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WESTERN CANADA MEDICAL JOURNAL

VOL. IV APRIL, 1910 No. 4

ORIGINAL COMMUNICATIONS

CIVILIZATION AND HEALTH DANGERS IN FOOD.*

By Prof. Sheridan Delépine, M.B. B.Sc.
Manchester, England.

"Wherefore it appears to me necessary to every physician to be skilled in nature, and to strive to know, if he would wish to perform his duties, what man is in relation to the articles of food and drink."—Hippocrates, 460 B.C.

Civilization as a Disturbing Element of Health Factors and of Nature Evolution.

What was said of the duties of the medical man, over two thousand years ago, may now be considered to be applicable to those of the statesman.

One of the effects of civilization has been the gradual abandonment of rural life by a large number of individuals and their aggregation in cities.

With this shifting of population have been associated new conditions of life. These new conditions do not seem to have been altogether favorable to the evolution of our race; at any rate statistics of mortality from disease seem to point clearly to the fact that mortality is greater in populous centres than in thinly populated rural districts placed under similar climatic and hygienic conditions.

*Royal Institution of Great Britain, weekly evening meeting.

As we create for ourselves now conditions of life, we must at the same time consider carefully not only the benefits but also the dangers associated with these changes. Modern life is gradually increasing the distance between us and nature.

It is obviously necessary that we should keep a careful watch upon the artificial modification of natural factors which we introduce in our existence, so as to eliminate those which are detrimental before the race as a whole has suffered deterioration.

Quality of Food a Matter of National Importance.

Food has often to travel over great distances, or to be stored up for a considerable time, before it is consumed. Various methods of preservation, some distinctly harmful, have therefore been devised. Many natural products are considerably altered by artificial processes, which deprive them of their normal qualities; some articles of food are entirely manufactured by chemical processes.

All these things are often carried out by persons who have no clear conception of the dangers associated with the use of certain substances, and who look upon the preparation of articles of food simply as a commercial matter.

Artificial Production of Food Stuffs. Arsenical Contamination of Beer as the result of the use of a Manufactured Sugar.

It is to this kind of ignorance that the severe outbreak of arsenical poisoning, which afflicted the northern counties mostly, at the end of the year 1900 was due.

A certain manufacturer of brewing sugars did not take sufficient care to ascertain the quality of the ingredients used in the manufacture of his sugars; in his ignorance he used very large quantities of very impure oil of vitriol, perfectly unfit for the preparation of an article of food. The manufacturer of sulphuric acid also committed the indiscretion of sending, without sufficient warning, to the glucose manufacturer a very impure sulphuric acid instead of the purer article that he had usually supplied. Now this impure

sulphuric acid contained a large amount of arsenic, a fact which he knew, and that the glucose manufacturer should have known, and yet neither the one nor the other suspected that their carelessness was endangering thousands of lives. The brewers who used the sugars should have known that glucose was liable to contain arsenic owing to the use of sulphuric acid in its preparation, and yet it did not occur to them that such a possibility invited careful supervision on their part.

As a result of this ignorance many hundred people were rendered very ill, and not a few died.

Here we have a good example of the need of more knowledge of the effects which may result from the use of artificial methods in the preparation of food stuffs.

It seems to me that, under a state of things which involves such risks, the State may well enact a certain amount of knowledge on the part of persons who undertake the manufacture of products which may become such a source of danger.

Arsenic in Fuel. Contamination of Malt, and of the Air of Towns.

The same inquiry led to other observations, which also show one of the gradual changes which are taking place in our environment. The search for arsenic in beer revealed the fact that much of the malt prepared in the northern counties of England, and also elsewhere, contained a fairly large amount of arsenic, and that this arsenic was mostly derived from the fumes of the impure coke and coal burnt in kilns where malt is heated and dried. The large amount of arsenic present in certain samples of malt, led me to estimate the amount of arsenic which accumulated in the flues of certain chimneys where Yorkshire coal was burnt, and of stoves where gas coke was consumed. I found in a sample of coal soot over 5 grains, and in a sample of coke soot about 28 grains, of arsenic per pound. It was natural to expect that such an amount of arsenic in soot would lead to a distinct contamination of the atmosphere of a town such as Manches-

ter, where soot abounds. This, early in 1901, I found to be actually the case in Manchester, for I discovered that dust deposited from the atmosphere in inhabited rooms, in uninhabited lofts, upon the leaves of trees and shrubs, contained very material amounts of arsenic.

During the month of March 1902 there was a heavy fall of snow in Manchester, this was immediately followed by a heavy fog lasting one day. The snow, which was perfectly white before, was grey after the occurence of the fog. I collected the superfluous snow over a surface measuring exactly one meter square, and, from the quantity found in a sample of snow water, calculated that during a single day about 0.0000132 grammes of arsenic had been deposited on the small patch of snow under investigation. What may be the effect of the continual breathing of air containing frequently a distinct trace of arsenic? I cannot say, but the fact remains that the existence of large cities is associated with the contamination of the air with many products of which I have indicated only one. To satisfy myself that this inference was correct, I collected, under conditions similar to those I had observed in Manchester, samples of dust in one of the London suburbs, in the small town of Montreux in Switzerland, and in the open country near Ambleside; and found that the London suburban dust contained a material amount of arsenic, though less than the dust collected in the centre of Manchester. On the other hand, the dust collected in the lake district and in Switzerland either no arsenic or an inappreciable trace of the poison.

I do not wish to labor the argument, nor to suggest that the presence of a small amount of arsenic in the air of a town is certainly a source of danger. I wish rather to indicate the insidiousness than the potency of dangers associated with the gradual modification of our surroundings.

It might appear that air is not a food and should not be introduced into this discourse, but I contend that air and water are as much foods as beef and mutton, for without oxygen and water metabolism is impossible.

Disposal of Sewage. Pollution of Water and of Shell-Fish.

Man in his nomadic state was not troubled with the question of sewage disposal, for than he had a movable home. Now that large populations have become fixed over limited areas, the disposal of sewage has become a problem of such difficulty and magnitude, that it taxes to the utmost the ability of engineers, of municipal authorities, and even of state departments, without speaking of Royal Commissioners.

Certain cities are so situated that their sewage has to be thrown into the sea. Wherever a large number of individuals are congregated, certain infectious diseases such as typhoid fever are liable to occur, and this leads to a more or less extensive infection of the sewage, and of the tidal waters into which the sewage is discharged.

The tragic events which have lately followed the Mayoral banquets at Winchster and Portsmouth have roughly shaken the public indolence, and the moral of facts which scientific people have pointed out for many years has at last been understood.

Dr. H. Timbrell Bulstrode, in his able Report on Oyster Culture in Relation to Disease, which appeared in 1896 * had clearly stated "that there are cases where the risk of sewage pollution to oysters is so great and so considerable, that nothing short of complete diversion of the sewers or drains, or withdrawal of existing fattening beds or ponds from use, can be regarded as satisfactory in the public interest."

The Emsworth storage ponds belonged obviously to the category of dangerous ponds, as shown by Dr. Bulstrode's report and by the map accompanying it. The evidence was so great that the late Sir R. Thorne Thorne mentioned Emsworth especially as an example of much polluted pits. But for six years nothing seems to have been done to remove the danger, and it was necessary that several valuable lives should be lost to cause an action to be taken, an action for which the Fishmongers' Company is to be praised, provided that it does

* Supplement to the 24th Annual Report of the Loval Government Board, 1894-95. p. 82.

not stop short of a general exclusion from our markets of all the polluted oysters.

The general condition of things is well indicated by the following statement, appearing also in the report already alluded to: "A superficial glance at the maps with which Dr. Bulstrode's report is illustrated, might lead to the hasty conclusion that sewage is deemed to be of value—if indeed it is not actually sought for—in connection with the process of oyster-fattening and storage.*

Manufacture of Prepared Foods on a Large Scale.

I must now direct your attention to a danger of another kind, but still attributable to modern modes of living. The supply of fresh food to large cities is a matter of difficulty, which has given rise to the increased use of prepared articles of food which can be preserved for various lengths of time. Preservation by cooking or other means allows of a more economical utilization of meat than the simple division of a carcase into joints.

Derby Outbreak of Pork Pie Poisoning.

During the first week in September 1902, Dr. Howarth, the Medical Officer of Health for the Borough of Derby, was informed that several persons who had partaken of certain pork pies were seriously ill, being affected with a kind of diarrhoeal disease usually associated with food poisoning. In the course of the enquiries that followed, it was ascertained that at least 221 persons who had partaken of pies purchased at one shop in the course of a few days, had been similarly affected, and that four of them had died. Of the 221 persons, 131 were living in Derby, and 90 were taken ill in other towns. The four fatal cases belonged to the latter group, and it was apparent that pies which had been rapidly consumed in Derby had been less fatal than those which had been taken or sent to a distance.

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* R. Thorne Thorne, pp. xiv. and xv.

Careful investigation revealed the fact that the great majority of cases, if not all, could be connected with one batch of pies, baked on Tuesday, September 2.

On inspecting the premises where the pies had been prepared, Dr. Howarth ascertained that the owner conducted his business with more than ordinary care, and that there was no evidence of any contravention of any of the borough by-laws. There was not evidence to show that the flesh of any diseased pig had been used.

