## Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☐ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☐ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

THE

# CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

THE OLDEST MEDICAL JOURNAL IN THE DOMINION.

Vol. XXXI. No. 9. | TORONTO, MAY, 1899. | Price, 30 Cents. $3 per Annum.



CANADA LANCET PUBLISHING CO., PUBLISHERS, TORONTO.

## INDEX TO CONTENTS.


| | PAGE. |
|---|---|
| Abstract of Address by Dr. Roddick | 1135 |
| Fevers in Children: Their Significance, General Diagnostic Value and Treatment | 1140 |
| Clinical Notes from Johns Hopkins Hospital: Dr. Ernest Hall, Victoria, B.C | 1147 |
| Cancer, Discussion on | 1150 |
| A Plea for a More Correct Application of the Emmet Methods in Plastic Surgery | 1155 |
| Epistaxis: A Simple and Efficient Means for its Control | 1162 |
| A Common Cause of Crying in Infants | 1164 |
| The Value of a Healthy Body to a Healthy Mind | 1167 |
| The Proposed Extinction of Tuberculosis | 1175 |
| Editorial Notes | 1177 |
| Personals | 1182 |
| Epitome of Current Medical Literature—Surgery | 1183 |
| Therapeutics | 1185 |
| Drunkenness in Women and the Death of Children | 1187 |
| Bicycling for Children | 1194 |

FOR
RHEUMATISM,
GOUT, AND
RHEUMATIC
GOUT.

FORMULA:

℞ Acid Salicylic.
Res. Podophyllin.
Ext. Phytolacca.
Quinia.
Ext. Colchicum.
Pv. Capsicum.

Dose 1 to 2.

# Pil. Arthrosia

(W. R. WARNER & CO.)

ANTILITHIC.
ALTERATIVE.
...TONIC.

PIL. ARTHROSIA is indicated in all conditions of Rheumatism, Gout and Rheumatic-Gout. A marked improvement in this class of diseases follows almost immediately after the administration of Pil. Arthrosia. To be sure of the original Pil. Arthrosia, physicians will please specify "WARNER & CO."

If you would always have uniform results from your prescriptions

## SPECIFY "WARNER'S"

***Warner's Soluble Pills*** offer active ingredients in a form favoring rapid disintegration when taken, with full therapeutic effect of prescribed remedy.

...THEY ARE PERMANENT, POTENT AND RELIABLE...

SUPERIOR TO PEPSIN OF THE HOG.

## INGLUVIN

A Powder—prescribed in the same manner, doses and combinations as Pepsin.

**A Specific for Vomiting in Pregnancy.**

*WM. R. WARNER & CO., Philadelphia, New York, Chicago.*

**FORMULA**

℞ Olei Morrhuæ (opt ) ℥vii.
Ferri Phosphat. ʒ ii.
Phosphori gr. i.
Glycerini, etc., q.s., ad. ℥xv.
Sig.—Take as directed by attending physician.

TRADE MARK Ferrol REGISTERED

**With Creosote**

℞ Olei Morrhuæ (opt.) ℥vii.
Ferri Phosphat. ʒ ii.
Phosphori gr. i.
Creosoti (Beechwood), min. cxii.
Glycerini, etc., q.s., ℥xv.

# The Official Organs Pronouncing on "Ferrol" from the Medical Centres of our Dominion.

**Ferrol.**—In this preparation we have combined in the form of a perfect emulsion, phosphate of iron and cod liver oil, with the addition of a small quantity of phosphorus. The product is smooth and of uniform strength and supplies an excellent tonic food for use in wasting diseases and during convalescence.

Where the indications are such—as in pulmonary affections—that the addition of creosote would often add considerably to its value, Ferrol can be obtained with 112 minims of beechwood creosote added to each fourteen-ounce bottle under the heading of "Ferrol cum creosote." An analysis made by Dr. R. A. Pyne, of Toronto, shows that the product contains the different ingredients in the proportions claimed.

The manufacturers by publishing the exact formula of Ferrol and guaranteeing that no circulars or advertisements are enclosed in their packages, deserve the support of the profession in their efforts at having their business conducted strictly in accordance with medical ethics.—*Montreal Medical.*

FERROL AN IDEAL EMULSION.

Ferrol, an honest emulsion of cod liver oil, has been on the market for some years and given great satisfaction It is a Canadian preparation, made from the purest and best oil procurable. The formula is on every bottle and it deserves the support of the medical profession. The manufacturing of this preparation has lately been taken over by the Ferrol Company of Toronto. It is the intention to push the sale in every legitimate way possible, but always and only through the medical profession and press.—*The Canadian Practitioner.*

Some years ago there was introduced to the medical profession in Canada a pharmaceutical product named Ferrol. The name was indeed a most happy one, as giving its composition at once, that of cod liver oil and iron. For some reasons Ferrol was at that time not pushed. Now, however, fortunately for both physician and patient, it has been revived and taken hold of by a company of strong capitalists who intend pushing it, as it ought to be. Ferrol can be produced either plain, consisting of phosphate of iron, phosphorus in minute quantity, glycerine and cod liver oil, or with creosote, the latter ingredient so combined as to form one of the most palatable products on the market, one which can almost be guaranteed not to cause the usual nausea and after eructations so frequently the case with cod liver oil in any other form but that of Ferrol. The Ferrol Co. of Toronto, Limited, are putting their article before the profession in a strictly ethical manner, advertising it only in the medical press, thus appealing to the profession in the strongest possible manner. We take pleasure in making this preliminary announcement, and add that Ferrol can be procured from any first-class druggist.—*Canadian Journal of Medicine and Surgery.*

There has been on the market for some years, a preparation which was very favorably received by the profession, but owing to changes in management, and some internal difficulties, the supply was irregular. Although all those who prescribed it had formed a high opinion of it, and kept repeating their prescriptions, a regular supply was not obtainable. This was a permanent emulsion of iron and cod liver oil, known as Ferrol. This preparation, as will be seen by our advertising pages, has been taken hold of in a thorough and ethical manner, and now physicians will be able to obtain the article demanded on their prescriptions. We can certainly recommend it to the profession as an emulsion of iron and cod liver oil that they can absolutely depend upon.—*Dominion Med. Monthly.*

We beg to call the attention of the profession to the preparation known as Ferrol—Iron and Cod Liver Oil. It is an excellent preparation, and when combined with creosote most useful in those cases where these products are indicated. The manufacturers are appealing to the profession alone and not to the general public, desiring in the most ethical manner possible to have its merits fully tested and reported upon.—*Medical Review.*

**THE FERROL COMPANY OF TORONTO, LIMITED.**

# The Canada Lancet.

VOL. XXXI.] TORONTO, MAY, 1899. [No. 9.

## ABSTRACT OF AN ADDRESS ON A PROPOSED SCHEME FOR A DOMINION MEDICAL COUNCIL.

BY T. G. RODDICK, M.D., LL.D., M.P.

Professor of Surgery, McGill University.

As you are all aware, by the British North America Act, the subject of education was placed within the exclusive jurisdiction of the Provincial Legislatures. Section 93 of that Act reads: "In and for each "Province the Legislature may exclusively make laws in relation to Edu- "cation, subject and according to the following Provisions." These provisions do not, however, interest us, as they have reference entirely to common schools. This fact would give one the impression that professional education was not meant to be included in the section, or that it was overlooked or forgotten by those who were responsible for the framing of the act.

The Confederation of the Provinces had scarcely been consummated when our profession realized that a mistake had been made and that the multiplicity of medical boards throughout the Dominion would lead to great abuses and untold complications. Therefore we find the Canadian Medical Association at one of its earliest meetings, in 1869, suggesting a Dominion Medical Bill, called "The Medical Act of the Dominion of Canada." This bill, most comprehensive, was presented before the Association at the third meeting, in the city of Ottawa; and after a long and somewhat acrimonious debate, was finally abandoned; and so far as I know, was never brought up for consideration. Doubtless the fact that the profession in Ontario had, in the meantime, put into operation their own medical act, militated against the greater scheme. I am inclined to think that other reasons for its early demise are to be found in the attempt made, practically to expunge the provincial boards, and also to give a prepondering influence to the universities.

Nothing further was done however in this direction until a very few years since, when at the meeting of the Canadian Medical Association in Kingston, a committee was formed to discuss and report upon the question of interprovincial registration or some scheme of reciprocity, all with a view to harmonizing the practice of the profession throughout the Dominion, but more especially on the frontier settlements of the various provinces.

Little of a practical character was accomplished until last year, when the committee reported very fully, making among other recommendations the following: "That so soon as the various councils of the

Dominion shall establish an examining board of the Dominion conducted by examiners appointed by the medical councils of the several provinces, their candidates passing a successful examination before said board and obtaining a certificate to that effect, shall be entitled to registration in the several provinces of the Dominion on payment of the registration fee, providing they are not guilty of infamous or disgraceful conduct in a professional respect.

"Your committee desire to recommend that further efforts be made to ascertain the practicability of federal legislation leading to the establishment of a certain qualification which will also place the profession in Canada upon an equal footing with that of Great Britain, and that Dr. Roddick be authorized to take the necessary steps in said matter."

