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# Dominion Medical Monthly

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VOL. IV.]

TORONTO, ONT., APRIL, 1895.

[No. 4.

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## Reports of Societies.

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### THE PROVINCIAL BOARD OF HEALTH.

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The second quarterly meeting of this Board began at Dr. Bryce's office April 3rd, 11 a.m. Present—Dr. Macdonald, chairman; Dr. Bryce, secretary, and Drs. Cassidy, Rae, Kitchen, Covernton and Vaux. The minutes of the first quarterly meeting and of a special meeting held on March 11th having been read and adopted, the Secretary read a number of letters. One was from the owner of a building at Strathroy, which had been used as a small-pox hospital and subsequently burned down by some unknown persons. The owner wanted compensation from the Government. He was advised to refer the matter to arbitration. Mr. Doran, S.M., who resides at North Bay, sent an account for services rendered in connection with an epidemic at Warren. A lengthy correspondence from Chapleau, a village on the C.P.R., in one of the unorganized townships, was read. Chapleau has a population of about 600, but it is not yet a municipality. Diphtheria is prevalent. Dr. McKenzie, a physician

employed by the C.P.R. Co., had been asked to take charge of the village, nominally as Sanitary Inspector, owing to the fact that the police magistrate of Sault Ste. Marie was, by the Health Act, *ex officio* the Medical Health Officer. Dr. Bryce had advised him to placard houses and to employ sanitary police. Dr. McKenzie will send his account to the Provincial Board of Health. A lengthy petition was also presented, asking that Mr. H. A. West, of Chapleau, be made a provincial constable to assist Dr. McKenzie.

Dr. Baker, Secretary, State Board of Health, Michigan, wrote asking if the Provincial Board of Health was aware that there was scarlatina at Sault Ste. Marie. He was informed that this Board was not ignorant of the fact.

Mr. Spencer, police magistrate of Glamorgan, wrote suggesting that in the unorganized townships the school trustees of a section in which diphtheria or other infectious disease prevailed should be empowered to employ physicians and appoint sanitary police. The expenses incurred in putting down an outbreak of diphtheria in Glamorgan amounted to \$300. Glamorgan is poor, and wants

the Ontario Government to pay the bill.

A letter from Trenton was read, stating that a case of diphtheria was not properly isolated, and another letter from the same town complained of a want of public urinals.

Accounts were presented for vaccinating eighty-seven persons in Muskoka at the rate of twenty-five cents per head.

A complaint was received from a party at Toronto Junction, asking for damages for an unoccupied building which had been occupied as an isolation hospital. The complainant was advised to refer the matter to the county judge.

A letter from Walkerton was read stating that a cow near that town had actinomycosis.

After an adjournment for lunch, the Board resumed at 2.30 p.m.

An interesting report of an attack of hydrophobia, which had occurred in a dog in the township of Ekfrid, Middlesex, was read. A lad bitten by the rabid animal had gone for treatment to the Pasteur Institute, New York, and his friends wanted the expenses of treatment to be partly borne by the Provincial Board of Health. (See page 94.)

The Local Board of Health, St. Catharines, was warned by the Secretary to prevent the feeding of offal, etc., to hogs in the vicinity of the water-supply of the city.

A special report was presented by Dr. Bryce recommending the appointment of County Medical Health officers. The report was adopted. (See page 98.)

The Board then went into Committee of the Whole, in order to con-

sider a plan for providing legislation to make school trustee boards in the unorganized townships *ex officio* local boards of health.

A scheme of the proposed legislation was drawn up and discussed, but not adopted, the final settlement of the question being allowed to stand over until the following day. The Board then adjourned till 10.30 a.m. Thursday.

#### THURSDAY, 10.30 A.M.

On resuming, the Board heard some correspondence respecting rumored outbreaks of ergot disease in cattle in Haliburton.

No reports were made.

Mr. Willis Chipman, C.E., Galt, appeared before the Board to promote a proposed system of sewerage in Galt.

The report was received and referred to the Committee on Sewage, with instructions to report to the Board later.

The Board resumed at 2.30 p.m., and considered the proposed formation of local boards in unorganized districts. It was concluded that as school trustees in the unorganized districts have powers as trustees it would be well to make them *ex officio* local boards of health, and to give them the powers of local boards of health. A local board so formed could procure medical aid and appoint a sanitary inspector, or employ a physician and give him powers as a medical health officer, with the approval of the Minister of the Department to which it is attached. The Provincial Board of Health could grant to such a local board a sum, bearing the same proportion to the

amount raised for health purposes as the school grant does to the school moneys raised in the school section, this payment to be made out of such moneys as may be set apart by the Legislature. (See Act for regulating health matters in the unorganized districts.)

The account of Mr. Doran, S.M., for \$8, was passed.

An account for vaccination in the unorganized districts was left open for consideration.

An account of \$300 from Glamorgan was referred for particulars, and the secretary was instructed to submit the matter to the Board at a subsequent meeting.

A letter was received from Dr. Tizzoni, of Bologna, informing the Board that the antitoxine of tetanus was prepared and kept by Messrs. Merck, of Darmstadt. A second letter from Messrs. Merck informed the Board that the price of one bottle, sufficient for the treatment of a single case of tetanus, was 90 shillings. The Board considered that this was a large sum to pay for a treatment which might not be required for many months, more particularly as the antitoxine depreciates by keeping. The secretary was instructed to write to Dr. Gibier to ascertain if this antitoxine could be got in New York.

A letter was read from the town engineer of Woodstock, asking if there was any legislation providing for the expropriation of land for a sewage farm. He was informed that there was no such legislation.

FRIDAY, 11 A.M.

The Board having resumed, it was moved by Dr. Kitchen, seconded by

Dr. Covernton, that one hundred copies of the March number of the DOMINION MEDICAL MONTHLY be ordered and paid for by the Board. Carried.

Dr. Oille and Alderman Carlyle, of St. Catharines, appeared before the Board to discuss a nuisance which threatened the St. Catharines water-supply. They requested that an amendment be made to Section 51, Ontario Health Act, by which a local board of health would have power to inspect or order an investigation to be made of a nuisance in an outside municipality, which prejudicially affected the sanitary interests of the said Board. They were informed that the legislation would be asked for.

Dr. McKenzie was recommended as sanitary inspector, and Mr. West as sanitary policeman for Chappleau.

Dr. Bryce presented the report of the Committee on Epidemics. (See page 96.)

The Board went into Committee of the Whole to consider the appointment of the Standing Committees. The following were recommended: (1) Epidemics, Drs. Covernton, Cassidy and Bryce; (2) Public Water Supplies, Drs. Vaux, Rae and Bryce; (3) Sewers, Drs. Bryce, Kitchen and Vaux; (4) School Hygiene and Ventilation, Drs. Cassidy, Rae and Covernton; (5) Finance, Legislation and Publication, Drs. Rae, Cassidy and Bryce; (6) Foods, Drinks and Poisons, Drs. Kitchen, Rae and Bryce. The Chairman, Dr. Macdonald, to be *ex officio* a member of all committees. The report was adopted.

It was then moved by Dr. Cassidy, seconded by Dr. Vaux, that the matter of distributing reports of the

proceedings of the quarterly meetings of the Board to the local boards be referred to the Committee on Publication, to be dealt with. The proceedings of the second quarterly meeting then terminated.

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Correspondence respecting an outbreak of rabies in the Township of Ekfrid, and bacteriological report of the examination of the rabid animal by J. J. Mackenzie, B.A.:

*Dr. P. H. Bryce, Secretary of the Provincial Board of Health, Toronto, Ont.:*

DEAR SIR,—Dr. McEwen, of Melbourne will express you, in a sterilized vessel and securely packed, the posterior portion of the head and neck of a dog supposed to be rabid. I am not certainly aware that your laboratory has facilities for examining such a case bacteriologically, but send in the hope that you have. If so, please demonstrate nature of bacteria present in this case (head has been frozen since 12th inst. until packed), and if hydrophobia germs can be found, let us know as soon as possible. If inoculation experiments are necessary, please send word as to microscopic appearance of a section. Perhaps this should properly have been sent to Mr. Mackenzie, but the closing part of this letter will show why I send to you. Dr. McEwen may also address the head to you, in which case please hand to Mr. Mackenzie.

The dog bit a young lad (say 17 years) on the backs of both hands, through a rather thin pair of woollen mitts, on Wednesday, the 6th inst. The dog at that time was not supposed to be rabid, and had previously been a fairly even-tempered dog; but on the same night it left home, after

making some attempt to bite its owner, and "took in" a circle of country of ten or more miles, biting nearly every dog in its course, and also farm and domestic animals and fowls. It attacked two or three people (as far as heard from), biting only one, and that did not penetrate the skin on account of a heavy glove; and it did not return home until Sunday, 10th inst., about 2 p.m. On return it did not attempt to bite its owner or any of the family. It was evidently sick and stupid; would not answer when called; eyes sunken and glassy; much emaciated; owner offered it bread and milk, but would not touch them; a piece of meat placed in the mouth was immediately rejected, with evident pain; did not bark or growl; prostrated somewhat, which increased, and on Monday night or Tuesday could only rise on front legs, the hind parts being evidently paralyzed; some convulsive attacks noticed, but not severe. Dog then killed.