The results of this first part of the investigation were: (1) that the outbreak of illness was clearly connected with the consumption of a certain batch of pork pies; and (2) that these pies contained a noxious substance of some unknown origin. Outbreaks of food poisoning have, during the last few decades, been investigated both in this country and abroad; those connected with the ingestion of animal food have generally been attributed to the use of flesh of diseased animals, or to putrefactive changes which had given rise to the formation of poisonous alkaloids, known generally under the name of ptomaines. In this case I found no evidence of the presence of ptomaines in the pies, and I think that careful investigations of outbreaks of food poisoning will show that true ptomaine poisoning is a very rare occurence indeed.

On microscopical examination of the pies I found that the meat showed no evidence of having been derived from diseased swine. Many of the small pieces of meat which I examined were, however, partly covered with a layer of bacteria. These bacteria had invaded the surrounding jelly, which I found crowded with colonies of a bacillus. After a careful study of the character of the bacillus, I found that it resembled closely one described by Gaertner in 1888 under the name of **Bacillus enteriditis**, and I named mine **Bacillus enteriditis Derbiensis.** The distribution of the microbe led me to the conclusion that the meat had been exposed to faecal pollution after being chopped up, and before being baked. To test the correctness of my theory it was necessary to find out whether the meat had actually been exposed to such pollu-

tion, and whether bacilli of the kind discovered could have survived the baking process.

A visit to the premises where the pies had been prepared allowed me to realize more clearly than I had done before how many were the chances of infection, and how desirable it was that in the interest of manufacturers of comestibles, and more especially of the public generally, the sanitary authorities should be in a position to regulate the preparation of food exposed to contaminations.

On inspection of the premises where the fatal pies had been prepared I found that opportunities for pollution were numerous. I may enumerate them as follows:—

1. The meat, hung in an entrance passage, was exposed to occasional contact with persons and pigs going into the yard.

2. It was also exposed in the same place to dust from the street and from the yard.

3. The dust from the yard, which was used as a passage by men and animals (and where there were accumulations of refuse), was liable to be blown into the chopping-house where the meat and jelly were prepared, also through ground level gratings into the cellar where the jelly was often left for several days.

4. Live pigs were kept in the slaughter-house for at least one day, and sometimes for a longer time, before being slaughtered; the excreta of these pigs were allowed to gravitate towards a gutter in the centre of the slaughter-house, so that a pig affected with infectious enteritis would have soiled the floor of the slaughter-house. After being scalded, the carcase of the pig had to be hung over the same gutter, and as it was transferred from the tub to the hook some of its parts frequently touched the ground. The nature of the cleansing which followed permitted of the carcase and its parts being smeared over with a thin layer of filth, possibly not noticeable to the eye.

5. The men employed in the abattoir passed from there to the chopping-house, where the meat was chopped or minced

and where the jelly was prepared. They soiled the floor with their boots, which had come in contact with excreta in the slaughter-house. It was said that they changed their boots and washed thoroughly, but I found no evidence of their realizing the great importance of special care in that matter; and I saw that the floor of the chopping-house, which had recently been washed, was being rapidly covered with soil at the time of my visit.

6. The tub where the bowels and other parts were soaked, was in close proximity to the mincing-machine.—It was the usual practice to clean bowels in the chopping-house.*

7. The jelly-tins or bowls, and the scoops used for taking jelly out of the copper, were either regularly, or at least frequently, laid on the floor of the chopping-house. The vessels in which jelly and meat were placed remained frequently on that floor for hours.

8. No special precaution was taken to prevent hands and unsterilized vessels from coming in contact with the lukewarm jelly poured into the finished pies.

All these things, and many others which I need not mention in more detail, indicate numerous sources of pollution which should not be tolerated. Meat or jelly are quite as susceptible to pollution as milk, and a place where such things are exposed should be kept as scrupulously clean as a model dairy, or as an operating theatre. No surgeon would think of passing directly from a post-mortem room, where he had performed an autopsy, to the operating-room, or he would expose the person operated upon to dangerous infection. Dead flesh and jelly are far more prone to be affected by bacterial infection than living flesh.

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*Some of the water from a bucket containing the bowels was obtained by Dr. Howarth. This water had a dirty appearance. In order to find out whether this water might be fairly considered a constant possible source of pollution, I tested it for the presence of the bacillus coli, and found that this organism was, as expected, present in large numbers.

Beneficial Effects of Complete Cooking.

The only thing which has saved the consumer of pork pies, and other dainties prepared in the pork shop, from even more frequent disasters than have occurred is the sterilzation to which these articles are submitted during the process of cooking. What I say of pork applies also to many other eatables. It is obvious that it is possible by preventive measures to guard against such serious sources of pollution, and thus prevent the recurrence of such outbreaks as the one in question. A large amount of illness, the source of which is not always so evident, is undoubtedly due to similar pollution of other articles of food, and I have for many years attributed much of the epidemic diarrhoea, so fatal to young children, to contamination by bacilli of the milk identical with or allied to those found in the pies.

Temperature Reached by the Various Parts of a Pork Pie During the Process of Baking.

Baking is not so great a safeguard as might be supposed. The pies are, it is true, placed in a very hot oven, the temperature of which is more than sufficient to kill non-sporing bacilli, such as the bacillus enteriditis, in a few seconds. But a pie is so constructed that its central parts are reached but slowly by heat. The pie is surrounded in the oven by hot, comparatively dry air, the rapid evaporation taking place from the surface of the moist crust keeps for a time the temperature of the rest of the pie comparatively low. The meat does not constitute a homogeneous mass, it is separated from the crust by a layer of air, there is also more or less air between the small pieces of meat occupying the centre of the pie. All these things prevent the rapid penetration of heat. To satisfy myself that these views were not purely theoretical, I have made, with Dr. Howarth and Mr. Cope, observations upon the tempereature reached by various parts of pies baked in Mr. Cope's own oven. For the purpose of this experiment Mr. Cope had a certain number of pies prepared in the usual way, and placed in the oven, some at 4.30 p.m. and some at

5.20 p.m., on September 22. These pies were removed respectively at 6.17 p.m. and 6.11 p.m. before Dr. Howarth and myself, and we immediately took the temperature of the central parts of the pies, and also of the meat close to the bottom and top crust.

I could not devise any more reliable way of doing this than by plunging the bulb of the thermometer rapidly into the pie through the vent hole. A continuous record of the changes of temperature taking place in the pies during baking could not have been obtained on the premises, and would not have offered great guarantees of accuracy. The distance between the centre of the pie and the top crust having been measured on the stem of the thermometer, the instrument was plunged into the meat so that its bulb should reach at once the centre of the pie. This undoubtedly allowed a little of the boiling fluid which was on the surface of the meat to follow the bulb, so that the temperature observed must have, in every case, been higher than the actual temperature of the centre of the pie; but the error so produced was in the right direction, for it did not tend to make one under-estimate the temperature. After allowing the mercurial column to rise to the utmost, and seeing that it remained stationary, the temperature was read, the bulb of the thermometer was then pushed as far as the bottom crust, the temperature being again taken, the bulb was now withdrawn so as to come almost in contact with the top crust. As each of the ovens is heated chiefly by means of radiators situated above the pies, it was to be expected that the top crust would be hotter than the bottom crust.

In a first set of observations I found that the highest temperature reached in the central part of the pies was 47.2° C. These pies were said to have been under-baked (fifty-one minutes instead of the usual ninety minutes), but they had the appearance of well-baked pies.

In a second set of observations I found that the highest temperature in the centre of the pies was 86.6° C. These pies were said to be over-baked (107 minutes instead of 90 min-

utes), and they looked distinctly too much baked, their color being much darker than is usual.

Several facts were brought out by these experiments.

1. The temperature of the centre of a pie said to be under-baked, but having all the external appearances of being well-baked, may not exceed 47.2° C. A batch of pies prepared in a hurry might therefore be so cooked that bacteria might continue to grow in their centre during the greater part of their stay in the oven, and the bacteria would certainly not be killed.*

2. The temperature of the centre of a pie obviously over-baked, and acknowledged to be so, had not gone beyond 86.6° C., which means that, even after excessive baking, the temperature reached in the centre of a pie does not in any case exceed by many degrees that at which bacteria of low resistence are killed.

3. There was a difference of several degrees between the temperature of various pies.

The importance of these results will be better understood in the light of some experiments which I have conducted, with the assistance of Dr. A. Sellers, to ascertain the resistance of the Bacillus Derbiensis to heat. In these experiments care has been taken to ascertain the exact duration of exposures to certain temperatures. We found that the bacillus isolated from the pies, and cultivated in broth, was not killed when exposed in that fluid for twenty-four hours to a temperature of 50°C. (121°F.) in four experiments out of six.

It was only when a temperature of 60°C. (150°F.) was reached, that death of the bacillus was usually obtained in less than five minutes.

It is therefore obvious that the bacillus could easily resist the temperature to which the ce .tral parts of several of the pies which I examined had been raised, and that pollution of

*The appearance of the portions of pies which I received from Dr. Howarth at the beginning of this enquiry, gave me the impression that these pies which caused the Derby epidemic had been well-baked.

the meat in the chopping-house was quite sufficient to explain the Derby outbreak.