"We further recommend that this association shall appoint a committee who shall consider and recommend the details as to the number of examiners to be appointed, the method of conducting examinations the fees to be charged, and other necessary details to bring the aforesaid scheme into active operation, which details the officers of this association shall, with the foregoing, send to each of the respective councils for approval."

The following were named a committee to strengthen Dr. Roddick's hands before the Government:—Dr. McNeil, Prince Edward Island; Dr. Muir, Nova Scotia; Dr. Walker, New Brunswick; Hon. Dr. Marcil, Quebec; Dr. Williams, Ontario; Dr. Thornton, Manitoba; Dr Bain, Northwest Territories, and Dr. McKechnie, British Columbia.

The delegates from Quebec on the committee could promise nothing with regard to a central examining board for the Province of Quebec, the universities having already positively refused to surrender their charter rights.

Feeling the responsibility of this charge, I have been engaged more or less, ever since the meeting, collecting information from various sources (among others from the law officers of the Crown) and am now in a position to place before the profession of Canada a scheme which if acceptable to the various medical boards of the Dominion, may I trust with some modifications, become law at no distant date.

At first sight it would seem as if any plan were impossible that looked to united action. The Dominion Parliament cannot, on the one hand, infringe on the Provincial jurisdiction, while, on the other hand the Provincial Legislatures cannot unite in creating a central or federal medical board, because their powers are, in each instance, confined strictly to their own territory. If this opinion be correct, any scheme looking to interprovincial registration, or in other words any bargain made between the Profession in the various Provinces, or between the Boards as representing the Profession, would be *ultra vires.*

Under Section 91 however, of the British North America Act, the Dominion Parliament has power "To make laws for the Peace, Order "and good Government of Canada, in relation to all matters not coming "within the Classes of Subjects by this Act assigned exclusively to the

Legislatures of the Provinces." Under these general terms it is believed that the Dominion Parliament may create a corporation for such objects relating to medical education and practice as are of general Dominion interest, and importance, and as are beyond the Provincial powers.

Uniformity of medical education and the promotion of interprovincial registration are just such objects. The plan by which it is now proposed (for our purpose) to effect them is as follows :—

By an Act of the Dominion Parliament, a corporation may be created called, let us say *The Dominion Medical Council* which would be composed of medical practitioners from each province and from the Northwest territories. The principal function of this council would be to register all persons who have complied with certain requirements, as to education and training for the practice of medicine and surgery, and all applicants who shall have complied, would receive what might be termed Dominion registration by the council.

This registration would, however, *per se* confer no right to practise in any province of the Dominion. The Dominion Parliament has, of course, no power to make such an enactment; but it is within its power to enact that such registration shall alone confer the right to practise in any of the territories over which it has direct legislative control; and it may provide that such registration shall be a condition of employment in any medical capacity in the active service of the Dominion, as for example, the quarantine service, penitentiary surgeons, mounted police surgeons, the surgeons of the militia force generally, etc. Besides another important result of the establishment of such a system would be that Medical practitioners registered under it could claim registration under the Imperial Medical Act of 1886, without undergoing further examination. By this Act (as you are aware) where parts of a British possession are under both a central and a local legislature, the authority of the central legislature is requisite to entitle a colonial practitioner to British registry. Under the existing systems of provincial registration, Canadian practitioners are debarred from entering the extensive field of medical employment in the various departments of the Imperial service, such as for example, the army and navy, the Indian medical service, the colonial medical services, medical service under the board of trade, including ships' surgeons, etc., also from employment as sanitary officers in the United Kingdom.

At this point, however, the powers of this council would cease. *In order to bring about what we most desire,* viz. interprovincial registration, all the medical boards in the Dominion would have to be consulted, and their consent obtained to the passage of a short Act in their own Legislature, giving the right to any person registered under the Dominion Act to practise in any province, subject, of course, to the payment of any fee that the Province may impose. It will have to be shown further that the person obtaining Dominion registration has given evidence of possessing qualifications at least equal to those required for registration under the existing law of any Province. In other words, the educational

standard as to preliminary examination for study, the professional curriculum followed and the final examination must be fixed by the Dominion council at a level as high as or higher than that of any Province, with power in the council to keep it always so; and in case of failure at any time to maintain the standard, the Governor-General in Council may have power to intervene.

In the case of some of the Provinces, where the medical councils already possess the power of determining such equivalents, this matter could, perhaps, be arranged directly by these Councils. The medical councils of Ontario, Nova Scotia and the Northwest Territories have by recent enactments obtained such powers.

It will be observed that the proposed plan avoids in every possible way any encroachment upon the exclusive right of the Provinces as to maintaining their own system of medical education and registration. *I fully realize that any scheme, to have a sound constitutional basis and prove acceptable in working, must not encroach upon the provincial autonomy.* The various provincial medical boards or councils, (as they may be termed) shall continue their work of examination and registration as before, and to them shall be left all questions of taxation, discipline, etc. In a word the establishment of a Dominion Medical Council would simply provide a direct and efficient way of interprovincial registration, while promoting a high level of professional education.

One of the most difficult problems in connection with this subject is the composition of the proposed council. It is evident that it must be thoroughly representative of the Provinces; and as it will have to deal with professional questions, it should be kept above the plane of political interference. The matter, however, being one of great public importance, and the assistance of the Dominion Parliament being invoked, some provision would doubtless have to be made for the representation of that interest.

Let me suggest, then, that a Provincial Council consist of three classes of members, all of whom would be registered medical practitioners:

(a). One for each Province, including the Northwest Territories, to be appointed by the Governor-General in Council.

(b). One from each Province, including the Northwest Territories to be appointed by the Medical Council of the Province.

(c). The President of each Provincial Medical Council to be an *ex officio* member.

This would give a council of 24 members.

It is a question whether all the Provinces should have an equal number of members, in the council as permanently constituted, or whether the representation should be in some measure graded according to the relative number of practitioners in each province. In any case it would be desirable to keep the council of moderate number, for ease and efficiency of working, and to secure a representative majority at all times.

Now, so far, the outline of the proposed scheme deals only with students of medicine wishing to qualify themselves for practice in all or any of the provinces which accept Dominion registration as sufficient evidence of professional capacity.

With regard, however, to medical practitioners actually practising at the time of the passing of such an act, should the right be given them to avail themselves of the privileges under the act admitting them to practise in other provinces than that in which they had originally qualified ? Should it be retroactive ?

Many objections would doubtless be raised to such a clause, especially by the profession in the yonnger provinces who might dread a stampede in their direction. This could readily be overcome, however, by making some time limit, say five or seven years of actual practice, coupled with evidence of good professional standing. Medical men in practice for that length of time would not be so likely to migrate as the more recent graduates.

There are many matters of detail that might be introduced, but my chief purpose to-night is to excite a discussion on the general practicability of such a scheme as that which I have endeavored to outline.

The present state of affairs in connection with the practice of our profession in this country is anomalous, and exists perhaps, nowhere else. Where we have, simply imaginery lines or narrow rivers separating our provinces the present arrangements must continue to lead to hardships, both to the public and the medical men themselves, and sometimes to grave abuse. Besides, the provinces are all congested, the number of medical men being far too numerous in proportion to the population. This scheme would not only lead to a more equable distribution, but it would throw open the entire British Empire to our Canadian youth who have adopted medicine as a profession.

## FEVERS IN CHILDREN; THEIR SIGNIFICANCE, GENERAL DIAGNOSTIC VALUE, AND ANTIPYRETIC TREATMENT.

A LECTURE BY SAMUEL S. ADAMS, M. D.

Professor of the Theory and Practice of Medince and of the Diseases of Children in the Georgetown University, Washington, D. C.

GENTLEMEN: Fever is a group of symptoms the most prominent of which is elevation of temperature.

In the healthy child, variations in the productions of heat are compensated for by variations in its discharge, while in fevers the production and loss may both be increased but seem no longer to be interdependent. There may be no increase in heat production but a decrease of heat dissipation which will cause a rise of temperature or the converse.

Among the principal causes of fever may be mentioned, first, physiological ferments acting independently of bacteria. A familiar example of fever rising from this cause is afforded by the aseptic fever observed to follow injuries in spite of the strictest antiseptic precautions. A second cause of fever is to be found in the presence in the system of substances which are the product of micro-organisms not in themselves pathologic. They are frequently met with in the infant and young child as a result of fermentative and putrefactive changes. We know that, under certain conditions, certain mico-organisms are present, and although in themselves harmless, they become virulent in their nature as a result putrefaction or fermentation. In consequence of this, there is set up a septic condition, the principal symptom of which is elevation of temperature, in the third place, we have, as causes of fever, poisons which are the result of specific infections. Principal among these are the infections of the acute infectious or contagious diseases. These poisons, as you know, possess certain qualifications, *viz*: (1) The power of life; (2) the ability to multiply to an unlimited extent; (3) the power of affecting the organism as a whole; and (4) the power of conferring upon the individual that condition usually known as immunity—*i. e.*, a certain protective element enters into their life history, which prevents the individual from having a second attack of these acute infectious poisons. There are, of course, others which give rise to temporary fevers in the child, such as crying or fits of temper, but they are of minor importance.