In its course through the country it passed through a village, and bit every dog in sight. It would run from one group of dogs to another, biting and snapping, and not stopping to fight. Other dogs, on its approach, would run away from it, although some of them had the reputation of being good and eager fighters.

I did not mention that the saliva was scanty and thick andropy when seen at home on Sunday and Monday.

In my opinion all clinical symptoms denote rabies, but would not affirm such without a laboratory examination.

The Township Council has been asked to defray expense of sending bitten lad to the New York Pasteur

Institute for treatment. Dr. Gibier telegraphs me that the cost for minimum period of treatment of fifteen days will be \$200, and board \$50. Have requested of him if any reduction cannot be made. Boy's parents are unable to pay anything towards the cost, as I am informed they are very poor, barely making a living for themselves.

Our Council wishes to know from you if the Provincial Board will bear any of the cost in case they decide to send him. They do not wish to incur expense unless they are reasonably sure of the dog having hydrophobia, and not some simulating disease.

In case you cannot examine patient, please wire on receipt what proportion of cost the Board will pay, if any, and oblige,

Yours sincerely,

L. HYTTENRAUCH, M.D.

P.S.—Also, has Local Board of Health power in this matter.—L. H. Appin, Ont., *March 17th, 1895.*

*L. Hyttenrauch, Esq., M.D., Medical Health Officer, Township of Ekfrid, Appin.*

DEAR DOCTOR.—I am in receipt of your communication of the 17th instant, and am obliged for your full statement of the movements of the dog supposed to be rabid.

From all you have stated I have no hesitation in concluding that the dog is rabid, and the person bitten should be sent as soon as possible to the Pasteur Institute, New York.

While it would be satisfactory to know the results of inoculation experiments in rabbits, it has been found that unless the removal of the medulla has been done very promptly after death in the most thorough

manner, the inoculation experiments will kill by some saprophytic germs before the hydrophobia, even though present, can develop.

Mr. Mackenzie will inoculate rabbits to-day if the specimen arrives, but it will be probably twelve or fourteen days before symptoms of rabies can develop. In the meantime every day lost increases danger, and the absence of results, if any putrefaction has gone on in the cord, will not relieve us from our responsibility with such clinical symptoms.

I would urge the township to send the patient at once to the Pasteur Institute; and I shall lay the matter before the Board at the next meeting, although there is no good reason why we should treat this difficulty other than the cases of small-pox in other townships. The action taken in reference to the Dorchester case several years ago was largely an experiment for the benefit of the Province.

I shall be glad to learn of the action taken and the results of the treatment.

I have the honor to be, your obedient servant.

PETER H. BRUCE, *Secretary.*

Toronto, *March 19th, 1895.*

*To the Chairman and Members of the Provincial Board of Health:*

GENTLEMEN,—I received from Dr. McEwen, of Melbourne, on Tuesday, March 19th; a box containing a portion of the skull and brain of a dog supposed to have been rabid, a full account of which is given in the correspondence.

Immediately on the receipt of it, I took a small quantity of the interior

of the medulla oblongata, triturated it in a sterile mortar with sterile beef broth and injected it underneath the dura mater of two rabbits. Rabbit No. 1 received about one-half c.c. of the mixture, injected far back over the cerebellum; rabbit No. 2 received about one-tenth c.c. on the surface of the cerebrum. The following day I treated a third rabbit in the same manner. The morning following the operation the rabbits were quite well and the wounds healed rapidly by first intention.

The following is a table of the temperatures and weights of the animals from day to day :

Date	Rabbit No. 1.		Rabbit No. 2.		Rabbit No. 3.	
	Weight	Tem.	Weight	Tem.	Weight	Tem.
Mar. 19	1170 grms.	..	700 grms.	..	....	..
" 20	....	..	....	..	720 grms.	..
" 21	....	93.4	....	93.5	....	99.8
" 22	....	102.8	....	100.6	....	100.3
" 23	1136 grms.	100.8	774 grms.	97.8	731 grms.	100.5
" 24	....	103.2	....	102.4	....	101.8
" 25	....	103.8	....	100.3	....	101.4
" 26	1085 grms.	102.0	823 grms.	100.4	766 grms.	98.6
" 27	....	102.0	....	102.0	....	102.5
" 28	994 grms.	100.5	788 grms.	99.3	781 grms.	101.2
" 29	930 grms.	91.2	760 grms.	100.4	816 grms.	102.2
" 30	....	85.0	731 grms.	99.5	752 grms.	102.3
" 31	852 grms.	91.0	702 grms.	97.8	730 grms.	102.6
April 1	....	..	695 grms.	97.4	809 grms.	103
" 2	....	..	624 grms.	94.8	823 grms.	101

Rabbit No. 1 died April 1st; rabbit No. 2 April 2nd. In the case of No. 1 the animal did not at first show paralysis, but rather great weakness.

In the case of No. 2 the animal showed paralysis (complete) of the right hind leg, and partial paralysis with hyperæsthesia of the left hind leg.

The *post-mortem* results were practically the same in both animals, intense congestion of the whole central nervous system, but especially so of the spinal cord.

The incubation period in the case of Rabbit No. 1 is rather short for the first passage of street rabies;

but that may be accounted for by the exceedingly large dose which he received. In rabbit No. 2 the period of incubation (fourteen days) is about the average length of time for the first passage. Rabbit No. 3 is still living, and has shown as yet no symptoms; to-day is the fourteenth day for it.\* To be absolutely certain, of course, it is necessary to pass the virus on through other rabbits. I purpose doing this.

I think, however, that there is little doubt that the rabbits died of paralytic rabies.

I have the honor to be, your obedient servant.

J. J. MACKENZIE, *Bacteriologist.*

Toronto, April 4th, 1895.

## REPORT OF THE COMMITTEE ON EPIDEMICS.

Presented by Dr. BRVCK.

To the Chairman and Members of the Provincial Board of Health :

GENTLEMEN, — Your Committee takes pleasure in reporting, for the information of the Board and public, the satisfactory position of the public health during the past quarter. As will be remembered, at the time of the last meeting there were six cases of small-pox in the Province at five places.

The following report of Dr. C. A. Hodgetts, in detail, gives the origin and progress of the Aylmer outbreak, and that of the Guelph outbreak caused thereby :

"The action taken by the Local Boards of Health of Guelph City and Township, and by the authorities of

\* Rabbit No. 3 died April 11, with an incubation period of twenty days.

the Agricultural College, and by your secretary, fortunately prevented the extension of what seemed at one time a very serious danger. Through the action taken, the College term was continued without any serious interruption, and the business of the community was only temporarily disturbed. The outbreak illustrates, however, the necessity for this Board notifying all public institutions of the Province to adopt systematic measures for the regular vaccination of inmates. The danger in such institutions here is accentuated by similar outbreaks in Yale University and at Storrs Agricultural College, Connecticut. The Province is now free from a single case of small-pox, and a very considerable number of persons in every district where the disease has been have been vaccinated."

*Diphtheria.*—While the disease has prevailed to a notable degree throughout the winter, there have been evidences of a general lessening of its prevalence throughout the Province, both from report of local outbreaks and in the demand for diphtheria antitoxine. Thus, in December there were 40 orders sent out; in January there were 57 orders sent out; in February there were 46 orders sent out, and in March there were 38 orders sent out.

While the results of the use of antitoxine have, according to such reports as have been received, continued to be very satisfactory, it must again be stated that the Board has not been favored, except to a very partial extent, with a return of the blank form for reports, sent out with every bottle, filled in with details of results. This is even more regrettable than the

statement of receipts of payments for antitoxine forwarded. As stated before, it has been supplied at the New York cost price to practitioners throughout the Province, and always perfectly fresh. Under such circumstances, it would have been thought that remittances for the favor of the Board would have been prompt.

A statement regarding the amount of antitoxine was presented.

*Scarlatina.*—The correspondence from many parts of the Province which is presented shows, however, a general dissemination of outbreaks of scarlatina. They do not seem to be of a high degree of virulence, but, as the reports show, there is everywhere a percentage of deaths. The immunity of the Province from the disease during the past ten years has before been remarked upon; but there can be no doubt of the increased incidence of the disease during the past two years. Thus the mortality in the 12 cities from scarlatina in 1892 was 99, and in 1893, 146. The returns for 1894 are not yet complete, but it is probable that the rate throughout the Province will have exceeded that of 1893. Thus the cities had 116 for 1894.

Diphtheria and scarlet fever in cities in 1894 :

Cities.	Diphtheria.	Scarlet Fever.
Toronto .....	103	60
Hamilton .....	68	2
Ottawa .....	79	23
London .....	48	1
Kingston .....	5	..
Brantford .....	5	23
Guelph .....	2	3
St. Thomas .....	1	1
St. Catharines .....	4	2
Stratford .....	1	1
Belleville .....	1	..
Windsor .....	..	..
<b>Total .....</b>	<b>307</b>	<b>116</b>



Your Committee would call the attention of the Board to the fact of the proposed regulations *re* scarlatina, submitted for approval, being still under consideration, and would urge that the need of these regulations be again brought before the attention of the Minister.

The several communications presented with regard to outbreaks of contagious disease in the unorganized municipalities accentuate what has been said before with regard to the necessity for some more systematic organization, whereby the Board will be enabled to deal more satisfactorily with outbreaks when they occur.