Another property of the bacillus explains how large masses of food may rapidly be infected. Its rate of multiplication is extraordinary high. Thus I found that, with a small particle of a pure culture of the Bacillus enteriditis, I was able to infect throughout several ounces of broth, meat jelly or milk, in less than two hours; 2 milligrammes of culture are capable of infecting in two hours 150 grammes of these materials, when they are kept at temperatures ranging between summer temperature and blood heat. In other words, 1 part of infective material may easily infect in two hours 70,000 parts of one of the foods mentioned. A single drop of polluted water, or particle of excreted matter, would therefore be capable in summer to infect a gallon of milk, broth or jelly in a few hours.

Carriage of Food From a Distance.

If time permitted, I would be able to show how frequently cows' milk is infected at the farm through dirty milk-cans, and how infectious bacilli multiply in the milk sent from the country to towns in hot railway vans. In this way a quantity of infectious matter, originally too small to cause a definite danger, is capable of increasing to such an extent as to render milk distinctly noxious.

During the past few years a large number of samples of milk sent to Manchester have been tested in my laboratory, by means of inoculation experiments. A small quantity of wholesome fresh milk injected under the skin of a guinea-pig causes no inconvenience to the animal, but infectious milk produces various forms of illness, some of which are rapidly fatal. Many of the cases of fatal illness are due to bacilli resembling those which I have mentioned in connection with the pork pies. It seems, therefore, desirable that infants should not be fed on such milk.

The effects of refrigeration, during transit, upon the properties of milk received in Manchester from various counties,

offer a proof of the dangers connected with this multiplication of bacteria in milk, and also that the danger is not without remedy.

About 50 per 1000 guinea-pigs, inoculated with non-refrigerated milk coming from a distance, died within ten days after inoculation. Not more than 3 per 1000 died when inoculated with milk which had been kept cold during transit. If the milk had been refrigerated immediately after milking, no death at all would have occurred, unless the milk had been obtained from much-diseased cows.

Preservation by Means of Chemical Preservatives.

Another source of danger, which I must mention before concluding, is that which results from the addition of preservatives to perishable food stuffs, such as meat, milk, cream, butter, etc. Dealers in those articles are exposed to serious losses owing to putrefactive changes, which occur more or less rapidly in such articles. In most cases these putrefactive changes can easily be prevented by refrigeration; but in many cases that method is not economical or convenient, and therefore chemical substances, such as salicylic acid, boracic acid, formalin, which arrest putrefaction, are extensively used by various trades. Some of these substances, when taken in sufficient quantities, have been shown to be more or less detrimental to health; and as a matter of fairness to the consumer, it is obviously desirable that the addition of such substances should be made known to the purchaser who is not anxious to try upon himself experiments regarding the action of drugs taken in small doses over an unlimited period of time. It is not, however, to this aspect of the question that I wish to attract attention specially. There is another aspect which is of more importance.

Some of the preservatives in common use, although they are able to check the growth of putrefactive organisms, are unable to arrest that of some of the disease-producing bacteria which may be present in food; and this is a serious source of danger.

During my investigation of the Derby outbreak, I was struck with the absence of putrefactive changes in the jelly of the pies, and previous experiments led me to infer that a preservative had been added to it in fairly large proportion. On analysis I found that the preservative used had been boracic acid.

If such a preservative had not been used the pies would rapidly have become stale, and few of the stale pies would have been eaten. Instead of this, the pies maintained the appearance of freshness whilst the deadly bacillus was multiplying in their midst. It will have been noticed, that the pies which had been kept for some time had proved more noxious than those which had been consumed at an earlier date.

To obtain more accurate data on that point, I added to some broth and to some jelly four times more boracic acid than is considered sufficient to preserve food, and then inoculated those media with the **Bacillus enteriditis.** The bacillus grew abundantly in this comparatively strong solution of boracic acid. Moreover, I found that the bacillus remained alive for three months in broth to each 500 parts of which 1 part of boracic acid had been added (140 grains per gallon).

Apart, therefore, from the action which some preservatives may have upon the human frame, it seems evident that their use is attended with a definite danger; for, although they may be able to check putrefaction, they do not prevent the multiplication of certain infectious germs. The consumer, being deprived of the useful index of staleness which putrefaction offers, is therefore exposed to consume dangerous articles which he would have rejected otherwise.

Conclusion.

I must now conclude these remarks. I have dealt with a few instances only of the dangers lurking in food, such as it reaches us under the complicated conditions by which civilization has surrounded us. The nature of these dangers indicates clearly, I think, that they can be met only by thorough

legislation and administration. When one considers that the question of the purity of food is only one of the many with which our Public Health service has to deal, and how important such questions are to a nation, one is tempted to ask why the importance of this work is not more fully recognized. It seems that the magnitude and technical difficulties of the task should be enough to occupy fully a State Department, headed by a Cabinet Minister of great ability. [S. D.]

THE DIETARY EDUCATION OF THE PEOPLE

By

H. M. Speechly, M.R.C.S. Eng., L.R.C.P. Lond.

Pilot Mound, Man.

It will be noticed that the heading of this paper refers to "people," an inclusive noun which here is intended to include our Canadian population as a whole, not merely patients, but everyone, and therefore not only the sick and the possible sick people but the medical people, both doctors and nurses. It is instructive to note in the daily papers that recently there was formed in Winnipeg a Dietary Association which was described as an enthusiastic organization designed to teach common sense in the choice of food for the human beings. I have not the slightest idea as to who are the founders of this Association, but, if they run along the lines of common-sense, they deserve the hearty support of the medical profession. After all, unless all kinds of science including every branch of Medical Science are based on common-sense, they have no standing and must be classed as "science falsely so-called." Science is in fact common-sense applied. In nothing is this so true as in the all-important matter of diet. The astonishing fact is that many people think that dieting is mere faddism. Let me say at once that directly anything becomes a fad it is invested with humbug and that I for one will have nothing to do with it. Quite a number of people think that as with religion so with diet the matter needs neither study nor training, that in both the tradition of the elders is all-sufficient. A horrible delusion which accounts for the ignorant blunders in both branches of knowledge!

But why in the world should people want to form a Dietary Association? A trifle unorthodox, is it not, with so many learned medical persons, religious leaders, and intellectuals in existence, not to speak of M.P.P's. Clearly there must be a demand for education along these lines or why should any set of persons take such a course as to form a Dietary Association? It is indeed a fact that people have waited in vain for leaders in physiology, in medicine, in surgery, in chemistry, and in religion to instruct them. We of the medical profession are the natural instructors in this matter of diet but we have, as a profession, failed miserably. Why? Because we do not know how to diet ourselves and our families. No one ever taught us how and when to diet except in general terms. Here and there solitary prophets arise but the tendency is to regard them as a little "batty" on the subject. If you desire the proof that the medical profession knows and cares precious little about diet, just go to their private tables, their meals at the club, or their banquets, and observe their violation of the laws of diet. "Quis custodiet ipsos custodes?" The guardians of the public health apparently prefer to qualify themselves for appendicitis and other effects of over-eating. They place themselves in the position of those politicians who propose to catch votes by making the so-called Temperance Cause part of their platform but are themselves addicted to alcoholic excess, the main reason for the failure of true temperance, which also, afterall, is really a matter of dietary education. But how many of our profession get real detailed instruction in Diet? It is true that we have a few fine samples of dietary blunderers. In fact, large numbers of highly intellectual people are mere children in dietary matters who cherish delusions about the healthiness of raw apples as sleep-inducers or the power of a raw onion with a bread-crust at bedtime as a panacea—a panacea, mark you!—for insomnia. Looking back over the past twenty-five years, I can see very little improvement along the lines of dietary education of our medical students, to which class I still belong, for, believe me, I am not here setting up as a learned professor of dietetics. Rather I would appear

as one still groping after a knowledge that should have been instilled into my early years of medical training. I claim that despite all the teachings of Metchnikoff and Lauder Brunton our young medical men are taught too much about drugs and too little about feeding the body. Oh, yes, we know all about the theory of the digestive juices and of digestion from a physiological stanpoint, but we do not study the varied effects of diet with a view to our own personal practice and with a view to practicing what we preach. Too often we bolt our food, over-eat ourselves, take wrong articles of diet, and generally demonstrate either our total carelessness or our total ignorance of diet to the people. Naturally, as young men, we inherited certain beliefs and prejudices, more or less defective, about diet just as we have inherited other beliefs, which in the clearer light of exact knowledge have to be re-adjusted. Yet at the clinics no emphasis is placed on exact, detailed dietary. Even the house-physician and house-surgeon is trained dietetically only in general terms. Usually he chalks up on the board under the dietary heading—"Fever" or "Middle" or "Full." The house-surgeon is hardly ever taught to consider diet as having any bearing of importance on surgical cases, though the progress of a case may be hastened or delayed by the effect of diet. At present far more attention is being paid to the surgical treatment of diseases of the digestive organs than to the methods of prevention of those diseases by proper dieting. It ought to be our aim to prevent appendical troubles just as much as it is to prevent enteric fever by paying attention to a clean and correct dietary. How much knowledge has the average newly-fledged medical man about the effect of diet on tuberculosis or in producing it? What does he know about the attitude of digestion towards diseases of the throat or, say, asthma? Unless he is an exceptional man he is all for treatment by drugs or surgery. Again, is there any subject upon which the average young medical man is more green than on the management of infant dietary, although in private practice the bulk of his work will be amongst women and children? Or yet again, has our young medico, as a rule, many ideas about the

relation of diet to diseases of women? It is sufficient to ask these questions to demonstrate at least the need of a good dietary education of our people and primarily of our medical men. I would urge the necessity of establishing a Chair on Dietetics in relation to health and disease in all our medical schools with the object of instructing our rising generation on the values of food, on the studying of the patient's needs, not by fixed rules, but according to that patient's personal equation, and on the extraordinary influence played by what we call Auto-intoxication in the production of disease. By this means a rational Medicine will go one step further in cutting out of the body politic the parasitic disease called Quackery, both the medical and non-medical kinds of that complaint.