From these causes of fever we are led to conclude that an elevation of temperature in the child indicates, as a rule, some pathologic condition. Now, in the indication of a pathologic condition we do not necessarily understand that it can be detected even by the most expert upon first sight and without careful observation, but we do mean that by careful observation and training we can determine, in the vast majority of cases, the pathologic condition which produces the elevation of temperature in the child. Accordingly you should not be satisfied simply with an elevation of temperature, but should reserve the right to formulate your opinion as to its cause carefully and slowly, if necessary, in order that you may intelligently apply the means for its amelioration.

From our knowledge of children we understand that the slightest disturbance may produce a very marked rise of temperature, and this leads us to conclude that a great deal depends upon the individual susceptibility of the child to one of the few causes which are responsible for this. To illustrate: A child, from indiscretion in diet, may develop a temperature of 105° or 106° F. Now, we know from experience that a temperature of this kind cannot be maintained with safety for any length of time, but, fortunately for the child, nature is of that generous disposition that usually by a diarrhœal process or by the rejection of food or of offending material, the temperature soon subsides. Sometimes the most violent and fatal disorders of childhood are accompanied by a low range of temperature. This is the case, for example, in the first stage of tubercular meningitis. If, therefor, we depend upon the temperature alone, we shall go astray, since it is not an index of the severity of disease. Thus, the pendulum swings both ways. In some cases we may have it swinging so that the temperature is a direct indication of the severity of the disease, while in other instances, it may swing in the opposite direction, and may give no idea of the gravity of the disorder.

In children the temperature is subject to sudden and violent rises, more frequently than in the adult. In the latter there is some part of the mechanism which prevents these sudden fluctuations. In the child, we have not only the primary rise in the afternoon, but not infrequently several maxima and several minima in the twenty-four hours. This, of course, in very many of the acute infectious diseases is of the most confusing character, and should always be borne in mind in estimating the value of this one symptom in connection with any pathologic condition.

Again, we may have not only irregularity, but also remissions to a certain extent—a periodicity. We know there is some regulating influence which will control the periodicity, and we must, if possible, search, and be diligent in this search, for any condition which might produce in the child a remission of the fever. An illustration is to be found in mixed infections. Not long since we were taught that no two infectious diseases could exist in an individual at the same time, and particularly in the case of the acute eruptive diseases of childhood. I was taught this, and believed it. But what has been the result? That teaching has been most emphatically contradicted since then by practical experience: I have not only met with double infections but, during the course of the disease, treble infections. That is to say, during the course of a scarlet fever I have observed a croupous pneumonia, and following this, diphtheria which was clearly demonstrated to be such, both pathologically and clinically. We can, therefore, have during the course of an acute infectious disease, other diseases, and an unusual and sudden elevation of temperature is many times accounted for by such a mixed infection.

In most of the diseases there are stages, with which I presume you are perfectly familiar. There is the initial stage, the fastigium and the stage of defervescence. But here let me caution you against depending too much upon what you see in books, lest you be sadly mistaken, since in different diseases, and particularly in the exanthemata, these stages

are often anything but well-defined. Measles is, perhaps, an exception to this; but in the other diseases of this class you will be very much surprised not to find the gradual rise of temperature, a marked fastigium and the slow decline in temperature which is therein depicted. In children these are irregular, and sometimes most confusing, He who depends upon the temperature chart for his diagnosis will be sadly led astray. This is exemplified very frequently in hospital work, where the internes will bring a temperature chart, and show you, on the strength of its supposed indications, what a nice example of a certain disease is in the wards, when more careful observation will probably show that it is a case of an entirely different kind. For instance, we are taught that in scarlet fever a sudden rise of temperature takes place, and that after this the temperature keeps up for four or five days, with a daily remission, and that the maximum and minimum are about on the same line. We are also taught that with the decline of the eruption defervescence takes place. This is all very nice as a type, but in scarlet fever, taking a large number of cases, we find that the typical chart drawn in the books is not evident. So it is with tyhoid fever in children, and this fact probably explains why typhoid fever has not been properly diagnosticated in infancy. It is not rational, and it certainly is not safe for the physician to lose sight of the general symptoms and pin his faith entirely upon the one symptom of fever. In measles, we have one of the most typical charts that can possibly be made. There is a premonitory catarrh, and with this there is an elevation of temperature. It then recedes almost to the normal, but on the fourth day it suddenly rises again, and with this elevation there is an exacerbation of almost all of the symptoms, and the eruption comes out. When the disease is at its height, the temperature may reach 106° F., but the charactistic of this temperature is that it very soon falls. If this high temperature were maintained for any length of time, it would be a very serious matter; but fortunately it usually subsides in a few hours to 100° or less. What does this teach us? You may suspect from the temperature chart alone the presence of measles, but when you consider that there are other diseases, which are specific infections, and which will give a similar temperature curve, you lose faith in that one symptom as being pathognomonic of the disease.

In certain diseases we have the termination of the fever by crisis. Where the fever terminates in this way, it is sometimes very confusing. Thus, it is not uncommon for the physician after a study of the temperature chart in a given case to conclude that he has to deal with typhoid fever, even though there are no rose spots visible; but after several days of fever the temperature suddenly falls to the normal, or below that point, and he then feels that he must abandon his first diagnosis. At such a time it is likely that the physician will awaken to a realization of the full significance of the ratio between the respirations and the temperature. In a case of typhoid fever the respirations may be out of proportion to the temperature and pulse, and yet the presence of a deep-seated pneumonia may not be suspected because of obscure physical signs, until the occurrence of the crisis.

We use the terms intermittent, remittent and continued fevers in a different sense from that which formerly attached to them; they now mean different types of disease rather than different pathologic conditions; and when I use them I wish you to understand that this is the meaning intended to be conveyed.

What is the significance of the daily excursion of temperature? By daily excursion of temperature we mean the temperature taken in the twenty-four hours. It may be taken five or six times, or three times, it matters not; the daily excursion is the difference between the maximum and minimum temperature for the twenty-four hours. The significance of the daily excursion of temperature is great; it is a very important guide to prognosis as well as diagnosis. The daily range of temperature will vary in different individuals. If there is a daily range of 103° to 105°, that means that the excursion is 2° for the twenty-four hours. It does not make any difference, so long as we have a safe guide, how high the temperature is in any fever of childhood. By safe guide, I refer to the *manifestations* of high temperature. The mistake is constantly being made by general practitioners of placing too much dependence upon high temperature *per se*. An elevation of temperature without corresponding evidence of cerebral disturbance is of no significance. For example, a child has croupous pneumonia. The temperature range is from 103° to 104°, or 105°. The individual is getting sufficient air; the pulse is good; there are no mental disturbances and the physical signs are well-marked. Under such circumstances, it is bad practice to attempt, by any active measures to reduce the temperature, simply because it reaches the degree of 105. The reason for this statement is, that we know croupous pneumonia to be a self-limited disease, and that it ordinarily runs a definite course, which terminates by crisis. Reasoning from this, the temperature should be let alone. On the contrary, suppose that the temperature is 105°, with manifestations of the injurious effects on the nervous centres. Here, it would be bad practice not to interfere and relieve, for a few hours at least, the brain from the deleterious influence of the high temperature.

In the treatment of all acute infectious diseases, this principle should be your guide: Rather use intelligence in interpreting the injurious effects of high temperature than plunge the patient into a bath, or resort to internal means of reducing temperature because the thermometer registers a high degree. Some children will bear a temperature of 103° or 104° without any cerebral manifestations, yet in the same family there may be other children who are thrown into a state of high nervous excitability, or even into convulsions, by a temperature of 101° or 102°. You must, therefore, determine the effect of the high temperature upon the *individual* child rather than base your treatment on the height of the temperature alone.

Parents are terribly frightened by high temperature, and insist upon the physician doing something to relieve it. They frequently say to me: "The temperature is 103° F. or over, why don't you reduce the fever?" My invariable answer is: "As long as with this temperature there are no evidences of injury, nothing should be done."

Upon the methods of taking temperature will depend, in great part, your success. You are taught aseptic surgery and aseptic midwifery, and you are also, I know, taught aseptic thermometry. Nothing shows the care of the physician, and nothing will so impress the family as the care which he bestows in the use of the thermometer. You may think that having washed it and packed it in your pocket, you have done all that is necessary. When you go to a child, however, the mother does not know but that the thermometer has just been in the rectum of another child. You should therefore make it a practice to cleanse the thermometer in the presence of the parents or the nurse, both before and after using it.

You can get the best results by taking the temperature of an infant in the rectum. Only recently I was called in consultation by a physician who was old enough to be my father. He stated that the infant had no fever, and he could not understand why the child seemed to be sick. On inquiry, I learned that he had taken the temperature of the child—an infant of nine months—in the mouth! I then insisted upon having the temperature taken again, both in the mouth and in the rectum. It registered normal in the mouth, but 105.5° in the rectum. Not only this but the baby was suffering from a croupous pneumonia presenting the clearest physical signs. I stated to the family that the crisis would occur in twenty-four hours, and this perdiction was fortunately confirmed. But you say: "The child is fractious and some mothers do not wish to have the child disturbed by having the temperature taken in the rectum." If you wish to be successful in practice, you must be an autocrat, and you must teach people that you will, under all circumstances, have your way. Make them understand that you are going to take the temperature in your way, and if the parents will not consent to this, withdraw from the case. You will give some offense, and occasionally lose a patient, but in the long run it will be to your advantage as well as to theirs.