Under the Act of 1889, much valuable work has been done by the stipendiary and police magistrates; but inasmuch as there are a number of growing committees without municipal organizations, and therefore without any means for giving financial support, it has been impossible with the grant at the disposal of the Board to organize any permanent health organization in these places. Your Committee would suggest that some recommendations be made with a view to so amending the Municipal or Education Act as to make provision for some kind of incorporation into either villages or police villages, such as will meet the needs of the case. There are, moreover, growing up in many centres villages around mining companies and lumber camps, where much capital is invested, and which are amply able, from the financial standpoint, to maintain a good health supervision of their districts. A thorough inspection of these should be made with a view to making suggestions as to water-supply, an isola-

ted building for the sick, and, where absent, arrangements for the regular attendance of a medical man.

Your Committee would, therefore, present the report for your consideration, trusting that some means will be discovered for adequately dealing with the important health interests of a district extending from Mattawa to Rat Portage.

All of which is respectfully submitted.

Toronto, *April 3rd*, 1895.

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SPECIAL REPORT RECOMMENDING  
THE APPOINTMENT OF COUNTY  
MEDICAL HEALTH OFFICERS.

Read by Dr. Bruce.

*To the Chairman and Members of the Provincial Board of Health:*

GENTLEMEN,—There has naturally grown up with the development of public health work throughout the Province, a certain feeling in many municipalities for some more exact methods for dealing with the questions which arise within the borders of our several counties than can be developed under our present municipal health boards. The essential reason for this will be admitted by those who have been observers in this work, viz., that the amounts of money which are commonly spent by local boards of health at present are not sufficient to produce any definite attention being paid to health work, unless under the pressure of an outbreak of small-pox, or occasionally of diphtheria, if it becomes epidemic.

To illustrate this, I take the amounts of money expended under the leading local boards of health in

the municipal returns, made to the Department of Agriculture for the year 1893, from two of our oldest and most prosperous counties: Oxford, 1893, townships 11, total \$481.00, varying from \$0 to \$97.00; towns and villages, from \$5.00 to \$481.00; Grey, 1893, townships 16, total \$286.00, varying from \$0 in four townships to \$75.00; towns and villages, \$6.00 to \$344.00.

Now, these figures mean either that almost no attention is given to public health in these districts, or that the amounts of money thus expended have not been returned under the proper heading. As a matter of fact, both causes exist. With regard to the returns I find in those for one of our largest villages, which I visited in 1884 on account of a serious outbreak of diphtheria, that the returns under local board was as \$24.00, while under poor relief were charged sums for diphtheria nurses, etc., amounting to \$121.95.

This will doubtless explain how, in many places, the amounts returned for public health work are so small.

When, however, I find \$5.00 for the Sanitary Inspector and \$5.00 for the Medical Health Officer, in examining details of expenditure, it must be concluded that the public health of such municipalities has been most satisfactory, or that local boards of health in many instances exist only in name. When I find such amounts set down, however, for townships where correspondence shows public funerals in cases of diphtheria took place, and where schools finally were closed on account of the disease, it would seem a fair inference that, from the public health standpoint,

improvements are not only possible but seem to be greatly needed.

At the instance of this Board the Legislature introduced a provision in the Act of 1890, whereby municipal authorities were empowered to forego their powers in health matters to a medical officer appointed by the County Council. Up to the present time I am not aware of advantage of this provision having been taken in any case; but the advantages of such a step in the interests of the public health of any county cannot, in my opinion, be over-estimated. In order to appreciate fully the advantages of such a step, it is necessary to recapitulate the principal work which boards of health are supposed to perform.

1. The first and most immediate duty is that of suppressing outbreaks of contagious diseases. During the past year some twenty outbreaks of small-pox occurred. These have had to be dealt with by the local health officers. From the figures already given it is made plain that a Medical Health Officer has not been expected to give medical attendance, and, as a consequence, special medical aid has had to be given at the rate of from \$10 to \$20 per diem, and this, in some instances, from two to three months. It is hardly necessary to say that such an expenditure for one or two cases of small-pox falls heavily on a single municipality. In an instance where the amount has been obtained, the total cost of the outbreak was \$1,600, and in another some \$600 for medical services alone.

This is, however, but one disease. With the numerous outbreaks of diphtheria which have occurred in every part of the Province we have

abundant evidence to prove that the practical absence of any active health authority has allowed outbreaks to obtain a headway, with an ultimate loss of life and expenditure of a most serious amount. As an illustration, I may refer to one of the applications before you for relief, from a township stated to have 140 ratepayers, with an assessment of \$23,771.50, a rate of 57½ mills, and a bill of \$320 for contagious diseases, and a total indebtedness of \$1,409.80. Had a county officer existed in this instance, specially devoted to this work, and paid for his services by the county, the epidemic could hardly have got under such headway, or, had it done so, the expenditure would have been spread over many municipalities, instead of one.

2. The work of supervising cheese factories and dairies, the pig-pens in connection with them, and the sanitary oversight of Public Schools, both in the matter of good water, outbuildings, heating and ventilation, are all most necessary duties laid upon Local Boards at present. Remembering the growing importance of this work, it will be seen that the work necessary to be done is of a most extended and important character.

3. The investigation of outbreaks of hog-cholera, of actinomycosis and tuberculosis in herds, and in milch cows both for dairy and public milk supplies, is another growing and most important part of Local Board work. The complaints constantly received from medical officers and sanitary inspectors with regard to these subjects show how greatly is needed the constant supervision of a trained medical officer.

4. The yearly introduction of public water supplies in our growing towns and villages, and the need of accurate investigation of sources of disease from badly-constructed sewers and drains, is similarly demanding the presence of an officer who shall make local conditions a special study and take steps to prevent the pollution of public water supplies.

5. Another and very pressing need is the presence of some medical expert in every county to whom can conveniently and quickly be sent by local medical practitioners samples of membrane from cases of suspected diphtheria, and sputa from cases of supposed tuberculosis.

The work undertaken in the laboratory of the Board during the past year amply illustrates the good which may be done in this direction by supplying accurate information at the earliest moment, and thereby enabling medical men to take prompt steps toward arresting the outbreak at the outset.

6. The development of the science of bacteriology has not only enabled us to diagnose these diseases with an accuracy hitherto impossible, but it has also given to us at least three well-known antitoxines as diagnostic or preventive agents in disease, viz., vaccine against small-pox, antitoxine in diphtheria, and tuberculin in tuberculosis. The presence of a trained bacteriologist as a county medical officer would enable him to systematically vaccinate the children of the county schools, to keep on hand diphtheria antitoxine, which could be had at the shortest notice from any point in the county, and to diagnose any suspected tuberculous animals

before the herds became widely inoculated with the disease.

Summing up, then, briefly the advantages to be gained by such an officer, they are:

1. The efficient and progressive administration of public health work in the counties. The difference between the present method and such a method will be as marked as the present method of county inspection of schools as compared with that in the days when the township council appointed some local clergyman who once a year put his head within the door to see that school was "being kept," and then passed on.

2. A direct saving of lives through a limitation of the number of outbreaks of disease, and a notable saving of time and money to ratepayers, and therefore to the country.

3. No increase in the direct outlays, if compared so far as possible with existing expenditures.

4. The possibility of a medical officer by assisting local practitioners in several essential branches of their work, developing that active support and sympathy for public health work so necessary for its success in the place of what has hitherto existed in many instances, an active hostility to health measures, because it has been possible for one medical practitioner, by getting the appointment of a medical health officer at a mere nominal authority, to exercise what has not always been acceptable, an official oversight of the cases of a rival practitioner. In many instances this has resulted in the abolition of the office of medical health officer, even in some of the larger towns.

5. The existence of local county

officers so easily in touch with the Provincial Board of Health, that an accurate estimate of the health conditions of the Province at any time notice will be possible, while detailed scientific investigations would be carried on by this Board with the assistance of such officers in a manner at present largely impossible. We should gradually be able to collate information with regard to local geology, underground water, rainfalls, relative incidence of such diseases as malaria, etc., until the Board will, by and by, be able to work the details into a Public Health Map of the Province, which will form the basis of a scientific and historical work of inestimable value for the future.

6. The encouragement of a high standard of scientific work in our universities by offering encouragement to scientific students to follow out in medicine special lines of investigations, such as water analysis, food analysis, investigation of animal diseases, and other lines of biological study. The public press and the practising physician are to-day fully convinced that the country has an abundance, even a surplus, of doctors, of the average class, but no one has yet stated that there is a surplus of men of such accurate scientific attainments as to be able to follow out chemical and scientific investigations with any great success.

Like specialists in education, agriculture, mining, etc., we have in public health a large amount of work like beside, yet outside the work of the practising physician, which can only be done by such trained men as I have referred to, and in conclusion I would suggest that some permissive

legislation be obtained which will not only give the power to appoint such county officers, but which will establish a fixed remuneration on such certificates of efficiency being obtained as may be approved of by this Board.

I trust that this Board will give this matter further consideration, and appoint a committee to pursue the subject with medical societies and county councils.

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### AN ACT FOR REGULATING HEALTH MATTERS IN UNORGANIZED DISTRICTS.

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1. In any case where a school section exists in the unorganized districts, outside of any municipal jurisdiction, organized as provided under Cap. 55, entitled, "An Act Consolidating and Revising the Public Schools Act," the trustees of said school section shall be *ex officio* a Local Board of Health for such school section.