THE NEED OF TRAINED DIETITIANS IN INSTITUTIONS FOR THE TREATMENT OF TUBERCULOSIS.

Herbert Maxon King, M.D., Physician in Chief, Loomis Sanitorium, Liberty, Sullivan County, New York.

In the institutional care of the tuberculous invalid the most difficult problem which presents itself, whether from the point of view of therapeutic efficiency or from that of economy, is the one of diet. Underfeeding on the one hand and undiscriminate stuffing on the other are alike fatal to success in treatment, while a badly constructed dietary is usually mischievous and always costly. To maintain the highest degree of efficiency in an institution of this character, the dietary must, of necessity, be under the supervision and control of some one competent and skilled in practical dietetics. The ordinary cooks and caterers usually available are no more competent to manage the cuisine of a Sanitorium than would be the practical but untrained nurse to officiate at a major surgical operation. With accumulating experiences it is becoming more and more evident that an educated and specially trained dietitian must be included in the professional staff of a tuberculosis sanatorium.

Nevertheless, in this country at least, the dietary in most such institutions is still left largely in the hands of ordinary cooks and even less skilled caterers under the somewhat vague and indirect guidance, to be sure, of the physician in charge whose other duties render a painstaking and scientific direction of the cuisine well nigh impossible. The available funds of the institution combined with the taste and capacity of the patient practically determine his diet. It is not because institutional physicians have failed to recognize the need of a

more systematic and scientific plan that such a condition exists, but because of the extreme difficulty of finding suitably trained educated dietitians to undertake the work. This special and, from the present view point, all-important field has apparently been neglected—at least it does not seem to have been developed—notwithstanding the far-reaching and most attractive possibilities which it offers. It is a comparatively simple matter to secure the services of capable medical assistants and splendidly trained nurses, but quite another story to find trained dietitians for sanatorium work.

As an illustration of what can be accomplished by the introduction of scientific dietetics in the sanatorium, a recent experience in one of the divisions of the Loomis Sanitorium is interesting and certainly instructive. The Annex is the semi-charitable division of this institution, with a capacity of forty patients, equally divided as to sex. Only ambulant and presumably curable cases are admitted and the patients are almost exclusively from the working classes. Under my direction the administration of this branch of the Sanatorium is in the hands of a Medical Assistant and a Superintendent. Under the old regime the arrangement of the menus was left largely to a rather superior cook, subject to the approval of my Medical Assistant. The catering was done by the Superintendent. The three meals daily were supplemented in such cases as failed to show weight gains by extra diets of milk and eggs, taken between meals. At intervals rough estimates of the chemical constituency of the food were made. The average consumption per patient per diem was approximately:

Protein	156 grammes
Fats	215 grammes
Carbohydrates	323 grammes
Calories	3960

This dietary is by no means ideal. The excess of protein and fats is at once conspicuous. The bulk of these constituents was made of as might be expected from milk, eggs and meat, chiefly from the first two. Patients were not restricted as to the choice or amount of the fare provided and as a result

individual excesses in certain constituents were common. The cost of this dietary in 1905 was approximately 35 cents per patient per diem, but during the two years following the increasing price of all food stuffs brought the cost up to from 38 cents in the summer to 42 cents in winter. From the point of view of therapeutic efficiency, moreover, this dietary was faulty, for while weight gains were satisfactory, digestive disturbances were common, as might be expected, from a diet so constructed.

Under the new regime the catering and arrangement of the menus are entirely in the hands of a trained dietitian (at present Miss Charlotte Strickland, a graduate of the Boston School of Domestic Science). The combustion value in calories and the chemical constituency as to proteins, fats and carbohydrates are, from time to time, according to varying needs, prescribed by my assistant or myself. In the dining-room there are three distinct "messes"—the newcomers and "small eaters" at the Doctor's table, the "normals" at a table by themselves and the "working corps," composed of convalescents on hard manual labor, at the nurse's table.

The exact consumption of each food constituent is measured for each table and for each meal and at the close of each day is carefully tabulated. Individual excesses and deficiencies are guarded against. The food is weighed and measured before it goes to the patient and the residue is again weighed upon its return to the pantry; the diet is constantly under perfect control.

The chief cost of a dietary is its protein constituent. As a rule the ease with which a protein can be prepared for the table is, roughly speaking, a measure of its cost. This is particularly true of such commodities as meat. A tender porterhouse steak, for instance, needs little time or skill in preparation for the table, while a scrag end of beef requires most careful cooking by one who understands the art to make it equally attractive, yet a penny-worth of the protein of the latter is several times that of the former in nutritive value, and when properly prepared and garnished is almost equally attractive.

When eggs are more than twenty-five cents the dozen (and fresh eggs are often from thirty-five to forty-five cents) they are a very extravagant form of protein, though their preparation for food is practically nil.

It is the recognition of such points which gives the trained dietitian every advantage economically over the ignorant cook or uneducated caterer.

During the month of December just past almost all food stuffs reached higher prices, I think, than ever before in our experience, yet under the new regime at our Annex the cost of the dietary (raw material) was only twenty-eight cents per person per day, and in nutritive value averaged as follows:

	Table I	Table II	Table III
Proteins	129 grammes	132 grammes	139 grammes
Fats	112 "	116 "	120 "
Carbohydrates ..	389 "	400 "	431 "
Calories	3165	3260	3453

This diet is fairly representative of that which we have employed during the colder months of the year. Compare it with the diet of the old regime and the superiority of its construction is at once apparent. With this dietary at this season digestive disturbances are practically unknown, while weight gains are most satisfactory.

In view of our experience it seems to me no further argument is needed to show that the trained dietitian should become an integral factor in the staff of the sanatorium.

This field of dietetics seems to be especially within the sphere of woman; to offer to the capable a broader scope than any one may have hitherto realized, and as the demand certainly exists we may reasonably expect the supply to be forthcoming.

A VISIT TO A HOSPITAL DIET KITCHEN.

By Charlotte A. Aikins.

There is no place in the world quite so interesting to me as a hospital, and no part of a hospital so interesting than the diet kitchen at meal time when the trays are all set and the food is being despatched to the different rooms and wards. One never knows so much about the management of the feeding of patients that more cannot be learned. After a good many years of experience in hospital work, during which time I have visited diet kitchens in probably at least half a hundred institutions, one should be able to compare methods, to study the reasons for success or failure,and perhaps offer some suggestions to those who are pondering over how they may improve the food service of the hospital, and make it more satisfactory to all concerned.

The last visit I made to a hospital diet kitchen was during the serving of the evening meal. There were fifty-nine trays for ward patients and forty-nine for private patients.

Because, so far as one could judge, by observation, the food service in that hospital seems to be a success, I shall try to relate my observations somewhat in detail.

In the first place, the whole dietary system was in charge of a trained dietitian, a graduate of a cNw England School of Domestic Science. She is not the housekeeper and dietitian, she is simply and solely the dietitian. She does that one thing and does it well. I am fully convinced that the best results in food service will not be reached until the diet kitchen service is view by hospital managers and superintendents as of equal importance with the operating-room service. If it is necessary for the operating-room to be in charge of one trained head, whose business it is to achieve success in that department so far as success lies in her hands, it is surely quite as important that the food service for a hundred or more sick people, be in the hands of one person who can give her whole time to the preparation of the food supplies provided by the hospital into

wholesome appetizing meals for the sick and those who care for them.

This trained dietitian has a corps of six pupil nurses as her assistants in the preparation and management of the food service. These pupils represent seniors, intermediates and probationers or juniors.

Those who are in the probationary or junior term are given the less important parts of the work to do, and the seniors are given the management of the serving pantries on each floor under the supervision of the dietitian. Besides these six nurses and the dietitian, there were five maids busy carrying the trays to the elevator and getting them to the wards and rooms. Herein is a strong point of contrast with many other hospitals which I have visited, and a point that is a strong factor in determining the success or failure of the hospital food service. The lack of sufficient helpers, or of proper co-ordination of various factors, is one of the strong reasons for an unsatisfactory food service. If some of our boards of managers could know of the real difficulties encountered in trying to serve meals to a hundred or more sick people, with perhaps only two or three or four workers, some of these difficulties would be speedily removed. If they could be induced to spend an hour at meal time in the diet kitchen and wards and get a realizing sense of the amount of work that is involved and the number of details to be kept in mind in preparing and serving one meal, they might perhaps be willing to spend a little more for brawn and brain in this department and a little less on plate glass and marble in other parts of the institution.

The trays in this diet kitchen which I visited were all the little wooden, invalid trays that could be stacked one above another, thus economizing space. They did not present quite such an elegant appearance as some trays which I have seen. The equipment was neat and plain and the kitchen was, even during this busy hour, as scrupulously clean and neat as the most fastidious invalid could desire.