The way to make a diagnosis is not on any one symptom, but on the group of symptoms which the pathologic condition presents. Usually the first thing the family wishes you to do is to reduce the temperature. Bear in mind what I have said, that if there is no sign of cerebral disturbance, though the temperature is high, there is no necessity for its reduction. I venture to say that if you simply attempt to reduce the temperature, losing sight of everything else, in the vast majority of cases the diagnosis will be obscure. We often lose sight, in this way, of the most valuable symptoms; hence, my advice to you is, if on approaching a case for the first time you find an up-and-down temperature without evidence of cerebral mischief, to remember that the reduction of the temperature may please the family, but it will only add to your confusion. If the temperature is not doing harm, therefore, reserve the right of allowing it to go on until you have determined the true nature of the disease. Meanwhile it may be necessary to give a placebo. After you have made your diagnosis, if reduction of the temperature is demanded, you can do it intelligently and safely. The successful issue of a case conducted on this plan will more than please both the physician and the patient's family.

This brings me to the question of the treatment of fevers.

The first is the administration of internal antipyretics, in the use of which great harm is very frequently done. It is true that by a good dose of antipyrine, acetanilide or phenacetin we can reduce the temperature and make the child apparently better. The parents are satisfied, and you may think that you have accomplished something; but what is the result? The effect of internal antipyretics is transitory, and consequently you must resort to one of two things—either allow the temperature to return to its former height, or reduce it by the further adminis ration of powerful antipyretics. In this way you not only confuse the diagnosis, but do much more, for, such drugs exert a violent and paralyzing effect on the heart.

I do not mean to decry the judicious administration of them, but I do believe that antipyrine, in the hands of even the most skilful is a dangerous drug. I have seen the ill effects of it, and the apparent good effects. I have seen a child wildly delirious from croupous pneumonia made rational by a dose of antipyrine, so that it could sit up in bed and chat with its parents, but I have seen the same child relapse into a condition of high temperature within twenty-four hours because the heart had never regained the tonicity which it had had prior to the violent reduction of the temperature by antipyrine. My experience with antifebrin is similar. With phenacetin I have had a little more favorable results. Of the internal antipyretics it is one of the safest, but it should be given judiciously, and only in those cases in which we require a rapid reduction of the temperature. Its administration should usually be accompanied by free stimulation. These antipyretics act in two ways, *i.e.*, they lessen heat production and increase heat dissipation, and we must take this into consideration in determining the nature of the antipyretic to be given.

The second method of reducing temperature is by the external application of cold. This method is not only the most beneficial, but it is the most stimulating to the various systems. It may be done be means of the cold pack, by the application of the ice-cap to the head, or of the ice-coil to the abdomen; but far beyond the beneficial effects of the wet-pack and these other methods, the application of the Brand method, pure and simple, is unquestionably the best means of reducting fever, no matter what pathologic exists. I say this without any hesitancy. I have no compunction whatever in taking from its bed a child having one of the infectious diseases with a high temperature and accompanying nervous excitement, and placing it in a bath under proper conditions, for, I believe that I am not only reducing the temperature but am placing the system in far better condition than prior to the administration of the bath. You have probably been taught the Brand method, but remember it must be carried out in every detail. It is not sufficient to take the little one out of bed and place it in a bath-tub. The bath-tub should be brought to the patient, and the latter should be gently lifted out of bed and placed in the tub, and then the manipulations should be conducted during the bath, and the necessary stimulation given. The result is that the reduction of the temperature is affected with perfect safety.

I have demonstrated to my class in the Georgetown University a case like the following: A child of eight years who was wildly delirious with typhoid fever was placed in a tub containing water at a temperature of 90° F., and kept in this bath for fifteen minutes. Enough heat was dissipated from the child to raise thirty gallons of water 4° F. This shows the immense amounted of heat abstracted. And the child, who was wildly delirious at the time the bath was begun, became conscious and rational; the pulse increased in force. Quite commonly the temperature rises after three or four hours to its former height, when the bath can be repeated.

In connection with the treatment of acute infectious diseases, I am frequently asked why we do not see so frequently the complications and sequelæ commonly observed in former years. When I began to practice medicine, as soon as a child was attacked by one of the eruptive diseases, he was isolated, and every crack in the windows of the sick-room was sealed A blanket was placed over every door but one. The child remained in that vitiated atmosphere from the beginning to the end of the disease, with the result that there was a continual inhalation of a vitiated and germ-laden air. Twenty years ago to give a drink in such a case was equivalent to the physician receiving his passport, so far as that household was concerned. In private practice the complications of scarlet fever, and the post-scarlatinal conditions are now much less frequently seen than they were ten or fifteen years ago. It can be attributed not only to the freer use of water and better ventilation of the sick-room, but also to the practice of placing such fever patients in baths when the temperature requires reduction. Such treatment favors the elimination of the toxic material, and, as a result, convalescence is more rapid and smooth, and the complications and sequelæ are avoided.

The temperature of the bath varies considerably in different cases. With a temperature of 105° be very careful how you reduce the temperature of the bath below 95°, the books to the contrary notwithstanding. If you can accomplish what you desire by a warmer bath, and with less inconvenience and discomfort, why should you use a colder one? Some advise a bath at 60° or 55° F., and some even a bath at 50° F. I claim that just as good results follow the use of a bath having a temperature of 95° to 100°, provided a cold cloth is applied meanwhile to the head. The ordinary duration of the bath is ten minutes, and during this time the patient should be subjected to continuous friction. I should hesitate a long time before giving my consent to a fever patient receiving a bath at 55°. Your city water probably has a temperature of about 50°, so you can readily test the effect of such a bath on a normal temperature by jumping out of bed into water just drawn from the faucet. I am confident that if you try this, you will render a verdict in accordance with what I have said.

I hope that you will carry away with you these few thoughts about the fevers of childhood. I am sure with the systematic teaching which you receive from the professor in charge of pediatrics, whom I have known for many years, you will be amply qualified to carry out the few principles which I have laid down in this lecture.—*Archives of Pedriatics.*

## JOHNS HOPKINS HOSPITAL NOTES.

**Clinic by Dr. Kelly.**—Reported by E. Hall, Victoria, B.C. CASE 1.—Parasitic dermoid of left ovary. Removal by abdominal section. Dr. Kelly called attention to the dense bladder adhesions as indicating the facility with which such cysts discharged through suppuration of their walls into the bladder. The other ovary was cystic and the uterus presented well marked chronic inflammatory disease. As the patient was dependent upon herself for maintenance it was considered better to remove the uterus with the appendages. This was done by the Kelly method which briefly described is—a ligature, silk preferably, is placed upon the left broad ligament external to the appendage, encircling the ovarian artery, the distal part is clamped and the ligament severed with scissors, an additional gut ligature is placed further down upon the ligament. The round legaments are ligated and severed the uterovesical fold of peritoneum is then severed and the bladder freed by pressure with a sponge. The uterine artery is next found and a silk ligature applied. The uterus is then drawn upwards and towards the right, the cervix freed and cut directly across, the uterus drawn further up and the uterine artery ligated upon the right side. The broad ligament is then ligated as upon the opposite side. The cervical canal is not disinfected, as bacteriological experiment has shown this to be unnecessary, as it contains no pathogenic germs. The anterior and posterior surfaces of the stump are approximated with gut, the ends of the broad ligaments are brought inwards and stitched to the cervix and all raw surfaces covered with peritoneum. The appendix was also found elongated doubled upon itself behind the caecum, it was removed.

CASE 2.—Cervical fibroid filling the pelvis. In discussing the various methods of dealing with these cases Dr. Kelly said he preferred to first remove the entire uterus, similar to the operation previously described with the exception that the cervix is completely removed. The tumor was then carefully peeled out of its bed. The hemorrhage which was profuse was temporarily relieved by digital pressure upon the iliac artery, and hot sponges. The anterior branch of the internal iliac was ligated with many other bleeding points. The ureter was isolated and examined in order to insure its patency. The peritoneum was approximated as in the previous case. In all cases of abdominal section Dr. Kelly examines all the abdominal organs by direct nutea abdominal palpation, and as an example of the usefulness of such examination an enlarged gall bladder containing a large stone was found in this case. Upon compression the bile was forced into the intestine showing absence of obstruction. Now followed one of those exhibitions for which this clinic is noted. With the right hand and forearm inserted into the abdomen through the central abdominal incision, Dr. Kelly pressed the gall bladder containing the stone against the anterior abdominal wall while with his left hand he cut through the abdominal wall directly upon the stone which shot out of

the abdomen like a pea out of a pop-gun. The gall bladder was then closed and replaced free within the abdomen and the paietal incision closed.

CASE 3.—Lady with movable mass in right abdominal region. Diagnoses either malignant disease of the intestine or enlarged gall bladder, probably the latter. Incision directly over the tumor revealed an inflamed enlarged and odematous gall bladder adherent to the intestines. The pus was asperated, bladder withdrawn attached to the wall and drained in the usual way, several hundred stones were removed, and a piece of the bladder removed for bacteriological examination.