2. The Local Board of Health thus organized in any such school section shall possess and exercise, so far as applicable, all the powers and duties laid upon any Local Board of Health under the various Public Health Acts of Ontario.

3. The Local Board of Health in any such section is hereby empowered to annually appoint a sanitary inspector for the area over which its jurisdiction extends, and to supply such medical services as at any time may be required, by employing a competent physician, who shall possess any powers of a medical health officer under the Public Health Act which may be laid upon him by the Local Board of Health.

This Act is recommended, but has not yet been made law.

4. The Local Board of Health of any such school section is hereby empowered to provide by an annual assessment, to be levied and collected in the same manner and at the same time as the Public School moneys, such moneys as may be deemed necessary for the public health work for the year.

5. The Provincial Board of Health may, with the approval of the Minister of the Department, pay out of such moneys as may be set apart by the Legislature for the purpose, a grant to the Local Board of Health of any such school section, to supplement any expenditure made by it for public health purposes in the preceding year under the Public Health Act; such grant to bear the same ratio to the amount of money raised by said Local Board of Health and expended for health purposes during the preceding year as existed between the amount of school moneys raised by local assessment during the preceding year, and the amount by which such school fund was supplemented through the annual grant made to the Board of School Trustees of said school section by the Department of Education of Ontario.

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### AN ACT TO MAKE FURTHER PROVISION FOR THE PUBLIC HEALTH.

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Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as "The Public Health Act, 1895."

2. Section 39 of "The Public Health Act" is hereby repealed, and the following section and sub-sections are substituted therefor :

(1) There shall be a local board of health in each township and incorporated village, to be composed of the reeve, clerk and three ratepayers, to be appointed by the municipal council in the following manner: One member to be appointed for three years, one member for two years and one member for one year, each member retiring to be replaced by a member appointed for three years from the date of his appointment.

(2) There shall be a local board of health in each town containing less than four thousand inhabitants, according to the municipal enumeration of the previous year, to consist of the mayor, clerk and three ratepayers, to be appointed by the municipal council as follows: One member to be appointed for three years, one member for two years and one member for one year, each member retiring to be replaced by a member appointed for three years from date of appointment.

(3) There shall be a local board of health for each city and for each town containing more than four thousand inhabitants, according to the municipal enumeration of the previous year, to consist of the mayor and six ratepayers, to be appointed by the municipal council as follows: Two members to be appointed for three years, two members for two years and two members for one year, the retiring members to be replaced by two members appointed for three years from date of appointment.

3. Section 30 of the said Act is hereby repealed and the following section and sub-sections substituted therefor :

(1) Wherever the establishment of a public water-supply is contemplated by the council of any city, town or village, it shall be the duty of the said municipal council to submit to the Provincial Board of Health, together with the plans, an analysis of the water from the proposed source or sources of supply, and an affidavit stating that the water analyzed is taken from the proposed source, and that the analysis submitted to the Board exactly represents the conditions of the sample examined. In case the source of any proposed public water-supply does not, in the opinion of the Provincial Board of Health, meet the sanitary requirements of the municipality, either by reason of the quality of the water, or because the water is likely, owing to the situation of the proposed source of supply, to become contaminated, it shall not be lawful to establish such waterworks without first obtaining from the Provincial Board of Health a certificate signed by the chairman and secretary stating that the proposed source is the best practicable, having regard to all the circumstances of the case, and that all proper measures have been taken to maintain the supply in the highest possible and practicable state of purity.

(2) Whenever the construction of a main-sewer or of a system of public sewerage shall be contemplated by the council of any city, town or village, it shall be the duty of the said council to place itself in communica-

tion with the Provincial Board of Health, and to submit to the Board before their adoption all plans in connection with said sewer or sewerage system. It shall be the duty of the Provincial Board of Health to inquire and report upon said sewer or system of sewerage, as to whether such is calculated to meet the sanitary requirements of the inhabitants of the said municipality; and as to whether such sewer or system of sewerage is likely to prove prejudicial to the health of the inhabitants of the said municipality or of any other municipality liable to be affected thereby.

(3) The Provincial Board of Health may make any suggestions or amendments concerning the plans submitted, or may impose any conditions with regard to the construction of such sewer or system of sewerage, or the disposal of sewage therefrom, as it may deem necessary or advisable in the public interest; and the construction of any main sewer or system of sewerage shall not be proceeded with without being reported upon and approved of by said Provincial Board of Health, and no change in the construction thereof or in the disposal of sewage therefrom liable to injuriously affect the public health shall be made without previous submission to and approval of said Board.

(4) The decision or report of the Provincial Board of Health with regard to any system of water-supply, or any public sewer or public system of sewage, or the disposal of sewage therefrom, shall be subject to appeal to the Lieutenant-Governor in Council, such appeal to be made within one month after the filing of the report or

decision in the office of the Minister of the Department to which the Provincial Board of Health is attached; and such decision or report, when not so appealed against, or when confirmed or amended, and confirmed upon appeal by the Lieutenant-Governor in Council, shall be binding and conclusive upon all the municipalities and persons affected by the same; provided always that whenever it shall appear that any change of circumstances or conditions has arisen the Provincial Board of Health may, if it deem it advisable, make further inquiry and report as to any system of water-supply, or main sewer or system of sewerage or the disposal of sewage, which report shall be subject as aforesaid, and have the same force and effect as aforesaid.

4. Section 99 of the said Act is amended by adding thereto the following sub-section:

(8) Whenever any medical health officer, sanitary inspector or other health officer of the Board of Health knows or has reason to believe that blood, offal, or the meat of any dead animal which has not been previously boiled or steamed when fresh or before becoming putrid or decomposed, or which, although boiled or steamed, is putrid or decomposed, has been or is being fed to hogs, he may summon the owner, the person in charge, or any person found feeding the same, before a justice of the peace for violation of the provisions of this section; and wherever such blood, offal or decomposed flesh is found on any premises, the burden of proof that such was not intended to be so fed shall rest with the person charged.

Should the charge be proven, the health officer making the charge may seize and carry away, or cause to be seized and carried away, the animals, whether dead or alive, to which the aforesaid blood, offal or unboiled or putrid meat has been fed, in order that said animals may be destroyed or so disposed of as to prevent them from being exposed for sale or used for food for man.

AN EARLY GRAVE COMPLICATION OF PHARYNGEAL DIPHTHERIA.—Aufrecht (*Therapeutische Monatshefte*) calls attention to a particular form of diphtheria of the pharynx, which, despite its limited local extension, rapidly kills the patient in two or three days. It has been held that these almost fondroyant cases were to be attributed to a grave infectious myocarditis. Recently, however, the author has observed three cases of this kind where the autopsy showed no trace of myocarditis, but a sub-acute nephritis. The author, therefore, insists upon the importance of systematic examination of the urine from the beginning of diphtheria, even when no symptom points to a renal lesion. The symptoms observed in these cases have been very great frequency of pulse, a semi-comatose condition, delirium, high fever, and marked albuminuria. Guided by these cases the author has been able, in a fourth case, to combat this nephritis in the beginning by the administration of large quantities of alkaline and saline water (*Wildungen*) for the purpose of increasing diuresis and relieving the choked-up kidneys.—*Medical and Surgical Reporter*.

## Special Selections.

### MEDICAL TREATMENT OF DISEASES OF THE STOMACH.\*

BY A. JACOBI, M.D.

Abnormal gastric conditions may depend on incipient pulmonary tuberculosis (*Med. Rec.*), peribronchitis, chronic pleurisy (particularly the diaphragmatic form), asthma, and diseases of the heart and blood-vessels. These disorders, then, require treatment. Where there are nausea, inflation, and sour or bitter taste, irrigation is indicated. To repeat this for its psychic effect is inadvisable. But to clear the cavity of all the food remnants, one or two washings are not sufficient. The tube should be soft and have a double opening at its lower end. It should be moistened with warm water. Its use is contraindicated in acute gastritis, except that caused by poisonous or fermenting food, in painful pharyngitis, gastric ulcer, a dilated heart, or aneurism or strictured œsophagus. About 500 gms. of warm water or warm alkaline water are run in, once or several times. When mucosis separates the ingesta from the absorbing and secreting epithelium, irrigation is indicated. Then chloride of sodium and carbonates act as solvents. In bad cases of chronic gastritis, solutions of 1 to 2000 of nitrate of silver are of benefit when preceded by warm water with carbonate of sodium. In an atonic and non-secreting stomach, papayotin is an excellent aid to digestion. Pan-

\**American Médico-Surgical Bulletin*.



creatin changes starch into dextrin, splits up fats, etc.; but in acids it has no effect, and, therefore, it is useless to put it into an acid stomach. Pepsin in water with HCl dissolves albuminates. When the stomach does not secrete it, as in anæmia, scrofulosis, etc., its use is beneficial.

The preparations of bismuth are a gentle and anti-fermentative protective to the gastric mucous membrane. The gastric neuralgia of the anæmic, hysteric and pregnant are favorably acted on by it. When nitrate of silver is to be taken, no salt should be allowed in the food, and the stomach should be fairly empty. Solutions are better than pills.