I do not remember seeing even one silver tea set. The

dishes were not at all of an expensive quality, but the arrangement and management was effective. The plates had been kept hot till the last thing before the hot food was served. One thing that they had which most hospitals which I have visited might have, but do not, was a round cover for each plate. These covers were of aluminum or nickel plate, similar to the covers used in restaurants in serving hot foods. The covers had no handles, but each had an opening in the top that permitted the escape of steam, and also made the cover easier to handle. These covers were stacked one over the other in the heating apparatus for dishes, and were a great improvement over the use of cheap saucers and plates for covering hot foods.

What did they have for supper? On some of the private trays which were served while I was in the diet kitchen, they had boiled or steamed rice, baked potatoes, porterhouse steak, a small dish of some kind of salad, a small square of sponge cake, bread, butter and apple sauce. The bread was thinly cut from a loaf giving a small sized slice, and each slice was divided diagonally, making an attractive looking triangle. The bread was cut in quantity, and kept covered with a damp cloth till it was put on the plates. There were a number of special diets and some trays for which special requests had come in from patients, for some special article of food. I noticed chicken salad, creamed chicken and oysters on different trays.

The main or central diet kitchen was larger than a good many such kitchens I have visited in much larger hospitals. One of the great many defects in the construction of a great many modern hospitals—even those built within the last five years—is the miserably inadequate space allowed for diet kitchens. There is not room enough in some of them for even two people to work comfortably at once, and yet perhaps in such a diet kitchen meals for forty or fifty sick people are supposed to be properly served, and gotten to the patient in a wholesome, appetizing condition.

The nurses in this diet kitchen, of which I have written,

do practically all the cooking for the private patients, and prepare the special invalids' diet for the whole hospital. The maids assist in the rough work and cleaning, do the washing of the dishes and assist in various other ways about the wards.

The main kitchen is in general charge of a housekeeper.

The things which seemed to me worthy of note were:

1. The whole dietary system was in charge of one trained woman whose business it was to teach and supervise and direct, and who was not expected to do fifty other things besides.

2. Her assistants were nurses who took an interest in preparing the food for the patients in the best possible manner, and who understood something of the general needs as regards diet for the sick.

3. There were plenty of people to do the work as it ought to be done.

4. The diet kitchen seemed large enough and well equipped for handling a lot of trays without confusion.

5. The food was simple, plain, of good quality, and well cooked.

6. The executive ability of the dietitian was plainly in evidence. She not only knew what ought to be cooked, and how to cook it, and serve it, but she had brains enough to get the best service out of her helpers.

Without this executive ability in a dietitian I cannot see how real success in hospital food service is possible. It makes little difference how many diplomas from Domestic Science Institutes she has, or how well she herself can cook, unless she knows how to teach, and how to handle people, unless she has a real capacity for details, unless she can keep an eye on the whole situation, can keep her head cool, her temper sweet, and arouse in her assistants a genuine enthusiasm for the success of that department, she cannot be called a success as a hospital dietitian, and she cannot evolve a satisfactory dietary service.

—From McDonald Institute, Guelph.

EDITORIAL

Wake Up Colleges of Physicians and Surgeons, to Your Rights!

We publish with pleasure Dr. Kennedy's letter. In our Editorial of the March number certain points regarding Western and Dominion Registration are considered to be misrepresented. If so, we are glad to state the facts given for the benefit of our readers. Which body has the power of Registering medical men at the present time? The **Canadian Medical Association** or the **Colleges of Physicians and Surgeons of the Province?**

It is very good of Dr. Roddick and the Canadian Medical Association to take an interest in having the Dominion Medical Act passed and now amended, so as to bring about Dominion Registration, though they seem to be assuming that the various Colleges of Physicians and Surgeons have abdicated their right as controllers of Registration in their respective Provinces. The way Western Federation was arranged was legally in order and the rights of each registering body recognized. The method of procedure was as follows: The medical profession in the various Provinces expressed a desire for Western Federation. This was discussed at various meetings. The Colleges of Physicians and Surgeons felt it their duty to recognize this desire of the profession (note, the Colleges of Physicians and Surgeons of Saskatchewan had only been elected shortly before the meeting at Banff). Three delegates were elected from each council and a mutual understanding was reached. Final details were to be arranged when each College of Physicians and Surgeons had accepted the terms.

This is the proper procedure for anything regarding Registration, which is entirely the business of the various

Colleges of Physicians and Surgeons and should be dealt with by their councils alone. Which is the highest tribunal in medical matters in Great Britain? Surely the British Medical Council, not the British Medical Association. Imagine the British Medical Association dictating to the British Medcal Council!! And yet this is what the Canadian Medical Association is practically doing to the various Councils of Physicians and Surgeons by taking upon itself the arrangements for Dominion Registration. In fact, it is laboring under the delusion that it is the highest tribunal in Canadian medical matters. The highest authority in medical matters in the Dominion are the Councils of Physicians and Surgeons of the various Provinces.

We are told that the final decisions regarding Western Federation as well as Dominion Registration are to be made at the Annual meeting of the Canadian Medical Association at Toronto in June. The West considers that Western Federation is a matter to be settled by their Colleges of Physicians and Surgeons, bodies elected by the profession at large, of Western Canada. Dominion Registration, we are told, is to be handled by a committee of the Canadian Medical Association, a body which was lately incorporated by Eastern medical men and to which medical men of good standing, on paying a fee of five dollars, can be admitted (but which has only about 1,500 members—Ontario has 4,000 Physicians alon !) This body has absolutely no legal status so far as registering a medical man is concerned. It openly says to the proper authorities, you must accept our ruling; we are going to get this act through. Is it any wonder that B. C. Council of Physicians and Surgeons sent the telegram referred to by Dr. Kennedy to Dr. Roddick? Is it any wonder that the Council of Quebec desire to know where they are? The only wonder seems to be that the Colleges of Physicians and Surgeons of each Province have not called a halt and exercised their rights to bring about Dominion Registration by collective action This may be accounted for by the apathy of the members, if the profession of Manitoba is a criterion—

as one district took so little interest that no representative was elected on the Council, and another elected its representative, it is said, by two votes. Some years ago the Council gave its rights to another body. If this spirit permeates through the Colleges of the different Provinces, it is no wonder another authority usurps their rights. But let us rejoice, there are signs of awakening amongst the rank and file of the profession. Much has been allowed through ignorance of proper procedure and rights, but knowledge is power.

It does not speak well for the true interests of those in whose hands the welfare of the Canadian medical profession has been that it should need the stimulation of the West to stir itself to perform its duty. Let no one ever infer that this journal has not systematically advocated Dominion Registration—not only Dominion Registration, but to the amusement of some, World Wide Registration has been suggested. Western Federation came only because of the apparent hopelessness of Dominion Registration being taken up by the proper authorities. Now it is apparent the good of Western Federation is not only to stimulate the East to activity, but to see that the East arranges matters in such a way that their Councils of Physicians and Surgeons agree with those in the West. All the West wants is a "square deal" to all Canadian medical men, whether they come from the East or West. One cannot help harping back to the seeming absurdity that because Dominion Registration is delayed a year, Western Federation should also be delayed. The Councils of Physicians and Surgeons, having come to a mutual basis through their delegates, could go ahead and settle the Western unity. The determination with which certain members insist that Western Federation is not a stepping stone to Dominion Registration makes one ponder regarding their reason. Surely they don't believe Westerners would be content with Western Federation alone! Instantly that was obtained the West would work to bring about Dominion Registration. "The whole is greater than the part"—but we get the whole generally by first getting the parts. The spirit that demands all

beyond the Great Lakes be called Western is not Provincial but National in truth. The hopelessness of the Union of the Whole caused first the desire for the several parts which are laboring under similar conditions and difficulties to unite. These united—as the Eastern Maritime Provinces have done—could very easily join in the Greater Union of the Dominion.

Let the various Colleges of Physicians and Surgeons act, then we shall have Dominion Registration, but it is doubtful if the Canadian Medical Association has the slightest legal status to act. And it is hoped that the step taken by the British Columbia Physicians and Surgeons will awaken the other Councils to their duties. God speed, Dominion Registration, but let us have Western Federation in the meantime.

Warning!

We are publishing Dr. Lydstone's letter—knowing nothing about the American Medical Association's methods of election of delegates. The Canadian Medical Association is to meet in June in Toronto and we vividly remember the casual way, last year, the names for the council were shouted out, chalked up on the board by the Secretary, and when the requisite number had been reached the nominations at once closed and those nominated elected without further consideration. May the election of Council this year be taken more seriously.

CORRESPONDENCE

WESTERN FEDERATION AND DOMINION REGISTRATION.

To the Editor of the Western Canada Medical Journal.

Dear Sir:—Your article in last month's issue is opportune, but as it is in some respects slightly misleading, I trust you will allow me to explain as briefly as possible the present status of these two closely related subjects.

The representatives of the four Western Provinces, at their conference at Banff last September, finally agreed on the basis on which they could join for the purpose of examination and registration. I believe that the resolutions embodying the basis of union have been published, but the main features were:

1. The formation of a Federated Council, elected by the four Provinces, to which should be delegated the power of examination. A candidate passing an examination before this council would be entitled to register in any of the four Provinces on payment of the Provincial Registration Fee.

2. The requirement of a higher standard of preliminary education; that standard being the education possessed by a successful student at the end of his second year in Arts.

3. A provision enabling practitioners who had been in actual practice for five years in any of the four provinces, to register in any of the others on passing an examination in the final subjects only, and also, of course, on the payment of the provincial registration fee.