CASE 4.—Perineal tear including both sphincters. Case had been operated elsewhere, old ligatures still in place. As there was a small amount of mucus membrane towards the anterior part of the rectum this was carefully dissected backwards and preserved. The lateral walls were then cleared of their muscus membrane as far as the tear extended, the incision was extended in a crescentic manner backwards at each side of the anus and a careful dissection made until the ends of the splinclur muscles were isolated, a part of the fibrous ends were removed and the ends united with catgut. The raw surfaces were approximated in the usual manner.

The unexperienced operator should note that the ends of the splinclur muscles are distinctly fibrous, not muscular as is so frequently expected. The fleshy part of the muscle lies deeper, or more posteriarly and is not necessarily exposed. This operation above all others restores the natural action of the rectum. After two days oil is injected through a soft catheter and the bowels encouraged to move.

CASE 5.—Ruptured extrauterine pregnancy. Posterior vaginal section removal of foetus placenta and clots, irrigation and packing with iodoform gauze. In twenty-two cases treated in this manner only one required abdominal section on account of hemorrhage, yet the operator must always be ready for such emergency. The vaginal route is selected on account of producing less shock and more easy of performance. While Dr. Stokes, Dr. Kelly's first assistant, was performing Dudley's operation on the cervix, Dr. Kelly showed a case from whom he had removed a tuberculous kidney and ureter one year ago. For some weeks she had complained of pain and irritability and returned for treatment. The question was is there tubercular disease of the bladder originating from the left orifice, if so a vesical resection would be indicated. The patient was placed in the knee chest position, the urethera cocainized and air allowed to enter and balloon the vagina. The uretheral speculum was inserted revealing limited ulceration at upper and posterior parts; a ten per cent. solution of nitrate of silver was applied. The facility with which the interior of the bladder can be examined by Dr. Kelly's method was not a little surprising to those who had considered the interior of that organ as beyond the limits of definition. Dr. Kelly says he has yet to see a case of "neuralgia of the bladder" unaccompanied by local lesion. Tuberculous disease of the kidney may be

differentiated from pyelitis by the presence in the former of a peculiar ring of granulations around the uretral orifice while in the latter there is mere hyperæmia. In a case of obscure pain in the right loin in which a diagnosis between renal and other forms of colic, especially hepatic is desired Dr. Kelly injects sterilized water through his uretral catheter into the kidney producing renal colic. If the pain is similar to that previously experienced the diagnosis of renal trouble is given.

**Epidemic Cerebro-Spinal Fever.**—After referring to various epidemics in different parts of the continent, Dr. Osler stated that they had sixteen cases under treatment in the Johns Hopkins' Hospital. The invasion is generally very abrupt, chill, vomiting, pain in the head, some were seized while at work, one seized while walking down the street after dinner. Compared to other forms of meningitis there is greater cutaneous hyperesthesia also greater rigidity of the neck muscles, sometimes complete opisthotones. Arthritis symptoms also more prominent, one case very closely simulated rheumatism. Consciousness is much better retained than in the other forms. Out of the sixteen the mortality was very low, only six, whereas in the other forms, that caused by the pneumococcus, by the streptococcus, and the tubercle bacillus all are expected to die. Regarding treatment, little can be done with drugs. Great importance is placed upon lumbar puncture which is a simple procedure, harmless and easily carried out. General anesthesia is not necessary. The needle of the operator was inserted between the second and third or the third and fourth lumbar vertebrae about an inch to the side of the dorsal spine. Arching of the body forward separates the parts and facilitates the operation. From ten to one hundred and twenty-five cub. cent. of fluid are withdrawn. As this fluid is very limpid and clear, any turbidity whatsoever indicated meningitis. The fluid is examined by cover slip preparations and culture tests. The cause of this epidemic form of cerebro-spinal fever is the deplococcus ultracellularis which has been found in all fluid withdrawn. One case that recovered was asperated four times. The first gave 125 c.c., the second 45 c.c., the third 85 c.c., and the fourth 100 c.c. of turbid fluid.

Of this organism Mallary and Wright say, "In cover-glass preparations from the meningeal exudate the deplococcus frequently is situated inside the aucocytes, and sometimes within the nucleus. The appearances are very much like those of gonorrheal pus." It is discolorized by Grain's method. On blood serum the colonies appear active about twenty-four hours, after forty-eight hours they may attain a diameter of two or three m. m. They are round, colorless, shining, slightly convex or flat, moist and viscid looking. They may become confluent. They are found in the meniugeal exudate of certain cases of epidemic cerebro-spinal meningitis and mainly situated inside the puscells, some of which may contain many deplococci. In some cases the presence of the organism in the exudate may be difficult or impossible to demonstrate, and it is probable that it rapidly dies out. It has been observed in the bronchopneumonia of one case and in the nasal secretions of a number of cases.

## CANCER.

IS CANCER A PARASITIC DISEASE?—This question is answered decidedly in the affirmative by Mr. Plimmer in the very important article on the Ætiology and Histology of Cancer, published at p. 430. This is not the place to express an opinion as to the validity of his conclusions; he must be judged by his peers. But his work and his beautiful plates speak for themselves. During the past six years he has examined microscopically 1,278 cancers, taken as they came from various parts of the body. In 1,130 out of the total number of cases he has found parasitic protozoa which he looks upon as the cause of the disease. But he has carried his research much farther than this. From a rapidly growing cancer of the breast in which the parasites were present in exceptional abundance, he succeeded in isolating an organism which he was able to cultivate outside the body. By inoculating these cultures in certain animals, tumours—mostly of endothelial origin—were produced, and death ensued. The next step in the experiment is to get pure cultures from these tumours which, when inoculated in other animals, will produce similar growths. Mr. Plimmer has obtained the cultures, and has inoculated animals with them. Sufficient time has not yet elapsed to enable him to make a positive statement as to the results, but one gathers that he is hopeful that the experiment will be successful. We cannot as yet be sure that Mr. Plimmer has settled the question of the ætiology of cancer; he himself does not claim to have done so, and he admits that there may be more than one cause, and that different causes may be operative in different cases. But he is unquestionably to be congratulated on having made a most valuable contribution to the literature of one of the most important questions in pathology.

IS CANCER AN INFECTIOUS DISEASE?—If cancer is caused by a parasite it must be regarded as communicable by inoculation. At present the parasitic theory must be looked upon as not proven, and, for the moment at least, the weight of scientific opinion is rather against it. Whether Mr. Plimmer's results will turn the scale remains to be seen. Not that the fact of their not gaining immediate acceptance will be any proof of their unsoundness. In the sphere of science, as in others, wisdom often calls out in the streets and no man regards it. It is interesting, however, to note that, apart from what may be called laboratory evidence, there is already a certain accumulation of facts of observation which suggests that cancer is, sometimes at least, transmitted in much the same way as tuberculosis. The infectiousness of cancer is not a new idea. Mr. Plimmer refers to a discussion on the subject by members of the Academy of Medicine of Lyons in 1773. But more than a century before that date Zacutus Lusitanus expressed the opinion that cancer was communicable by direct contagion, and he cited in proof of this view the case of a poor women with an ulceration of the breast who slept with her three sons. Two of these died of cancer within a few years; the third also suffered from the disease, but was cured by a surgical operation. The curious may find the

record of the cases in *Zacuti Lusitani Opera Omnia* Lugduni, 1649, t. i, p. 232, and in the same author's *De Praxi Admirandâ* at the end of the second volume of the *Opera*, Lib. I., Obs. cxxiv., p. 31. Nicolaus Tulpius (who is represented demonstrating a dissected arm in Rembrandt's well-known picture), in his *Observationes Medicæ* (Ed. Nova, Amstelodami, 1672, p. 292), relates the case of an elderly lady, the subject of an ulcerating cancer of the breast with an ill-smelling discharge, who was nursed with great devotion by a servant who was herself later attacked with the disease. Tulpius was so uncompromising in his belief that cancer is contagious that he embodied it in the following proposition: *Cancer ulceratus juxta ac oculorum inflammatio contagiosus est* (An ulcerated cancer is just as contagious as inflammation of the eyes.) At a later period, but still considerably before the date of the Lyons meeting referred to by Mr. Plimmer, we find J. Juncker, a pupil of the famous Stahl, maintaining that cancer is contagious. Juncker (*Conspectus Chirurgiæ*, Halle, 1731, p. 308) admitted indeed that this quality is not very marked, and that for a successful engrafting of the disease it is necessary that the infective material should fall on a suitable spot where there is already a breach of surface. This statement probably represents all that the most convinced "contagionists" would affirm at the present day.

It may be added that in some parts of France, cancer was looked upon with special dread on account of its supposed infectious character. For instance, in the middle of the last century, cancerous patients were refused admission to the Hotel-Dieu of Rheims. Wherefore a charitable canon of the cathedral of that city, Jean Godinot by name, was moved to give a sum of 25,000 livres for the building of a hospital for sufferers from cancer, who were wont to gather about church doors and display their sores. With the money a house was bought in the city, and was turned into a hospital for cancerous patients. But an outcry was made by the citizens dwelling in the neighborhood, who were alarmed at having such a pest-house in their midst. The authorities of the hospital held their ground for a time, but public opinion, which was strongly imbued with the notion that cancer was infectious, was too strong for them, and in 1778 the patients were removed to a place outside the city, formerly used as an isolation asylum for the plague-stricken. It was not till 1841 that cases of cancer were received into a general hospital, and then they were placed in a separate block.