To an adult one-half to one grain in four ounces may be given in tablespoon doses every two hours. For irrigation a few grains of the silver salt to a pint of water may be employed. Charcoal is of no use when wet. It should be given in wafers or capsules, and only the carbo-animalis should be used. For atonic stomachs bitters are appropriate. The roots of gentian, calumba, quassia-wood, dandelion, Irish moss and condurango are beneficial. The best of all bitters is nux vomica. Rhubarb in small doses has no cathartic effect. It improves the appetite, particularly in rickety children. Motory incompetence may be treated with orexin, spices, massage, internal douches (hot and cold), electricity, etc. Lack of HCl results from anæmia, defective enervation, atrophy of glands, cicatrices or tumor. Pepsin is deficient at the same time. They can be supplied in medicine. Excess of acid is more frequent. It may be due to chronic gastritis, ulceration

or neurosis. The abuse of tobacco or alcohol also causes it. Whatever excites gastric secretion must be avoided. Instead of aromatics, acid, bicarbonate of sodium, etc., give nitrate of silver in solution—1 to 3000 or 6000 in tablespoon doses. In all cases antacids are indicated, such as prepared chalk, magnesia, bismuth, etc. Butyric acid ought to be neutralized before food is taken. Magnesia must be given ten minutes before a meal. Round ulcer requires, theoretically, absolute rest. The only food permissible is sterilized milk, not to be drunk, but taken by the teaspoon. The stomach should be kept alkaline. It must not be inflated. The meals should be small but frequent. Opium is good to enforce rest. Irrigation ought to be avoided.

In the vomiting and neuralgia of neurotic persons these remedies have served best the author: 1. Half to one drop doses of tincture of iodine every one to three hours; 2, arsenious acid in doses of one-fifth to one-third of a milligramme every one to three hours; and 3, the valeriate of zinc in doses of from 75 to 125 centimeters daily in divided doses. The oxide of zinc is also useful, in six daily doses of from two to five centigrammes each. In vomiting of pregnancy, one drop every hour of wine of ipecac has proved useful. The application of the interrupted current, one pole to the neck and the other to the epigastrium, is also effective. Constipation may give rise to vomiting, and should be relieved by purgation and rectal irrigation. In protracted fermentation the character of the food must be inquired into. The nose and pharynx should be examined. Among the

anti-fermentatives used by the author is HCl. Thirty to forty drops in a quart of water make a good drink. Creosote, hypermanganate of soda, resorcin, calomel, etc., act very well.

In gastric hæmorrhage, neither sound nor irrigate the stomach. Chloride of iron and acetate of lead can do little good. Avoid using alcohol, and even water. Ice internally may do good by contracting the stomach. Ergot, hypodermically, may be used. Keep the stomach contracted by a heavy ice-bag; the body recumbent; food, as iced milk, in small quantities. Subnitrate of bismuth is useful, and probably will be the only thing tolerated. Rest for the mind and circulation can be obtained by the hypodermic use of morphine. The loss of appetite in gastric carcinoma may be benefited by nux vomica, calumba, and particularly condurango. Anæmia needs mild iron preparations; constipation should be treated with vegetable, and not saline, purgatives; for pain we may give morphia, but not chloral hydrate; charcoal or creosote is used for eructations; vomiting is checked by morphine, creosote, hydrochloric acid. To a certain extent the secondary symptoms can be more than simply treated. Methylene blue is efficacious in many cases; in doses of one to two drains daily it will relieve and improve. Tumors are often reduced in size by its use.

Prof. Wilson says in cases of typhus that a decided difference between the morning and evening temperature can be considered as a favorable sign, even when the evening temperature shows a considerable increase over the morning temperature.

## THE COOL-BATH TREATMENT OF ENTERIC FEVER.\*

C. STENNETT REDMOND, L.R.C.P.I.

Although the cold-bath treatment of typhoid is identified with Brandt, of Stettin (*British Medical Journal*), it really originated with Dr. Currie, of Liverpool, in 1787. After his death, it lapsed until it was revived by Brandt, in 1861. The indications for the bath are a continued temperature of 102° F. to 104° F. for several days, with marked evening rise, and no local lesion, like pneumonia, to account for it. The temperature should be taken half an hour before the bath and regularly every three hours. Whenever the rectal temperature rises to 102.2° F., the bath should be repeated. In some cases a tepid bath at 87° F. or 90° F. for thirty minutes is better borne; in others, a bath 66° F. or 78° F. for fifteen minutes. When the temperature no longer rises to 102.2° F., but still remains above normal, a warm or tepid bath for fifteen to thirty minutes night and morning is beneficial and grateful to the patient.

The author has compiled from various sources the following code of rules:

1. A temperature of 102.2° in the rectum calls for a bath, and it must not, as a rule, be permitted to rise higher without giving the bath unless the patient is in a sound sleep.

2. The bath, long enough for the patient to be at full length in, is brought close to the bedside, and the

\* *American Medico-Surgical Bulletin.*

patient carefully lifted in and out in the horizontal posture.

3. Half an ounce or 1 ounce of old pale brandy in 2 or 3 ounces of soda or aerated limewater to be given first (in case of adult).

4. The patient always must pass water before being put in the bath.

5. The patient to be immersed up to the neck; the head to be constantly sponged; and the chest and extremities, not abdomen, to be gently rubbed by an attendant.

6. The first bath to be given at 90° F. or 85°, and cooled down by adding cold water to 75° or 70°. If the patient bears it well, subsequent baths may be given at 80°, and cooled down to 70°. The cold water is poured over the patient's head and chest.

7. Average duration of bath, ten minutes; some say until patient begins to shiver; but if he begins to feel cold, or gets uneasy, the bath must be cut short. Where a patient is nervous or bears the cool baths badly he must be kept in tepid ones at 87° for fifteen, twenty, or thirty minutes, the more prolonged immersion producing the desired effect.

8. Lift the patient carefully on to a couple of large, soft bath towels laid over a mackintosh sheet, and rub him dry briskly, except the abdomen, which dry gently, envelop him in a warm blanket, and put him in bed, covering lightly, and give him a cup of warm coffee and milk or peptonized cocoa and milk.

9. Half an hour after take the temperature, in the rectum preferably, when it should be 2° or 3° lower.

10. Take the temperature every three hours, and as soon as it again rises to 102.2° F. repeat the bath,

unless he is sleeping, when, as a rule, he must not be disturbed, even if the temperature rise to 104°, but the bath deferred till he awakes.

11. Usually a bath is indicated every six hours. Sometimes, however, during the fastigium the pyrexia is so obstinate and uncontrollable as to call for a bath every three or two hours.

12. During the night, baths are seldom called for except by an extremely high temperature.

13. In case the bath lowers the temperature only 1° or less, or only for a very short interval, it becomes necessary to lower its temperature to 66° (cool bath) or even 45° (cold), and lumps of ice may be put in the bath to cool it down with perfect safety, as was done in one of my cases. In Strümpell's experience, baths below 73° F. are seldom needed. He regards 80° to 85° F. as the average.

14. If intestinal hæmorrhage occur, baths must be discontinued.

The advantages of the bath treatment are: (1) Diminution of fever and calming of the nervous system; (2) Disappearance of headache, stupor and delirium; (3) Irritability of the gastro-intestinal mucous membrane, more or less relieved with less thirst, vomiting and diarrhoea; (4) Improvement of the pulse; (5) Diminished dehydration of tissue and lessened danger of bed-sores; (6) Diuretic action on the kidneys; (7) Reduction by 50 per cent. of mortality. The objections to the treatment are: Expense, public prejudice, nervous dread of patients, and increased frequency of relapse. The contra-indications are: Peritonitis, perforation,

hæmorrhage, and advanced cardiac weakness. Broadbent does not think albuminuria or pulmonary complications prohibitive.

### TREATMENT OF GOUTY HEART.\*

DR. J. MITCHELL BRUCE.

The author contributes an exhaustive paper on the subject of gouty heart (*The Practitioner*), from which we extract the following pertaining to treatment:

Some of the best results in the treatment of gouty heart have been obtained from the use of recognized mineral waters; but baths and waters call for the greatest care in the selection of them, and for even greater caution, if possible, in the use of them. Without judgment on the part of the doctor at home and the doctor abroad, such a patient, especially if over 50, may be very easily pulled to pieces.

The diet should be spare in amount, and of an ordinary mixed kind. We have to remember, when dealing with the gouty heart, that this great nervo-muscular organ is often nourished insufficiently, as well as poisoned. It is good to order a fair amount of water to be drunk at each meal; and Vichy water is perhaps the best beverage of all. In many instances, a small, definite quantity of stimulants—such as whiskey, or a pure red wine—has to be allowed at meal times; but all white wines and beer must be strictly forbidden. The question of smoking must never be forgotten. To insure

the best and speediest results, tobacco in every form is best avoided entirely. Some patients plead for one pipe a day; but I have known even the last pipe to have to be given up by the gouty old man with a weak heart before cardiac distress disappeared.

Drugs are valuable, if properly selected; useless or worse than useless, if prescribed in a routine fashion from the list of cardiac tonics. If we wish to know what class of medicines does most good in gouty heart, we have but to ask the sufferer after an experience of a year or two. It is remarkable how many of these patients suggest blue pill, or tell us spontaneously that they have found it better than all the other remedies prescribed for them; other patients praise saline purgatives. Plummer's pill, taken every second night for a fortnight, is highly successful.