This basis of union was agreed on by the representatives, but they had to go back to their respective provinces and ob-

tain the endorsation of the profession before further steps could be taken. It was arranged at Banff, that on the chairman being notified that this endorsation hand been obtained, he would call another meeting to perfect the details and arrange for the practical carrying out of the scheme. That meeting has not been called. The endorsations have not yet been obtained, Saskatchewan has, as yet, taken no action, although I believe they are willing to do so. The British Columbia Council received the report of the representatives, and, I understand, tabled it until they found what developments were to be expected along the lines of Dominion Registration.

There the question of Western Federation stands at the present, and there it is likely to stand until after next June at any rate, when the Canadian Medical Association meets and receives the report of the committee on Dominion Registration.

Let us turn now to the latter.

The Canadian Medical Association, undoubtedly stimulated by our action in the West, at its meeting in Winnipeg last August, re-affirmed its desire for Dominion Registration, and appointed a representative committee to assist Dr. Roddick in getting an amended Canadian Medical Act through Parliament. The committee met in Montreal in November, the only Provinces personally un-represented being Alberta and Saskatchewan. A thorough discussion resulted in a basis of agreement being reached as to the amendments that were necessary to make the so-called "Roddick Act" acceptable to all the Provinces. These amendments were printed and sent to the Medical Councils of all the Provinces of the Dominion. I am not now going into the terms of the amendments further than to say that, on the ques ion of retroaction, which has always been one of the stumbling blocks, the final proposition was, that a man who had been in practice for ten years, should be entitled to register without examination.

This, however, was further modified, by giving any Province the right to examine these men if it so wished. It was held that the Eastern Provinces would not avail them-

selves of this privilege, or exact this examination, and the ten year clause would remove a fertile source of trouble and irritation along the border lines between the Provinces. In the West, where conditions were different, the Provinces might, for a time at least, exact this examination, particularly if a Province found it was in danger of being flooded with men from the East. It is to be noticed that, while this meets the very strong wish of the Eastern Provinces, it protects the Western even more adequately than the five year clause and examination in the final subjects only of the Western Federation, as each Province retains the right to examine, whether they wish to do so or not.

The bill, as thus finally amended, was then ready for Parliament, and there was good reason for believing that it would have passed into law this present session when it was held up at the express request of British Columbia, who desired that it should be postponed for one year, in order to allow a more deliberate and thorough discussion of all its provisions. This is where I think you have been (unintentionally, I doubt not,) unfair to the East, to authority or headquarters, and to the Roddick Bill. It was the West, not the East, which prevented this bill from becoming law this present year. I, personally, saw the telegrams which passed between British Columbia and Dr. Roddick, and can vouch for the accuracy of the statement.

Further, let us be fair. There is no desire on the part of the East to control Western matters. They could not do so, wished they ever so much. Neither is there the slightest inclination to retard the progress of the West medically. They rejoice in our success, they applaud our progress, they gladly acknowledge a debt of gratitude to us for stimulating into life the project of Dominion Registration. They say, "If we fail to carry Dominion Registration, go ahead and complete your Western Federation, but, as the former is more desirable, from a national as well as a professional point of view, let us do our utmost to bring it about."

As a Western man, and a promoter of Western Federation, so say I. "The whole is greater that the part," and I would rather have Dominion Registration than Western Federation. Of the former we can be nationally proud, the latter gratifies only a sectional pride, and surely, we of the West, are not going to write ourselves down narrow provincialists, when we can help along a scheme which is national in its scope, and makes for breadth and unity throughout the whole Dominion.

A word as to time. You say, in your March issue, that few seem to know that the Roddick Bill will take years to become a workable factor. In this, I think, you are misinformed. If it is agreed upon and sustained by the Provincial Representation in Toronto next June, the bill will become law at the next session of the Dominion Parliament, and, concurrently, the Provinces which have not yet enabling legislation, can pass their respective measures, immediately following which the first Dominion Medical Council can be elected. It would take just the same time to get Western Federation into working order, as neither British Columbia nor Saskatchewan has enabling legislation, and neither legislatures do not meet until next autumn or winter. Apparantly, just at the present, the only obstacle in the way of either. or both, is the desire of British Columbia to have a little more time to think over the latest proposition in the Dominion Registration programme, and, in so much as the profession of British Columbia has already recorded itself in favor of a proposition which would give them much less power over the guarding of their portals than the proposed clause in the Dominion Registration Act does, I cannot believe that they will, longer than is absolutely necessary, interpose any obstacle to the consummation of a project which spells unity, high standards, breadth, nationalism and the liberalization of our "liberal" profession which has always been a reproach and a disgrace.

In conculsion, let it be remembered that there are conditions created by the British North American Act, conditions

created by the old laws in Ontario, national conditions in British Columbia and in some of the other Provinces, all of which have to be considered in the framing of a new and comprehensive act which will govern medical affairs for all future time.

There is little sectionalism, and assuredly no jealousy, of the East toward the West, or any desire of control. But the settlement, to be permanent, must be found satisfactory to all parties, and a year is not too much to obtain this result. I certainly do not class myself as a "wait-a-bit," but a little patience, and a little more continuous effort, and I am satisfied we shall have medical affairs in Canada on a basis of which we can be justly proud.

G. A. KENNEDY, M.D.

MacLeod, Alta.

ARE THE ELECTIONS IN THE A. M. A. AND ITS CONSTITUENT ASSOCIATIONS FAIR AND LEGAL?

Editor Western Canada Medical Journal.

As is well known, I have for some time been endeavoring to institute a reform movement in the politics of the A.M.A. and its constituent bodies. In furtherance of this movement I herewith submit to various journals for publication certain facts which, it seems to me, should prove to any reasonable or fair-minded man the logic of my contentions.

1. The voting unit of the A.M.A. is the legally qualified member of the district or county society. If this voting unit is not a voting member of the A.M.A. he is not legally qualified to vote for any officer who functionates as an elector in the A.M.A. Note, please, the following:

a. The voting unit in the district or county society votes for a councillor or councillors.

b. The council votes for state delegates.

c. The state delegates vote for delegates to the A.M.A.

d. The delegates to the A.M.A. elect its officers and through these officers transact its business.

The voting units are large non-members of the A.M.A. and not legally qualified to serve as electors in that body.

According to Dr. W. B. Dorsett, of St. Louis, Mo., 295 out of 747 members of the St. Louis Society are non-members of the A.M.A. and, therefore, not qualified to vote for any officer who, or policy which, is directly or indirectly concerned in the official or business management of the A.M.A. **And yet they do vote, the members of the A.M.A. paying a premium for political rights which are given to non-members**

free of charge so far as the elective franchise in the A.M.A. is concerned. What is true of St. Louis is true of Chicago and every other large city. In the Chicago Medical Society there are 503 non-members of the A.M.A.—these are all illegal voting units of the A.M.A. This throws the balance of power into the hands of the city members of the A.M.A. with a vengeance, and it is a power which can readily be abused.

According to the A.M.A. directory there are 73,478 members of the state societies in the United States. Of these only about 35,000 are members of the A.M.A. More than fifty per cent., therefore, of the total votes cast in A.M.A. politics are illegal and absolutely unfair. In Illinois there are 5,246 physicians who are members of the State Society. Only 3,310 of these are members of the A.M.A. Nearly 2,000 men, therefore, vote or are permitted to vote in A.M.A. politics in Illinois alone, who have no legal or moral right to vote. Nearly fifty per cent. of the voters in the New York State Society are non-members of the A.M.A., hence vote illegally. When one considers the enormous financial and professional interests of the A.M.A., these figures are startling.

2. Affiliated bodies.

I doubt if history can show a more ludicrous political farce than the affiliated special societies in the A.M.A. There are ten in Chicago, each represented by a councillor. One may belong to as many as he likes—to all, if the men in control of these organizations see fit to use them for political purposes. As each member is supposed to be a member and voting unit in his local society, he has as many votes in A.M.A. politics and in the constituent bodies—local and state societies—as he has memberships in the affiliated bodies. Thus, in Chicago, if he belongs to ten, he has ten votes for councillor in the affiliated societies; one for councillor of his branch society and one for councillor at large. Thus he has twelve votes to the ordinary member's two! Should he chance to be, first, a councillor, second, a state delegate, third, an A.M.A. delegate, he has fifteen votes in all to the ordinary

member's two! Should he chance to be an officer of the A.M.A. this means fifteen votes for himself!

The local Trustee of the A.M.A. in Chicago has been accredited with membership in five affiliated bodies. As he is a Councillor, and State Delegate, his total vote—for himself and coterie of supporters—is, therefore, nine!

Can the illegal vote of the affiliated bodies be controlled and used for partisan political purposes? Very easily—in fact it is so used. Of the eighteen Councillors who voted against the A.M.A. reform resolution recently adopted by the Chicago Medical Society, nine were from the affiliated bodies!

Comment would be superfluous. I would merely remark that the situation should be quite comforting to those who are inspired by political greed and desire for monopoly, but somewhat disquieting to the country members of the A.M.A., and especially to the members of the various state societies who are not members of affiliated bodies or even of the A.M.A., and must perforce be content with a single vote—a pitiful crumb from the political table. The illegal vote in the state society for A.M.A. representation should not console the latter class for the impositions put upon them in local and state politics.

As matters now stand, neither the A.M.A. nor the state societies are autonomous. To pile Pelion upon Ossa, matters are so arranged that men in the affiliated bodies who are not even members of the Chicago Medical Society vote for Councillors from the affiliated bodies!