As in the case of tuberculosis, the popular belief was ultimately crushed out by the force of medical teaching. But even in the middle of the present century Velpeau said, "For my part, I have long looked upon the contagiousness of cancer not indeed as demonstrated, but as possible" (*Traitè des Maladies du Sein*, 2nd Ed., 1858, p. 510). Since then cases in which there was at least some *primâ facie* evidence of the transmission of cancer have been published by John Hall (*Annals of Surgery*, December, 1885), H. May, (*Lancet*, 1887) A. L. Eade (*ibid.*, November 12th, 1887), R. Budd (*ibid.*, December 31st, 1887), Duplouy (Congrès pour l'Avancement des Sciences, Toulouse, 1887), Blyth (*Lancet*, 1888), and especially by Arnaudet, of Cormeilles in Normandy, who, in a series of

papers published in *La Normandie Médicale* (February 1st, 1889; February 15th and March 1st, 1899), gave the results of an investigation of cases of cancer in his own village and of thirty unpublished cases (reports of which were obtained in response to a circular) in a series of papers which appeared in the *Union Médicale du Nord-Est* (February, April, May, July, October, 1891, and August, 1892). A solid mass of literature on the subject has now been accumulated, and the question of the infectivity of cancer has come out of the limbo of creeds outworn into the light of scientific day.

CANCER HAUNTED HOUSES. A circumstance which strongly suggests the existence of an infective quality in cancer is the way in which it appears to haunt particular houses. As already said, this fact was noted in a rural district of France by Arnaudet some years ago. Similar observations were made in Germany, especially by Behla, who speaks of the disease as being endemic in a certain place. In this country some striking facts of the same kind have been published by Law Webb, of Ironbridge, and Lloyd Jones, of Cambridge. In Mr. D'Arcy Power's paper on "The Local Distribution of Cancer and Cancer Houses," published at p. 418, will be found the results of a personal inquiry, which certainly raise a strong presumption in favor of cancer being an infective disease, in the transmission of which locality plays a prominent part. Mr. Power, it should be noted, does not believe that cancer haunts houses, nor does he think the disease is water-borne. But he does believe that it haunts places, and he expresses with no uncertain sound the opinion that the germ of the disease is a *contagium vivum*, which lives in some intermediate host belonging to the vegetable or animal kingdom, from which or in which it somehow finds its way to a suitable place in the body of the human victim. According to this view, cancer is propagated in a manner analogous to that in which malaria, as Manson and Ross have shown, is transmitted.

THE GEOGRAPHICAL DISTRIBUTION OF CANCER. The analogy between cancer and malaria is made closer by the fact that both have a definite relation to a marshy soil. Many years ago, Mr. Alfred Haviland showed by an elaborate series of investigations that districts having the highest death-rates from cancer were traversed by, or in close propinquity to, fully formed rivers which seasonally overflowed their banks and flooded considerable areas; and that, geologically, these districts were characterized by alluvium and subsoils of clays of every variety of age and formation. On the other hand, districts in which the cancer mortality was low were characterised by the oldest palæozoic rocks, especially those of the Carboniferous Limestone period. In his paper on "The Medical Geography of Cancer," published at page 400, his researches regarding certain areas selected as representative of the whole country are brought up to date, and it will be seen that the conclusions at which he arrived thirty years ago are confirmed by his later investigations. His "cancer fields" are still found along the course of rivers that seasonally flood their riparian districts.

CANCER IN ANIMALS. It used to be believed that animals are not liable to cancer, and Dr. McFadyean, in his paper on "The Occurrence of Cancer in the Lower Animals" (p. 456), says that not long ago a distinguished pathologist asserted that the disease is peculiar to the human species. How erroneous this belief is may be gathered from Dr. McFadyean's paper, in which particulars are given respecting sixty-three cases of cancer in domesticated animals which he said had an opportunity of examining. It is somewhat curious that the only one of the domesticated species not represented in his table is the pig, which used to be considered by the ancients as approaching most nearly to man in its anatomical structure. Galen's anatomy is almost entirely founded on the examination of pigs, and in the Middle Ages almost to the time of Vesalius, lectures on the anatomy of the human body were illustrated by

> "Dissections made on the bodies of swine
> As likest the human form divine."

Dr. McFadyean's investigations suggest some interesting points of contrast between animal and human cancer. The rarity of cancer of the uterus and the mammary gland in animals is particularly remarkable. He has never seen a case of cancer of the uterus or of the udder in a cow, and, as he says, the immunity of the latter organ is difficult to reconcile with the theory that carcinoma of the human breast is ætiologically connected with the irritation incident to lactation. Another circumstance that seems to negative the influence of irritation, which is supposed to be so potent a factor in the production of human cancer, is the fact that, while carcinoma is by no means rare in the horse, is not one of the cases in Dr. McFadyean's table was the starting-point of the disease in any of the parts of the body most subject to friction. Thoroughgoing partisans of the irritation theory may indeed explain the rarity of cancer of the tongue in animals, by the fact that our "poor relations" do not smoke! "Irritation" is such a convenient hypothesis, and your destitute theorist will find a "fact" to support him in anything.

IS CANCER INCREASING? Alarming statistics have been published from time to time in recent years apparently showing a rapidly increasing prevalence of cancer, not only in this country but everywhere. In his paper entitled "A Further Inquiry into the Frequency and Nature of Cancer," published at p. 385, Professor Roswell Park, of New York, states that the death rate from cancer is still increasing, not alone in New York, but apparently in all parts of the world. He adds that it is the only disease tabulated which shows a steadily progressive increment by years, and even month by month. It would appear that we are doomed before long to live under the Sign of Cancer. He makes the startling prophecy that if for the next ten years the present relative death-rates are maintained, in 1909 there will be more deaths in the State of New York from cancer than from consumption, small-pox, and typhoid fever combined.

Verneuil some years ago said that he and other hospital surgeons in in Paris had been struck by the much greater number of cases of cancer of the tongue and other visible parts that came before them than had

been the case thirty or forty years before He attributed the fact to the increasingly carnivorous habits of the population. The vegetarians naturally hailed this suggestion with enthusiasm, till it was pointed out that cancer is just as prevalent among the mild Hindus, to whom the fleshpot is an abomination, as among the "cow-eaters" whom they despise. Among ourselves there seems to be a widespread and popular belief that the pleasant and harmless, if not exactly necessary, tomato has something to do with the production of cancer. Whenever the question of cancer is touched upon in the lay press, this tomato theory is sure to be brought forward with a gravity worthy of a better cause.

A more rational explanation of the increase of cancer is that it is the necessary penalty of sanitary progress. More people now live to an age at which they are liable to become the prey of cancer than in the brave old days when there were no drains and the fear of the microbe unknown. Dr. Newsholme, however, who has given special attention to the question, rejects this plausible explanation. In his paper on "The Statistics of Cancer," which will be found at p. 371, he brings forward a solid mass of facts and figures which certainly seem to show that the supposed increase of cancer in recent years is more apparent than real. He attributes the fact that a greater number of deaths are now registered as due to cancer to improved diagnosis and more careful certification. This is comforting as far as it goes. But the fact remains, as Dr. Newsholme points out, that cancer is among the most deadly diseases in the Registrar-General's list. It claims nearly four times as many victims as typhoid fever, and has a larger annual death roll than either measles or whooping-cough, although it has a much more limited field for its baleful activity than either of these deceases. It causes about 6 per cent. of the total deaths registsred among males, and more than 7 per cent. of those among females, at ages over forty-five And there can be little doubt that the registered mortality represents only a part of the havoc wrought by this most justly dreaded of all diseases.

CAN CANCER BE CURED? A few years ago this question could only have been answered with a despairing negative. But now, as may be learnt from Mr. Watson Cheyne's paper, published at p. 463, a far more satisfactory answer can be given Surgery can eradicate cancer in certain situations, whilst in a large number of cases it can give the patient a longer lease of fairly comfortable life.

Even in cases which are "past all surgery," Dr. Coley, of New York, still holds out a hope of relief from the use of the mixed toxins of erysipelas and bacillus prodigiosus, as described in his paper on "The Treatment of Operative Cancer," published at p. 497. Although in the hands of other surgeons the treatment has not been so effective as in those of Dr. Coley himself, in a disease so desperate as cancer, a doubtful remedy is better than none, and we are not justified in neglecting any chance however slight it may appear. By doing so we will only deliver the unfortunate sufferer into the greedy hands of the quack.—*London Practitioner.*

# A PLEA FOR THE MORE CORRECT APPLICATION OF THE EMMET METHODS IN PLASTIC SURGERY.

BY W. D. HAGGARD, JR., M. D., NASHVILLE, TENN.,

Associate Professor of Gynæcology, University of Tennessee; Adjunct Professor of Gynæcological and Abdominal Surgery, University of the South; Fellow of the Southern Surgical and Gynæcological Association; Secretary of the Section on Obstetrics and Diseases of Women; American Medical Association; Members of Alumni Association of the Woman's Hospital in the State of New York, etc.

The brilliant achievments in abdominal surgery have so far outshone the humbler plastic operations, that their perfection has been very much impaired. The apothegm that "whenever anything is as good as it can be, it cannot get better," is particularly applicable to the work of the early school of gynæcologists. It is equally axiomatic that when progress approximates perfection, it ceases to improve, and decadence ensues.