Next to purgatives, the drugs that give most satisfaction are potassium iodide, arsenic, strychnine, and digitalis, with its allies. If pain be a prominent feature, iodide should be ordered, in combination with alkalis; if faintness, strychnine, variously combined. Arsenic and strychnine make a valuable combination in some instances. The use of digitalis demands judgment. Prevalent views about vasomotor angina might at first sight suggest the opposite class of remedies—those which lower blood-pressure very readily and very rapidly, particularly the nitrites and nitroglycerine. But we must not forget that the sufferer from gouty heart has no such pulse habitually, no such evidence of cardiac vigor as we associate with high tension and as we typically find in some

\* *Materia Medica and Therapeutics.*

cases of chronic Bright's disease; and that if the tension do suddenly rise to a dangerous height during the angina, such a paroxysm may be safely regarded as a phenomenon of weakness, not of genuine strength, of the vasomotor system. The poor pulse and the signs of large, feeble heart rather suggest cardiovascular tonics. It will be well, therefore, as a rule, to order, say, five minims of tincture of digitalis, to be taken with each dose of any of the preceding drugs or combinations that are given. In some of these patients, strophanthus occasionally proves peculiarly suitable as a substitute for the older drug.

During the anginal seizures we naturally trust to the nitrites and nitroglycerine, which are so powerful and so swift in their action. In more prolonged instances, good results are had with a hypodermic injection, consisting of two minims of the B. P. injection of morphine and two minims of the solution of strychnine hydrochlorate—that is, 1-5 and 1-50 of a grain, respectively; of the two drugs. The effect of this combination on a disabled heart is often extremely satisfactory.

Whilst a single dose of morphine given by the physician himself is recommended in the acute phase of the gouty heart, it is urged to discountenance the use of sedatives—particularly hypnotics—for which the sufferer often craves or has actually acquired a habit. Sulphonal has lately replaced chloral hydrate in considerable measure as the popular remedy for sleeplessness. Such drugs do endless mischief in the insomnia of irregular gout if indiscriminately used.

## IMMUNITY AS ILLUSTRATED BY EXPERIMENTS WITH CHOLERA.\*

Metschnikoff (*Ann de l'Inst. Pasteur*, 1894, pp. 529-89) discusses the subject of cholera and vibrios in relation to immunity and intestinal cholera. The conclusions reached are of considerable interest and are appended without further reference to the details of his investigations:

1. "Local immunity cannot be explained by particular conditions which prevent the microbe from living, for it may be found beyond the cholera area and in places quite free from it.

2. "Local immunity cannot be regarded as an unconscious and permanent vaccination of the inhabitants.

3. "The blood of persons residing in exempt places does not protect against Koch's vibrio.

4. "The injection of cholera cultures does not protect.

5. "The development of the cholera vibrio is considerably affected when growing in association with other microbes.

6. "The immunity of animals to intestinal cholera is, in a great measure due to the inhibitory influence of the flora of the gastro-intestinal canal on the cholera vibrio.

7. "As long as young rabbits are being suckled they are very sensitive to the cholera vibrio, and this cholera is aided by the action of certain microbes.

8. "Young guinea-pigs are less sensitive than young rabbits to intestinal cholera.

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\**Medical and Surgical Reporter.*

9. "Young rabbits cannot be vaccinated successfully against intestinal cholera, either with sterilized or living cultures.

10. "Young rabbits may be occasionally vaccinated successfully by means of the serum of animals vaccinated against cholera peritonitis. Normal horse serum is useless.

11. "The attempts to prevent cholera by means of microbes have shown that bacteria exist in the alimentary canal inhibitory of the cholera vibrio, but at present the results are inconclusive.

12. "In the immunity and receptivity of man and animals to intestinal cholera, the microbic flora of the alimentary canal plays an important part. Relying on this fact we may readily reconcile the fundamental truth that the vibrio of Koch is the specific cause of cholera with the data of epidemiology, especially with the influence of places and time on the progress of cholera epidemics."

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THE WARM MILK WET-PACK.—  
(Dr. E. Wigglesworth, *Boston Medical and Surgical Journal*.) Dr. W. B. Sampson writes from Transvaal, South Africa, to call attention to the advantages, in zymotic diseases, of a wet-pack; not, however, of water, but of warm milk. An epidemic of typhoid fever, due to the use of milk which had stood in buckets previously washed in water subsequently ascertained to be infected, suggested the idea that, if milk would so easily absorb germs from wood, it might do the same from the human body. Experiments in cases of erysipelas seemed to confirm the truth of this

theory, and, accordingly, in an epidemic of small-pox, galactopathy was substituted for hydropathy to reduce fever, prevent pitting and soothe the nervous system; perhaps, also, in some degree, to nourish the patient. Three blankets were laid upon a mattress, and covered by a single sheet saturated with one and a half pints of fresh, warm milk (not boiled). The patient was laid upon the sheet. This was then wound tightly around him, the ends brought over his shoulders, and his arms left bare. The blankets were then, one by one, packed over him, and he rested thus for an hour. This was done once in four hours. After the pack, a warm bath or sponging. Dr. Sampson reports that in eighteen cases so treated by him, in the small-pox lazaretto at Kimberley, before the eruption appeared, the disease was aborted, and the patient convalescent in five days. In one case, where the eruption had just manifested itself, the milk-pack was used twice as often. The eruption disappeared entirely within twenty-four hours, and in four days the patient was able to leave his bed. Subsequent experiments in cases of the various infective fevers gave good results. The milk-pack was found to lower temperature, stop delirium, procure comfort for the patient, and promote sleep. It is, in its action, gentle, soothing and wonderfully recuperative. It causes no weakening, but increases the patient's flesh and strength. Tried side by side with hydropathic wet-sheet packing, the superiority of the milk-pack was manifest. In scarlet fever, measles, typhus, typhoid and even malarial and puerperal fevers, remarkable re-

sults were obtained. One case of scarlet fever yielded in three days. Milk compresses to the throat in diphtheria gave the best results. If this remedy should really prove as efficacious as it is simple, therapeutics has made an advance.—*College and Clinical Record.*

PROFUSE MENSTRUATION.—The *Canada Lancet* contains an able article on this subject by Dr. Chas. P. Noble, who, after a thorough discussion, offers the following conclusions: 1. Menorrhagia in young virgins is usually functional, due to disturbances in the vaso-motor nervous system or to relaxation of the tissues, in general caused by the rapid growth which at times takes place about the time of puberty. Because of its pathology, menorrhagia in young virgins is usually curable by general treatment. 2. Menorrhagia occurring in young child-bearing women is usually due to some mishap in connection with pregnancy or parturition, such as the retention of products of conception, laceration of the cervix or perineum, retro-displacement of the uterus, sub-involution, inflammation of the uterine appendages, and pelvic congestion. Menorrhagia in this class of women is curable. It usually requires local treatment of an operative nature. When due to sub-involution and malpositions of the womb, operation is unnecessary. 3. Menorrhagia in women approaching the forties, and in those who are older, is usually due to gross diseases of the uterus, such as fibroid tumors, polypi, adenoma, or malignant tumors. Menorrhagia occurring in this class of women, except

when due to advanced malignant disease, is curable, but almost invariably requires operative treatment applicable to the disease present in the particular case. 4. As menorrhagia is a symptom and not a disease, an exact diagnosis is requisite in every case. With the exception of young virgins, it is desirable that a physical examination of the pelvic organs be promptly made. The importance of this examination is the greater with the increasing age of the patient. Special considerations should influence the practitioner to postpone the local examination in the unmarried, unless it be reasonably certain from the symptoms that gross local disease is present. 5. There is no treatment for menorrhagia *per se*. By general measures, such as rest in bed and the use of digitalis, strychnine and ergotine, pelvic congestion can be lessened, and in that way menorrhagia can be, at least in part, controlled; but it cannot be too strongly insisted upon that in every case of menorrhagia an exact diagnosis must be made, and the appropriate treatment addressed to the disease which is present.—*Medical and Surgical Reporter.*

COUGH MIXTURE.—Cough mixtures should be regarded as a relic of ancient and unscientific methods of practice, and as most of them do more harm than good, their employment should be relegated to well-merited oblivion. Some physicians favor a Turkish bath as a remedy for a bad cold, and in exceptional cases this plan works well; but it is not suited to many, for the reason that a bad cold is but the warning signal that the

vitality of the organism has been reduced, while the susceptibility to disease is increased. An able-bodied man accustomed to Turkish baths can stand one of these in case of a cold; but it is of more importance that the condition of the alimentary canal should receive the same or like attention. The danger is not all from without; it is probably greater from the alimentary tract than from the skin, and those who advocate the use of the bath, to be consistent, should at the same time insist upon the free use of a suitable saline. In the second place, all successful (?) cough mixtures contain nauseants which tend to disorder the digestion; but were this effect only temporary, no material harm would ensue. These nauseants, however, are now promptly eliminated, and when the patient would be in a fair way to recover, their insidious influences begin to manifest themselves, so that neither the physician nor patient can understand why convalescence is prolonged. Cough mixtures are doomed; eventually they will be damned. In the third place, cough mixtures contain more or less saccharine substance—usually sugar in the form of syrup, originally incorporated probably to make a nauseating draught palatable; but it is now well known that the introduction of sugar into the stomach, when in an unhealthy condition, is most objectionable, inasmuch as it starts up fermentation, produces body heat, and even by the wildest stretch of the imagination has no distinctly beneficial effect upon the cough. Let us have a new régime for the winter campaign.—*Editorial in American Therapist.*