Preposterous, but true. The affiliated bodies in Chicago—some of them, at least—demand that an applicant for membership shall be a member of the Chicago Medical Society. If, however, he drops out of the Chicago Medical Society, his elective franchise is not taken away from him!

The spectacle of officers of the A.M.A. serving as, first, councillors, second, state delegates, third, National delegates,

is decidedly un-American and very disquieting to one who has pride of citizenship and believes in equal rights and fair play in our medical societies.

Remedies.

1. Exclusion of affiliated bodies from illegal and unjust political privileges, their members having only the same rights in the local societies as other members.

2. Membership ballot in the state societies.

3. Membership ballot in the A.M.A.

The only alternative for the ballot would be to compel all members of the state societies to join the A.M.A., for which alternative, my brthren, you would not stand for a moment. The voting should be done by the members in attendance at the meeting. This would put a premium on attendance and increase both attendance and enthusiasm. Nominations should be made on the first day and voting done on the succeeding days of the meeting. A certain number of nominations by petition would aid in guarding membership rights and democratizing our politics. The place of registration could be made the polling place. The A.M.A., the state societies and the local societies should be made autonomous if we are to avoid the rocks and shoals of political unfairness and corruption—above all, if we would avoid despotism. The ballot having been obtained, one thing more is necessary to secure autonomy for the constituent societies, viz.: All officers of the A.M.A. must be prohibited from holding multiple offices and more especially from serving as councillors and state or national delegates.

Let the rank and file carefully consider the foregoing. Not to-day, nor to-morrow, but sometime in the near future, the members of the local, state and national associtions will recall what is here written and wonder why they did not sooner awaken from their lethargy and spiritless submission to almost incredible political conditions which have robbed them of their rights of citizenship as well as of the society membership rights for which they yearly pay their good money.

I have no axe to grind, my brethren, and once the necessary reforms have been established, I shall return to more congenial pursuits than medico-political battles. It matters naught to me personally whether the members of the state societies go on and on forever, blindly following the lead of professional medical politicians, but it matters much to the rank and file whether the local and state organizations continue to be merely kitchens for A.M.A. politics. If the members of the state societies are content to allow the state organizations to continue to be merely adjourned meetings of A.M.A. officials, or at least of the large city societies, I presume that I ought to be reconciled to the situation. And yet, as a matter of justice to the rank and file, I am not.

G. FRANK LYDSTON, M.D., Chicago.

MEDICAL NEWS.

The citizens of Arcola, Sask., are preparing to build a hospital this summer.

It is the intention of the Saskatchewan Anti-Tubercular League to build a Sanitarium in the vicinity of Maple Creek.

The Sisters. of Charity intend building a hospital at Prince Albert, Sask., that will cost in the neighborhood of $75,000.

"Rochester's Pure Milk Campaign," in McClure's Magazine, shows the need for crusades to improve public health and the opposition from certain quarters which always arises.

At a meeting held recently it was decided to build a hospital for Princeton, B. C., with the utmost despatch.

The necessity of economy in hospital administration and the adoption of a uniform system of keeping hospital accounts were among the subjects discussed at the annual meeting of the Canadian Hospital Association held at the Royal Victoria Hospital, Montreal.

Medicine Hat has decided to erect a $10,000 isolation hospital this year.

Dr. Hastings, of Ottawa, head of the Milk Commission, is at present visiting the coast. It is understood that the Dominion Government is contemplating legislation which will give civic authorities control over the milk supply in their respective districts.

The infant Mortality in Quebec is over 16 per cent. of the total death rate. Mr. Joseph Bonner, the compiler of statistics, urges immediate action to prevent such a state of affairs. Hygienic knowledge should be better diffused among the mothers of families.

Dr. Seymour, Provincial Health Commissioner for Saskatchewan, and Dr. Porter established a local branch of the Anti-Tuberculosis League for Carnduff and district.

At the 11th annual meeting of the Cheminus Hospital general satisfaction was expressed with the report. A maternity ward is needed now and more suitable nurses' quarters.

The Provincial Board of Health of Saskatchewan has determined to enforce the Pure Foods Act. Mr. Watson, sanitary inspector of Fort William, has been appointed to a similar position in Saskatchewan with headquarters at Regina. A good deal of his work will be educative. Abattoirs and slaughter houses will be brought under his supervision.

The Bulletin of the American Academy of Medicine (February) contains comprehensive details regarding the conference held on Infant Mortality, and an association has been formed for the study and prevention of Infant Mortality.

Forms for recording weights of milk or feed will be supplied free on application to the Dairy Commissioner, Ottawa.

Dr. Doherty, in his report of the Government Hospital for the Insane at Westminster, B. C., notes a very important reform which has been made, namely, the increase of night nurses, so that it is seldom necessary to lock patients in their rooms at night. Most satisfactory results have followed this reform. The record of patients cured is very creditable to the management.

Kamloops, B. C., Board of Health recently requested that measures be adopted to prevent additional consumptives going into Kamloops and that those already there be removed. The authorities threaten that unless the government take some action they will quarantine every house containing patients. The case has been submitted to the Attorney-General's Department.

At the beginning of the new school year there is to be systematic medical inspection in the Victoria public schools.

It is probably that arrangements for First Aid instruction throughout British Coulmbia will be incorporated with the

Health Act at the next meeting of parliament by the adoption of the St. John's Ambulance Society plan.

From a statement made by Dr. Henry Pritchett, President of the Carnegie Foundation, it appears that now there are nearly twice as many medical men in proportion to the population in the United States as there are in Europe—1 to every 568 people.

The people of Boston are planning to place in every schoolhouse a room to which delicate children may be sent for treatment. A special teacher is in charge. This plan has been successfully carried out in one school and its results so beneficial that it will be adopted in all the schools of the city.

The generosity of one of New York's philanthropists has provided a "Mothers' Rest" where women of the tenement go to recuperate after childbirth and learn how to care for the health of their husbands and children. The visiting dietitian is on the staff of this institution and after enlisting the women's interest follows them into their homes in the city to carry forward the instruction learned at the Rest.

The new General Hospital which is to be built at Toronto will be the finest in Canada. The building will stand on ground eight acres in extent, near the centre of the city.

A visiting dietitian helps the ignorant mothers plan her meals so that the maximum of strengthening food may be obtained from the supplies. If there is a nursing mother she is instructed in the diet calculated to provide the baby with plenty of milk. The diet of young children and the school children is prescribed. If illness a special diet is planned according to the physicians orders. At first the instructor buys the food and cooks it with the utensils at hand. There is no doubt regarding the force of such work for civic betterment.

The social workers realize that the trained dietitian can give material aid to the district visits by teaching the housekeeper to make the best possible use of the supplies.

The Admiralty reserve has been selected as the site for the Vancouver Isolation Hospital. The situation is magnificent. The site will cost the city nothing as it is government property.

PERSONALS

Dr. Lambert, of St. Boniface, is very seriously ill.

Dr. and Mrs. Lynch, of Brandon, have gone East for a visit.

Dr. O'Brien, of Dominion City, has settled in Weston, Winnipeg. He has sold his practice at Dominion City to Dr. Houston.

Dr. Kennedy, of McLeod, Alta., has returned from his visit to England.

Dr. Galloway, Winnipeg, has gone to England.

Dr. and Mrs. Mansell, Vancouver, have gone for a short visit to Los Angeles.

Dr. Hamilton, of Fort William, has been visiting the Coast.

Miss Georgina Woodland, Lady Superintendent of the Western Hospital, Toronto, has been appointed Superintendent of the Moose Jaw General Hospital.

Dr. J. W. McCullough has returned from his visit to Chicago and New York where he visited the leading medical and surgical institutions.

Dr. Herman Robertson and Mrs. Robertson have gone on a visit to New York.

Dr. Irving, of Yorkton, Sask., paid a visit to Winnipeg this month.

Dr. Sahlmark has settled to practice at Saltwater, Sask.

Dr. G. W. Kennedy, McLeod, Alta., has returned after three months' hospital work in England.

Dr. Daniel McLellan has returned to Winnipeg after doing post-graduate work in New York.

Dr. Speechly, Pilot Mound, Man., has been elected President of the Manitoba Horticultural and Forestry Society.

Dr. Geo. Hall, Victoria, B. C., has gone East for a holiday.

Dr. and Mrs. Cameron, Carlyle, Sask., were in the city.

Dr. R. Matheson, Prince Albert, Sask., is spending a month in the city.

Dr. Callanan, M.P.P., of Cariboo, B.C., was visiting Nanaimo where he used to practice.

Dr. L. T. Seavey, Port Townsend, B. C., paid a visit to Victoria at the beginning of the month.

Dr. E. C. Foote, Sidney Island, B.C., who has been seriously ill, has returned home from Passadana much improved in health.

Dr. Bigelow, of Brandon, has gone to take post-graduate work in Chicago and New York. Dr. Sharpe is doing his practice.

Dr. McLeod, of Lassen, Alta., has been visiting Camrose.

Dr. Armstrong, M.P.P., of Gladstone, took an auto trip of 150 miles to inspect the Indians of the Ebb and Flow Reserve. 50 miles was on the Ice of Lake Manitoba.

Dr. Tolmie, of Hartney, Man., was in the city, having been East.