Plastic surgery of the vaginal walls and cervix uteri of the present, is a polyglot of many methods, widely differing in principle, and hopelessly diverging in practice. It is usually the *bête noir* of the practitioner, the unfruitful field of the general surgeon the *négligé* work of the gynæcologist. It is not that we love it less, be it said, but that we love major work better. In addition to these obvious reasons for the deplorable lack of excellence in much of this class of work, and to the general apathy in this department of surgery, there are more material and serious impediments to perfected results. A somewhat exaggerated idea of the importance of the perinæal body so-called the lingering belief in its similitude to the keystone of the arch, in its office of supporting the uterus; the failure to appreciate the rôle of the pelvis fascia in maintaining the integrity of the pelvic floor and its functional relations; and more especially the failure to grasp the results of its injury and the mechanics of production of rectocele together with the exact methods for its correction. Finally the employment of other suture material than silver wire. Even when these elementary facts and their significance are known theoretically the mechanical difficulties in meeting the anatomical and physiological indications are very considerable. More, perhaps, than in other surgery. It has been said that much of modern surgery tends to dissociate it from the characterizing manual dexterity from which it derived its name. Yet the substitution of instrumental for manual manœuvres is essentially necessary in the class of operations referred to. Its successful execution requires a special aptitude, nicety of judgment, delicacy of manipulation, and the inherent modeling and coaptation of parts which is signified by the word plastic. In this branch is found one of the highest exemplifications of science wedded to art, because the creative feature, the object to be attained, and the highly artistic means of attaining it, preeminently stamps it as essentially an art.

Plastic surgery received its first impetus from the pioneer work of that great master, Sims, when in 1845 he made the brilliant cures of vesico-vaginal fistula on the patients whose fortitude and high courage entitle them to share something of the gratitude of posterity for participating in those wonderful discoveries that made lacerated woman whole.

It is a unique circumstance in the annals of surgery that the instruments which made the feat possible, and the fundamental principles of his success, have remained unchanged.

It is not so much the tribute of homage to unprecedented genius, as the truth of the great principles he enunciated, and the perfection of his devices. It may be said, then, that the surgery of vesico-vaginal fistula has remained unchanged since the operation for its relief was given to a waiting world by its incomparable originator. It is a subject of regret that more of our art has not become crystallized into such classic perfection.

Trained in this embryo school, under the great Sims himself, possessed of a remarkable sense of adaptation, great patience, untiring energy, and a delicacy of touch rarely seen in a man, was Thomas Addis Emmet. He utilized his unaparalleled opportunities in extending the application of the methods of Sims in fistula to injuries of the adjacent soft parts.

In 1871 he read the historic paper on "Laceration of the Cervix as a Cause of Disease," which swept away the mythical "ulcer of the womb" from the nosology of disease, subtracted much from the sum of woman's sorrow, and forged the second link in the immutable trio of perfected plastic operations.

It would seem that an operation so accurately described, so universally practised and by so many men, would be more correctly performed. Yet I have seen many operators simply cut out a variable plug in the angles of laceration and sew it up by through-and-through sutures, very much as one would the corners of the mouth. No attempt was made to remove all the cicatricial and cystogenic tissue or to maintain the conical form of the cervix. In addition to attention to these cardinal points it is extremely essential to preserve the continuity of the cervical canal down to the new external ostium, and in the suturing to avoid the formation of pockets which are caused by leaving irregular recesses unapproximated by the sutures. The denudation is the scientific aspect; the suturing the artistic consideration. The hard cicatricial plugs in the angles and the oft-associated honeycombed condition of the cystic tissue, require careful excision with the sharp-pointed curved scissors, and very often amputation of the cervix. The *raison d'être* of the operation is to remove all abnormal tissue. It may be compared in one sense to a sequestrum of bone and the further analogy of the necessity of complete removal be carried out as we do in necrotomy. The hard tissue can sometimes be peeled out like a corn in one piece. The finger can best tell when all diseased tissue is removed. A proper appreciation of this fact causes one to regard instruments made to bite out an arbitrary piece of tissue as a biscuit cutter does, as extremely crude and in discord with the harmonizing indications and operative corollary.

The sutures when introduced to close the excavations are arranged like the ribs of a palm-leaf fan, the undenuded strip which is to constitute the new canal forming the rallying point and each suture making a lesser angle with it until the last one on each side is almost parallel with the margin of the cervical canal.

The difficulty of passing the needle underneath the deepest portion of the excavation and drawing out the point of the needle when it presents, is overcome by pulling up the bottom of the cervical stump so that the needle may be shoved along on a plane and the point elevated. Counter-pressure made with a tenaculum will facilitate the passage of this needle without breaking and tedious delay.

When the site of the proposed canal on the everted anterior and posterior lips are felt to be free of hard tissue, then the original operation of Emmet, bilateral trachelorrhaphy herein described, will suffice, no matter how deep the laceration. However, the majority of cases seen at the present time requiring operation, are the ones with large hypetrophied cervices with undurated tissue containing numerous cystic follicles. The rule "to remove all morbid tissue" when applied in these cases, necessitates an amputation of the cervix. It finds its analogy in the indication for removal of hypertrophied indurated tonsils, the relic of recurring inflammation. We also know that if we do not remove all dense cicatrical tissue in the cervix that it will be only a resection of the disease and the vaginal flaps will be brought over morbid tissue as a prepuce. Amputation can be substituted for trachelorrhaphy at any moment of the operation. The excision should be conoidal. The sutures so arranged as to pass through the anterior lip and out through the canal. A sister suture through the posterior lip unites mucosa of cervical canal to vaginal mucosa. Apposition sutures through the stumps draw the vaginal flaps snugly over the cervical stump like the cover on a ball.

Emmet's operation on the posterior vaginal wall was of more gradual evolution, but the later operation devised in 1876 does not differ materially from the old trefoil denudation. It must be asserted that Emmet was the first operator to include the rectocele, or indeed, any portion of the posterior wall of the vagina in the operation for laceration of the perinæum so-called. Then the multifarious operations devised for repairing the pelvic floor, or vaginal outlet, which includes the posterior wall of the vagina, are but modifications of his operation. The misconception of the operation for laceration of the perinæum, so-called, is due to two causes: (1) misconception relative to the exact nature and pathology of the injury. (2) The almost insurmountable difficulty in depicting the operation by diagrams, and the impotence of word-description in giving precise directions for its exact performance. The first of these hindrances I consider the gravest, and attributable to the popular idea of the perineal body which Emmet describes as a body that doesn't exist. The essential lesion in injuries to the pelvic floor is a tear of the pelvic fascia which runs along the lateral sulci of the vagina to which it is attached. The tear occurs where it is reflected upon the front of the perinæal muscles, of which it forms the sheath and which it binds together. This condition exists in the tears, indicated by the transverse tears, rectocele, and relaxed vaginal outlet commonly seen in the injury incorrectly designated Laceration of the Perinæum, but more accurately termed Laceration of the Posterior Vaginal Wall. The destruction of the integrity of the pelvic fascia is the sole pathology. The sense of bearing down characteristic

of this condition is caused by the congestion of the blood-vessels consequent upon the lack of support, through the above-mentioned injury to the pelvic fascia, which in its support of the blood-vessels have been likened to "the trellis supporting the grape-vine." The seeming destruction of the perinæal body is really only the retraction of the pelvic fascia which from the loss of support from its sheath, the fascia, is pulled apart by the transversus perineü muscles, like two leaflets of a window curtain separated at the bottom while they remain attached above. The two-fold function of this muscle, to close the vulval cleft during defectation and to assist the dilatation of the sphincter ani, being lost, each stool thus find an imperfectly dilated sphincter, an unclosed vaginal orifice, a weakened recto vaginal septum, a convex rectal curve all of which predispose to rectocele. The constant eversion of this rectocele by defecation, under the circumstances above enumerated, pulls down on the cervical attachment of the posterior vaginal wall, predisposing to rectro-displacement, which is the first step toward descensus. That the destruction of the pelvic fascia is the essential cause of rectocele which in turn produces consecutive prolapsus, is proven by the fact that women who have true laceration of the prinæum, *i. e.*, complete tear through the sphincter and the rectro-vaginal septum, do not have prolapsus. The utterus is not supported by the perinæum as formerly taught but "is swung from above like all other organs in the body." These women do not have the bearing down found in the class with transverse tears and the laceration of the pelvia fascia. They do not suffer any discomfort whatever execpt from incontinence. The reason of all this is because in the central, complete tears referred, the fascia is not or cannot be involved. This is the inevitable logical conclusion.

The mechanics and pathology of the results of injuries to the floor of the pelvis may be summarized by the comprehensive reply of a student whom I asked: "Why doesn't a woman with complete laceration of the perinæum have prolapsus?" He replied ingeniously: "Because she has no rectocele." "Why has she no rectocele?" "Because the pelvic fascia is not torn."

The converse of these propositions is of course true, and these brief statements comprise much of the unwritten mechanics of many displacements as well as the essential pathology of laceration of the pelvic floor.