ADMINISTRATION OF QUININE.  
—Dr. Patein (*Med. Week*). At a recent meeting of the Therapeutical Society at Paris, a committee was appointed to investigate as to the best preparation of quinine obtainable, and the form best suited for the preservation and use of this drug. As a result of this inquiry, committee reported the following conclusions: Solutions of quinine salts should be reserved for the curative treatment of attacks of intermittent fever. As a prophylactic remedy, basic hydrochlorate of quinine is less irritating than the sulphate and more pleasant to take on account of the absence of the extremely bitter taste characteristic of the latter. The dose can be carefully regulated, and it contains a proportionately larger quantity of quinine than the sulphate. It is easily transported, and keeps perfectly. Hydrobromate of quinine, it seems, ought to be employed particularly for the treatment of obstinate fevers, in which the hydrochlorate has failed to produce the desired effect. Quinine salts should not be put up in the form of tablets, as repeated examination of samples from various sources has proved that they are either too brittle or completely insoluble. After having administered such tablets to rabbits, the investigators found them two hours later to be entirely unaffected by the gastric juice. Better results were obtained with gelatin capsules and medicinal pearls, which readily dissolve in slightly acid solutions or in the stomach of a rabbit. The advantage of these preparations is the ease of controlling their composition and their small size. Pills, contrarily to the prevailing opinion, gave



the most prompt and invariable results, even when silver-coated pills, which had been kept for upward of a year, were used. Pills or pearls, containing fifteen centigrammes of quinine hydrochlorate, may be administered for prophylactic purposes—two daily, in a little water.

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VICTOR HORSLEY'S OPINION OF ELECTRIC BELTS.—In a lecture delivered before the London Institution, on "Truth and Falsehood as to Electric Currents in the Body," Professor Horsley said, among other things: "The actual currents in the body are only secondary phenomena accompanying some other manifestation, and they are indeed so feeble as to require the use of extremely sensitive instruments for their detection. The statement that 'electricity is life' is only one of the numerous impostures promulgated for making money in this connection, for, with the exception of certain animals, such as the electric eel and the torpedo fish, where the electric currents are necessary to enable the animal to obtain food, currents of electricity have no primary importance in the life of the animal. There is an immense amount of falsehood in relation to popular ideas as to what is and what is not the legitimate use of electricity in medicine. The application of suitable currents, which must possess considerable intensity, is legitimate enough for producing contractions and stimulating the parts to which they are applied; the use of galvanic or faradic currents as aids to diagnosis is also sound science. But when it is remembered that the resistance of the skin is extremely high, and that a considerable

current must be employed to overcome this resistance ere any stimulus can be established in the body, the whole fabric of the popular delusion upon the subject becomes apparent, and the extraordinary nature of the play upon the popular ignorance by such means as the widely-advertised electric belts is equally evident; and it is this want of knowledge which led the public to believe in the horrible impostures that were sold for promoting the physiological processes of the body."—*Bulletin of Pharmacy*.

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UNCONTROLLABLE VOMITING OF PREGNANCY.—Bonnet (*British Med. Jour.*) relates a case where the patient was twenty-two, and single. Her first pregnancy went on to term; but, in her second, labor was induced at the fourth month in consequence of hyperemesis. During the early part of the third pregnancy vomiting became very severe, lasting a month, and reducing her to an alarming extent. When just over six weeks pregnant a laminaria tent was introduced; on January 14, 1890, the vagina was plugged with iodoform gauze. For twenty-four hours the vomiting ceased. Next day the tent was removed, and the sickness returned. On January 17, two tents were introduced as high as possible. The vomiting again stopped, returning when the tents were taken out. Then five tents were progressively introduced, and left in place for three days. The sickness stopped and did not return. The uterus showed no signs of contracting throughout the course of the above treatment. The patient took food well and grew stout. Seven and a half months later she was delivered of a healthy child at term.

# Dominion Medical Monthly.

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*All literary communications, exchanges, and books for review, should be addressed to the DOMINION MEDICAL MONTHLY Editor, 97 Confederation Life Building, Toronto.*

*Address all business communications to the Publishers, THE MEDICAL PUBLISHING CO., OF TORONTO, Rooms 97, 98, 99 Confederation Life Building, Toronto, Canada.*

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TORONTO, APRIL, 1895.

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## CORONERS.

We are glad to see that other medical journals are following our lead in this matter, and we should like to have the hearty co-operation of all the journals in remedying what is at present a very bad condition of affairs.

There has been much feeling aroused lately in the apportionment of the various inquests. There are two views to be taken of this matter. The first view is that, as the present law stands for the appointment of coroners and the regulation of their duties under the law, one coroner is as good as another, so that the medical man acting as coroner in a certain district, who considers that he should have the conduct of given inquests, has a perfect right, both morally and

legally, to feel aggrieved when he is over-ridden by officers of the Crown from which he himself holds his appointment. The other phase of the question is, as we pointed out before, the public interest, and there is no doubt, as the coroner holds not only an investigating, but a judicial position in relation to inquests, that the more experience a man has in this peculiar class of work, the more thoroughly he is acquainted with criminalology, the more thoroughly he is posted in all forms of procedure, the better will public interest be served. This matter comes up at the present time in connection with the statements we have heard regarding the number of inquests conducted by Arthur Jukes Johnston, notably, the Hyams and Dicks inquests, and also the fire inquest. Now it is undoubtedly apparent that in these cases the interest of the public will be better served by a gentleman of Dr. Johnston's skill and experience than by anyone else that could be mentioned in the city, and we say this with perfect knowledge that the statement cannot for a moment reflect upon the personal qualifications or attainments of any of the other medical men in this city. From all this it is apparent that something must be done in the matter, and we would suggest that the city could be divided up into districts, each under the charge of one man, with some gentleman as a presiding coroner over the whole city, the duties and remuneration of all being fixed. This plan might likewise be extended to other cities and counties in the Province.

## PROVINCIAL BOARD OF HEALTH.

A special meeting of this Board was held at Dr. Bryce's office on March 11th. The following members were present: Dr. Cassidy in the chair, Dr. Rae, Dr. Kitchen, and Dr. Bryce, secretary. The object of the meeting was to receive reports from the Legislative Committee and from a special committee appointed to investigate a charge respecting the feeding of putrid animal refuse to hogs and fowls.

The Board considered these reports in committee and adopted them.

The recommendations of these committees are incorporated in an amendment to the Ontario Health Act. (*Vide* p. 102.)

It was moved by Dr. Rae, seconded by Dr. Kitchen, and carried, that the Government be asked to increase the salary of Mr. Mackenzie, analyst of the Board, owing to the perilous nature of the work he has to do in examining diphtheritic membrane and tubercular sputa.

The report of Dr. Hodgetts, respecting small-pox in the township of Malahide, was read. There were seven cases and two deaths. His bill for services in Malahide and other places, \$302.75, was ordered to be paid on motion of Dr. Kitchen, seconded by Dr. Bryce.

The Board then adjourned.

March 27th.—Mr. Haycock's bill to destroy the Ontario Medical Act was given the six months' hoist by a vote of 15 to 71, the Patrons as a body voting for it. The old parties voted together against it. Mr. Hay-

cock may know something about farming, but it is difficult to conceive what he can have learned about the rules regulating the conduct and behavior of medical men towards the public and their fellows, as well as the best means of keeping up the standard of medical education, unless "he knows it all." As a witty contemporary said recently, "the man who knows it all would not be such a bad fellow if he only kept it to himself." The leader of the Patrons, however, having begun to attack legislation in which he had no business to interfere, it was only right that the recognized political parties in the Province should unite to crush him.

The Haycock bill, however, bears *prima facie* evidence that it was not entirely the production of the bucolic legislator. The introducer of the bill was, if we may be pardoned the simile, the haycock behind which certain free-traders in medicine, and medical sore heads, *et hoc genus omne*, concealed their personalities while launching their envenomed darts at the Ontario Medical Council.

A cunning attempt was made to make the bill inure to the advantage of the Government, and certain features of the bill appear to have commended themselves to the favorable opinion of the Premier; but that gentleman, in speaking to the question, stated that the whole case for the bill had broken down. "There was no ground at all for a revolutionary proposal, no pretence that the powers given to the medical profession had been abused, or that anyone had been unfairly dealt with. There was nothing to justify the louse in sup-

porting the bill, and he would, therefore, vote for the amendment."

Mr. Whitney, representing the Conservative party, ably supported the position taken by the Attorney-General. "In his opinion the bill should be thrown out of the House without ceremony, and there had been times when bills like that had been destroyed by the common hangman."

Section 16 of this precious bill was rather mediæval in its tendency. It provided that midwives who had attended ten cases of confinement should be allowed to legally practise midwifery upon payment of a fee of \$1 to the treasurer of the municipality, that such midwives would not be liable to a fine for giving professional services, and would be entitled to recover fees for services rendered.