Dr. Porter, of Ottawa, Secretary of the Anti-Tuberculosis League, accompanied by Dr. Seymour, Chief of the eHalth Commission of Sask., paid a visit to Indian Head, where they addressed the meeting and formed a branch.

It is with great pleasure that we learn of Dr. Kemp's Indina Head, Sask., has resumed practice once more.

Dr. Cowie, of Sintaluta, has been visiting Medicine Hat, Alta.

Dr. Stewart, of Kinistino, Sask., we are pleased to learn, has recovered from his sickness.

Dr. and Mrs. Tyreman, Prince Albert, Sask., have returned from spending the winter in the East.

Dr. Reid, Medical Officer of Health, of Prince Albert, has had to go East for his health.

VITAL STATISTICS,

Winnipeg, March, 1910.

		Deaths.
Typhoid	11	—
Scarlet Fever	87	—
Diphtheria	17	2
Measles	122	—
Tuberculosis	9	2
Mumps	11	—
Scabies	1	—
Erysipelas	8	—
Chickenpox	1	—
	268	4

5 typhoids originated at points outside of the city.

MARRIAGES

HANNINGTON—RIDDOCH—At Witner, B. C., on April 5th, Dr. Darrell Hannington, of Witner, to Miss Janet Riddoch, Glasgow, Scotland.

McEWEN—SMITHERAN—Dr. McEwen, Hedley, Sask., to Miss Lillian Smitheram, of Olatta.

BIRTHS.

McTAVISH—To Dr. and Mrs. McTavish, Vancouver, a son, March 7th.

GIBSON—To Dr. and Mrs. Gibson, of Vancouver, a daughter.

HARWOOD—To Dr. and Mrs. Harwood, a son.

BLACK—To Dr. and Mrs. Black, of Winnipeg, a daughter, March 28th.

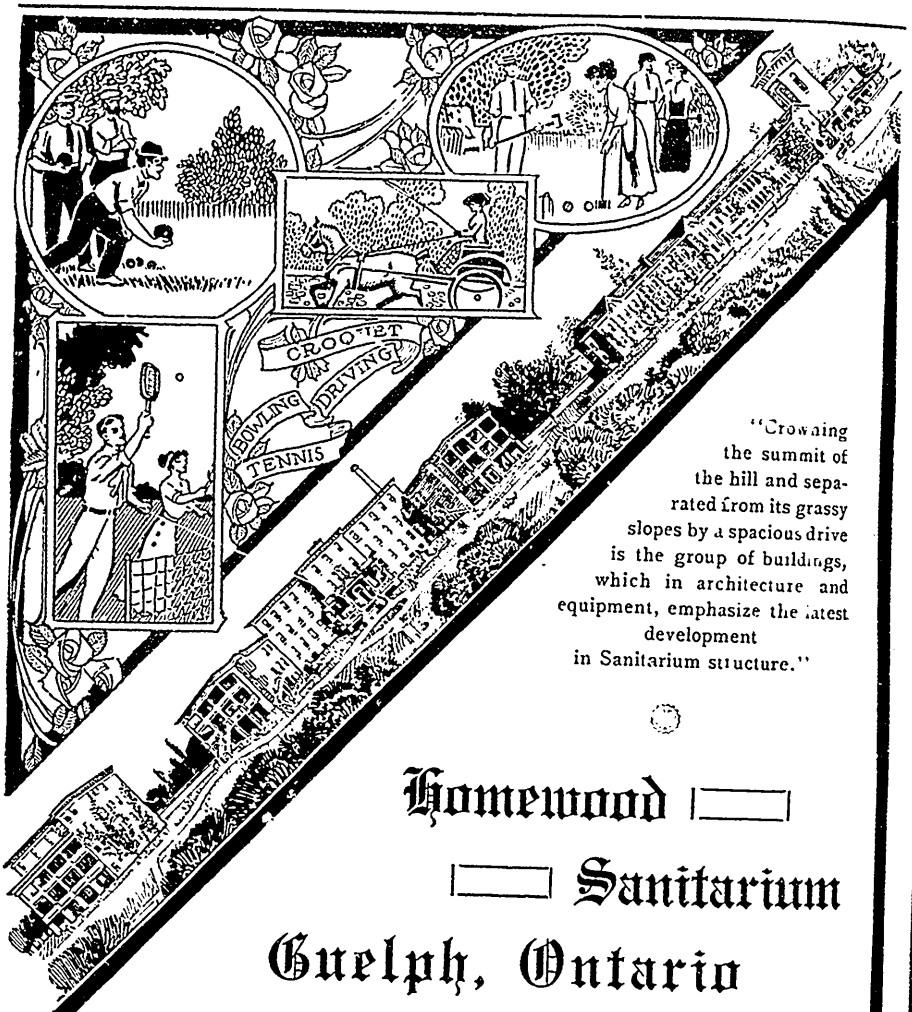
We are in receipt of the following:—

"High Frequency Electric Currents in Medicine and Dentistry"—Monell.

"Clinical Ostetrics"—Jardine.

"Symptoms and their Interpretation"—"J. Mackenzie."

"The Sexual Life of Women"—Kisch.



"Crowning the summit of the hill and separated from its grassy slopes by a spacious drive is the group of buildings, which in architecture and equipment, emphasize the latest development in Sanitarium structure."

Homewood Sanitarium

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For Mental and Nervous Diseases

A limited number of habit cases received in separate departments.
Separate hydrotherapeutic plant for ladies and gentlemen.
Modern medical and surgical equipment.
Beautiful lawns and well wooded grounds.
Recreation according to season.
Conducted on strictly ethical principles.
Situated 48 miles west of Toronto on Grand Trunk and Canadian Pacific Railroads. — 38 hours run to Toronto.

For particulars and booklet apply to Dr. A. T. Hobbs, Med. Supt.

Synopsis of Canadian North-West Homestead Regulations

Any even numbered section of Dominion lands in Manitoba, Saskatchewan and Alberta, excepting 8 and 26, not reserved, may be homesteaded by any person who is the sole head of a family, or any male over 18 years of age, to the extent of one-quarter section of 160 acres more or less.

Application for entry must be made in person by the applicant at a Dominion Land Agency or Sub-Agency for the district in which the land is situate. Entry by proxy may, however, be made at an Agency on certain conditions by the father, mother, son, daughter, brother or sister of an intending homesteader.

DUTIES:

(1) At least six months' residence upon and cultivation of the land in each year for three years.

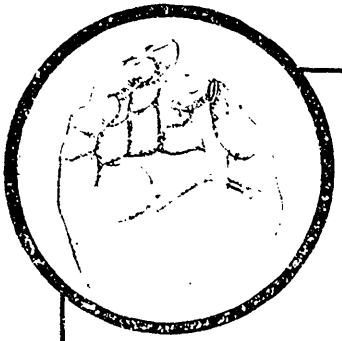
(2) A homesteader may, if he so desires, perform the required residence duties by living on farming land owned solely by him, not less than eighty (80) acres in extent, in the vicinity of his homestead. Joint ownership in land will not meet this requirement.

(3) A homesteader intending to perform his residence duties in accordance with the above while living with parents or on farming lands owned by himself must notify the Agent for the district of such intention.

Six months' notice in writing must be given to the Commissioner of Dominion Lands at Ottawa, of intention to apply for patent.

W. W. CORY,
Deputy of the Minister of the Interior

N.B.—Unauthorized publication of this advertisement will not be paid for.



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Soft-Mass Pills

are worthy of your specification.

These pills consist of a soft interior mass, enveloped in a thin coating of chocolate. They may be flattened between the thumb and finger as one might flatten a piece of putty.

Our **Soft-Mass Pills** dissolve readily in the digestive tract. They keep well and do not lose strength under proper conditions of storage. They are attractive in appearance. They are strictly true to label.

In the soft-mass process no heat is applied, hence such volatile substances as camphor, the valerianates, the essential oils, etc., are preserved in full measure.

THE LIST TO DATE.

No. 969—Quinine Sulphate, 2 grs. (chocolate-coated).
No. 970—Cascara Compound No. 2 (Dr. Hinkle) (chocolate-coated).
No. 971—Ferrous Carbonate (Blaud), 5 grs. U. S. P. (chocolate-coated).
No. 975—Cholelith (chocolate-coated, round)
No. 976—Ferrous Carbonate (Blaud), 3 grs. (chocolate-coated).
No. 977—Ferrous Carbonate (Blaud), Modified (chocolate-coated).
No. 978—Ferrous Carbonate (Blaud), Modified, B 2 (chocolate-coated).
No. 979—Ferrous Carbonate Laxative (chocolate-coated).
No. 980—Ferrous Carbonate Laxative, B 2 (chocolate-coated).
No. 981—Ferrous Carbonate (Blaud) Compound, B "C" (chocolate-coated).
No. 984—Aloin, Strychnine and Belladonna, B "A" (chocolate-coated).
No. 985—Aloin, Strychnine and Belladonna Compound, No. 1 (chocolate-coated).
No. 986—Cathartic Compound (Chocolate-coated).
No. 987—Emmenagogue, Improved (chocolate-coated).
No. 988—Evacuant (chocolate-coated).
No. 990—Camphor, Opium and Ipecac (chocolate-coated).
No. 991—Camphor, Opium and Ipecac (chocolate-coated).
No. 992—Opium and Camphor, No. 2 (chocolate-coated).
No. 993—Quinine, Iron and Zinc Valerianates (chocolate-coated).
No. 1001—Alophen (chocolate-coated).

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