A new-born infant, if dry and warm and later if its hunger and thirst are satisfied, sleeps pretty constantly, being interrupted by short intervals only.

In the second three months the child's nervous system having been developed somewhat, it has longer waking intervals.

In the third and fourth quarters of the first year, the infant's voluntary movements are becoming gradually developed, also the power of seeing and hearing as well as some evidence of memory, and mental functions, therefore, the periods of wakefulness are longer. Still the greater portion of the twenty-four hours of the day are needed for sleep.

From the latter part of the second year until into the fourth year, twelve hours sleep at night and one and one half to two hours sleep in the day is needed for healthy developeemnt.

As to when a child should cease sleeping in the day time, the author gives no definite answer but thinks, that if a child, after reaching four years of age has slept twelve to thirteen hours during the night, and is difficult to put to sleep during the day, it may be allowed to remain awake. He also advises that children should have nine to eleven hours sleep nightly until the beginning of puberty when they may remain normal with less sleep.

Causes of loss of sleep may be many:—

I. Affections associated with pain as traumata, painful inflamotary affections of the skin combined or not with itching, affections the bones, of organs of senses, respiratory, circulatory and digestive tract also peritoneum and pleura.

II. Special causes such as disturbed nasal breathing, as chronic coryza of syphilis, enlarged tonsils and adenoids.

III. Febrile affections, especially infectious diseases. Loss of sleep in this class due to fever and perhaps more to toxines. On the other hand some febrile children sleep very much.

IV. Disturbances of the nervous system, two divisions:—
(*a*) Those with anatomical brain lesions.
(*b*) The so-called functional nervous diseases.

The first class includes examples of reduction of the brain cavity and increased pressure in the cranium, as menengitis, chronic hydrocephalus and brain tumors beginning with disturbed sleep and end in coma.

The second class includes nervous disturbances due to rachitis, laryngismus stridulus, tetanie, nightly crying out (night terrors), sonambulism, epilepsy, nocturina, psychepathic conditions or neurasthenia leading to headache and nervous unrest, masturbation which may begin at very early age. The author blames parents for not inculcating in their children good habits, governed by regular discipline in eating and hours of sleeping.

Treatment.—It is necessary to get a detailed history of the child and all its habits, temperament, tasks and nourishment. Carefully examine for physical defects. Remove adenoids or tonsils and dress all traumata. Regulate method of living, work and feeding if it is indicated. Put the child in a quiet dark room at proper hour, and by holding hand and singing to it, induce sleep, by a sort of suggestive effect; a night lamp is advisable for those who sleep restlessly or are sleep-walkers. Warm baths in the evening are indicated for some restless children, duration of bath 5 to 6 minutes. Moist band on the body at night acts well sometimes. Keep child in open air in daytime. Only internal medication is some pot. brom. and chloral, and where pain, opium.

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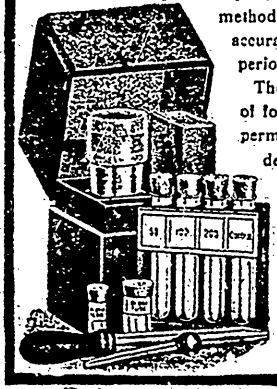

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