The leader of the Patrons should have introduced another clause to the effect that, in case an action for damages should be brought against a registered midwife for any injury caused through her ignorance, negligence or want of skill, the Board of Patrons would be held responsible for and would pay the order for damages granted by the Court.

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### Book Notices.

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*Twentieth Century Practice.* An International Encyclopædia of Modern Medical Science. By leading authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In twenty volumes. Vol. II. Nutritive Disorders. New York: William Wood & Co. 1895.

The second volume of this unique work opens with an article on "Ad-

dison's Disease and Other Diseases of the Adrenal Bodies," by Sir Dyce Duckworth, of London. The second article, on "Diabetes Mellitus," is from the pen of Professor von Noorden, of Frankfort, whose studies in metabolism have justly attracted so much attention both in this country and in Europe. Contrary to what we might expect in a treatise written by a German physiologist and pathologist, this article is intensely practical, sixty pages of the 150 being devoted to the subject of treatment. Following this is an exceedingly interesting article on "Rheumatism," by Dr. T. J. MacLagan, of London, the originator of the salicyl treatment of this disease. The next article is one on "Gout," by Dr. Henry M. Lyman, of Chicago, the only American writer in this volume—and he has made a worthy contribution to American medical literature. It is not too much to say that the article is one of the most thorough and comprehensive treatises on gout that has ever been written. "Arthritis Deformans" is the title of the next article, which is from the pen of Dr. A. E. Garrod, a son and worthy pupil of Sir Alfred Garrod. The sixth article of the volume is one on "Diseases of the Muscles," by Dr. Dujardin-Beaumez, of Paris. The closing treatise of the volume is one on "Obesity," by Professor Oertel, of Munich. "Oertel's" is known as one of the most successful methods of treating obesity, and the profession is to be congratulated on having a description of this method and an explanation of its *rationale* from the hand of the inventor himself. Finally, all this mass of material is made available to

the reader by an excellent index in addition to the ordinary table of contents.

*The Century Cyclopædia of Names.*

A, Pronouncing and Etymological Dictionary of Names, in Geography, Biography, Mythology, History, Art, Ethnology, Archæology, Fiction, etc., etc. Edited by BENJAMIN E. SMITH, M.A., Managing Editor of the Century Dictionary, assisted by a number of eminent specialists. Published by the Century Co., New York.

This is certainly the most complete book of reference ever published, and is a perfect mine of information on all subjects which are not to be found in ordinary encyclopædias or dictionaries. It combines in itself complete Classical, Mythological, Art, Historical and Bibliographical Dictionaries; Gazetteers of Geography, Biography, and a Dictionary of dates—in fact, all the various information that a literary man requires, or a general reader wants, to verify or correct the numberless references to little-known or obscure allusions and phrases they meet with in their reading. It is so arranged that every name can be easily found, and the information it contains is exact, condensed and comprehensive. No work has ever been published that is as valuable as this Cyclopædia is in its special line, and it will certainly occupy the first rank as a book of reference. Its convenience in bringing into one volume all the information contained in numberless handbooks, Biographical, Geographical and Classic Dictionaries, renders it indispensable to all who wish their reading to be of educational value. It is a work that should be in

every library in the land—in fact, no library can be considered complete without a copy of this valuable work. Messrs. McAinsh & Kilgour, Confederation Life Building, are the Canadian agents for this work.

*A Manual of Bandaging.* Adapted for self-instruction. By C. HENRI LEONARD, A.M., M.D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. Sixth edition, with 139 engravings. Cloth, octavo, 189 pages. Price, \$1.00. The Illustrated Medical Journal Co., Publishers, Detroit, Mich.

The main feature for commendation of this book over other similar works is that each illustration shows the direction of the various turns of the bandage with arrow-heads, and each turn is properly numbered; this renders the book a self-instructor to the reader of it, who has but to put the various bandages about the limbs of an office-companion a few times, when the "trick" of its application upon a patient has been learned. It takes the place, in this way, of hospital drill. Besides the "Roller Bandages," the various "Cravats," "Slings," "Tailed," "Adhesive" and "Plaster" bandages, and "Immovable Dressings" are given. The book is divided into sections treating of "The Bandages of the Head," of "The Body," of "The Upper Extremity," of "The Lower Extremity," "Knots," "Strappings," "Compresses" and "Poultices" with full description of making and applying the same. There is an illustration for nearly every bandage described. It has been recommended as a text-book in various medical colleges

and hospitals in this country, and has had two editions sold abroad. A medical student could profitably spend his vacation evenings in mastering the application of bandages by using this book as a guide; and to a practitioner it would not come amiss.

*Funny Bone*, a book of mirth, for doctors, druggists, dentists, medical students and others, containing funny sayings, jokes, good stories, dialogues, conundrums, ludicrous things, ditties, etc., etc., from a great many sources, with over 150 new and original comic illustrations. By Dr. L. CRUSIUS, Ph.G. All of which pertain to the medical and pharmaceutical professions. The Funny Bone Publishing Co., publishers, 1421 Market Street, St. Louis, Mo. Mailed upon receipt of price, 50 cents.

We heartily recommend this most amusing book to our confreres in the profession. It is brimful of what is of most interest to physicians.

*The Year-Book of Treatment for 1895*. A comprehensive and critical review for practitioners of medicine and surgery. In one 12mo volume of 501 pages. Cloth, \$1.50. Philadelphia: Lea Brothers & Co. 1895.

The eleventh consecutive issue of this annual summary of medical progress will interest the wide circle of readers who have learned its substantial value. To have the real advances in treatment in all departments of medical practice culled by recognized specialists from the immense mass of medical literature, and presented with critical remarks in a classified form for immediate use, is assuredly a help towards success which busy practitioners will not neglect, and

which other practitioners will consult for the soundest of business reasons. The reader interested in a special subject can quickly post himself on whatever is new and good in treatment by a perusal of the chapter devoted to it, and the general practitioner can with facility turn to any topic by a glance at the index. Those desiring to read up the literature of any subject can find no more convenient guide than the selected list of new books, new editions and translations. The volume is exceedingly cheap in proportion to intrinsic value and serviceableness.

*The Treatment of Wounds, Ulcers and Abscesses*. By W. WATSON CHEYNE, M.B., F.R.S., F.R.C.S., Professor of Surgery in King's College, London. In one 12mo volume of 207 pages. Cloth, \$1.25. Philadelphia: Lea Brothers & Co. 1895.

This little work owes its brevity and its widespread usefulness to the fact that it is devoted wholly to the treatment of affections which, though nominally surgical, are yet so common as to form part of the daily work of every practitioner. Antiseptic methods have revolutionized surgical procedures and have added vastly to their successes. Moreover by throwing light upon formerly unexplained failures they have increased not only the knowledge, but also the confidence of the surgeon, an element which must be recognized as having an important influence upon results. Professor Cheyne has long been known as one of the foremost of London surgeons, and as a critical student of antiseptic procedures in their practical bearings. In this vol-

ume he has described the methods of treatment which he employs and which he knows "to be efficient and to be the simplest consistent with certainty in results."

*Index of Medicine.* By SEYMOUR TAYLOR, M.D., Member Royal College of Physicians, Senior Assistant Physician to the West London Hospital. In one large 12mo volume of 801 pages, with 35 engravings. Cloth, \$3.75. Philadelphia: Lea Brothers & Co.

The author has prepared a work of great value alike to physicians and students. In a certain sense the name "Index" is a misnomer, for the volume is in fact a concise "Practice of Medicine," the diseases being grouped systematically in order to secure for the reader the many advantages resulting from rational arrangement. After valuable chapters on "Disease," "General Pathology," "General Diseases," "Specific Infectious Diseases" and "Specific Fevers," the various organs and systems of the body are considered, and the cause, symptoms, pathology, treatment and prognosis of each affection are succinctly stated. Numerous illustrations, together with tabulations of differential diagnosis, tests, etc., elucidate the text and condense a great amount of necessary knowledge in the clearest manner. The work is one which merits and will doubtless obtain a wide popularity.

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### Personal.

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\$3,000 practice and village property in western Ontario for disposal. No opposition. Address, A. A. McDuff, St. Thomas, Ont.

THE PROLONGED BATH.—*Modern Medicine* says that a patient in the St. Louis Hospital was recently kept immersed in a bath tub for six weeks, for the cure of a large sloughing abscess, a current of water being constantly passed through the tub. The writer has, within the last twenty years, treated many cases of gangrene, crushed limbs, sloughing sores, etc., by this method, and has found better results than by any other. Its success is due to the asepsis secured by the constant immersion. The presence of a large quantity of water is not favorable to the development of pus-forming germs, so that suppuration is lessened, and at the same time the poisons resulting from the action of the disease germs are washed away. These poisons, when left in contact with the tissues, paralyze the living cells and destroy them, thus hindering the reparative efforts; but by the constant cleansing effected by contact of water kept pure by frequent renewal, the tissues are protected from the toxic influence of these poisons, and healthful repair is thus promoted. While in Vienna some twelve years ago, the writer found patients living in tubs of water, who had been immersed for periods varying from six months to a year or more. The cells of the body are accustomed to contact with moisture; in this respect they may even be compared to aquatic animals. The blood cells are carried by a current of watery fluid, and the tissue cells are all constantly bathed in this fluid, so that the contact of water with the living tissues is a condition closely analogous to that which is naturally maintained within the body.—*Food.*