The rational correction of this complex condition, then, would be not to sew the labia together, which is the popular procedure in one class of operations, nor to denude an arbitrary area of fanciful shape on the rectocele and bring the edges of the raw patch together, after the fashion of another class. It would rather be in the language of Emmet "to catch up the retracted pelvic fascia at such a point and in such a manner as to 'take in the slack' as it were of the fascia throughout the pelvis. By this procedure the displaced posterior vaginal wall is certainly lifted up and drawn forward in contact with the vesico-vaginal septum. As the steps of the operation advance the displaced anus is lifted upward and forward, the everted tissues at the vaginal outlet gradually rolled in and the separated levator ani muscle brought together."

I shall not attempt a detailed description of the technique, because I realize the futility of conveying a composite idea of the method, which, to be properly understood, must be seen, preferably at the hands of the venerable Emmet himself. I am not unmindful that this good fortune has been enjoyed by many present. I will simply attribute a few of the essential features.

Based upon the conception of the injury outlined in the foregoing, the first and important step is to determine that point on the rectocele which when drawn down by a tenaculum will present a triangular, trowel-shaped area marked laterally by two folds which lead up to fixed points in the lateral sulci which mark the limit of retraction of the fascia. If this is not determined with precision it is obvious that any attempt at reuniting the sundered and retracted fascia, thereby restoring the equilibrium of the circulation in the pelvis and drawing together the separated levator muscles, will fail and the whole object of the operation be defeated.

This tongue-shaped portion of the posterior wall of the vagina when drawn down will constitute the new posterior vaginal wall because the denudation will include that part of the rectocele marked laterally by the highest caruncle and below by the junction of mucous membrane and skin, extending above into each lateral sulci to the triangular fixed points before referred to as indicating the extent of retraction of the fascia.

The denuded area, diagrammatically speaking, would correspond to the space between the straight lateral and oblique middle legs of the letter M, the ends of the lateral legs being connected by an exaggerated semicircle. The space above and between the two oblique middle bars of the letter M would correspond to the undenuded tongue-shaped portion of the rectocele, the angle formed by the junction of the outer and middle legs would correspond to the fixed point and the outer bars to the limit of retraction of the pelvic fascia as previously determined. The semicircle connecting the lower ends of the letter would designate the junction of skin and mucous membrane.

The sutures that unite the two lateral triangles, and thus catch up the retracted fascia, are introduced in the shape of an inverted triangle, the basic points corresponding to the points of insertion and final exit at the edges of the denudation and the apical point being in the centre of the denuded triangle at the point of first exit and re-entrance of the suture, where it changes direction. The sutures underneath the semi-circular denudation pass transversely across the area, the first or "down stitch" traversing the top of the undenuded triangle. When the two sets of lateral sulci sutures are shouldered and twisted they not only approximate the edges of the lateral triangles, but at the same time draw up and in the underlying tissues previously everted and displaced. The transverse sutures which draw together the levatores when tightened, draw the circular edges of the denudation into a linear line of approximation. It will be noticed that this entire operation is on the posterior vaginal wall, and hence Emmet's name for it. It has not involved the skin or labia, and the sutures are all *inside*. So perfect and secure is this approximation that I have frequently seen Emmet turn the patient on her side and

for the purpose of demonstration introduce a Sims speculum and retract the perinæum without the slightest disturbance to the newly contracted vaginal wall and in no wise marring the perfection of the result.

The operation for complete laceration through the sphincter is more amenable to pictorial description, and I think is more generally understood. It is the simplest and most beautiful of all the operations for this injury. In its simplicity consists its beauty, and as it is solely instituted for the restoration of the sundered ends and broken circumference of that muscle, no mutilating and arbitrary flap-splitting is done, but the ends infallibly lying under the two dimples are lifted up, laid bare with scissors and united by a suture going behind the sphincter end and drawing the straightened and retracted sphincter into a circle again.

The margins of the recto-vaginal septum are freshened and approximated. It has always been the custom of Dr. Emmet to introduce the cleft sutures before the ones to bring the sphincter together. To show the remarkable versatility of this master plastic mechanic on a certain occasion when he had some of the most distinguished men of the two continents at his clinic, he deliberately reversed the plan of a life-time and introduced the sphincter suture first. He advised those of us who were assisting to him to adopt that practice. I do not know that he has ever publicly recommended that modification, but I take the liberty of repeating his suggestion.

Of the operation on the anterior wall, I will not speak at this time; nor of his inimitable work in making an artificial urethra. This is an acme of adroitness that we cannot hope to duplicate, and fortunately the occasion for its employment is exceedingly infrequent

I cannot refrain from decrying the too general practice of substituting other suture material for silver wire in the cervix and vaginal walls. This innovation in plastic work is due to the invasion of gynæcological territory by general surgeons, who are just emerging from the use of silk as a universal suture material, and adopting silkworm gut for use in all localities where it can be removed. The general practitioner also essays plastic work, bringing to bear the results of his restricted experience in sewing up skin and scalp wounds.

The newer school of gynæcologists who are unacquainted with some of the older and good methods are applying catgut sutures to the cervix to avoid the trouble of removing them and also trusting them in the most awkwardly situated region of the body to protect from infection. The non-use of silver wire is perhaps as much responsible for failure in plastic work as nearly any other factor. It is the only suture that can be precisely controlled in the degree of tightness and, indeed, it can, if accurately bent or "shouldered" where it crosses the line of proposed approximation, be made to constrict the parts in the most delicately adjusted apposition, neither too tight nor too loose. The physiologic peculiarities of the erectile tissue of the genitalia, that of rapid engorgement and depletion, require an unyielding suture material, and one that will permit of the resulting involution as repair proceeds. Moreover, silver wire is easily and surely rendered aseptic and, indeed, is supposed to have the

property of forming an antiseptic salt with the fluids in the tissues in which it is embedded. It can remain indefinitely, and the longer it remains within surgical limits the better the results. Three weeks is the orthodox time for the cervix. The application of silver sutures requires some practice and much patience, and takes a little more time, but the last element is not of much moment in minor work, with good kidneys and expert anæsthesia, which is the only s rt that should ever be permitted, as I recently had sad occasion to realize.

In every branch of art there is a troop of imitators who follow so closely the hall-marks of the original that the specious can scarcely be distinguished from the genuine. So closely are mannerisms copied in literature, art, sculpture, and the drama, that the imitators create a distinctive school. The accuracy of duplication is rendered possible by the faithful and scrutinizing study of the original pattern.

The unlimited opportunities for the study of models in the arts are obviously impracticable in plastic surgery. We cannot all have the privilege of seeing the peerless Emmet, although a distinguished Fellow of this Association says that one who aspires to do such work ought to. I wouldn't presume to say that one must see him or his followers to do good work. I regret that many of his pupils do not or cannot copy his methods, and I don't hesitate to say that those of us who do conscientiously strive to imitate him, fall very short in our poor efforts, but we have at least the satisfaction of having a correct conception of the highest ideals in surgery.—*American Journal of Obstetrics and Gynocology.*

## EPISTAXIS—A SIMPLE AND EFFICIENT MEANS FOR ITS CONTROL.

BY BOYD CORNICK, M.D., KNICKERBOCKER, TEXAS.

Recurrent or prolonged nosebleeding occurs sufficiently often in general practice to occasionally prove a nightmare to those practitioners who must rely on the means of checking it which are recommended by most authorities.

Having witnessed, twenty-two years ago, the ineffectual efforts of a specialist to check the hemorrhage in a case of unilateral epistaxis, I naturally felt no little concern when, a few years later, I was called on to arrest a bleeding from the nose of some twenty hours' duration. The means finally resorted to (with success) was a strong astringent injection, by means of a postnasal syringe, the tip of which was inserted through the mouth into the upper pharynx, behind the velum palati, the fluid flooding the floor of both nasal passages, and flowing out of both nostrils anteriorly. But there is a better and simpler method than this, if I may judge from its prompt success in some half dozen severe cases encountered since then.

So late and so good an authority as Struempell's "Text-book of Medicine" (revised edition) recommends plugging the nares with absorbent cotton. In all the cases in which I have known this measure to be adopted the result was a failure. Perhaps it was not done *secundem artem*. And perhaps, with so unsatisfactory material, this method requires more skill than most practitioners—and some specialists—possess.

My treatises on general surgery, on the other hand, lay no little stress on internal remedies, and fall back on the plugging of the posterior nares with Bellocq's canula as a last resort. Meantime, if they refer to an attempt to plug the anterior nares, it is with the recommendation that a quill, or a fection of a gum catheter, be enclosed in the plug, and that a solution of perchlorid of iron be used to first saturate the plug. Of these recommendations the first is needless bother, and the second produces needless irritation.

There may be constitutional conditions predisposing to nosebleed, which call for internal medication. Plethora or cachexia, co-existing with epistaxis, calls each for its own appropriate treatment. Nor is it my purpose to deal in this paper with those cases of intermittent nosebleed, occurring in adolescence, without debilitating the patient, nor with that class of patients in later life where, because of contracted kidney and arterial sclerosis, an occasional profuse epistaxis acts, as a safety valve in the steam engine, by preventing a degree of intra-arterial pressure which threatens apoplexy.

The class of cases which I have encountered, though generally presenting evidence of some constitutional disturbance of the normal condition of the blood, or of the normal blood-pressure, has likewise given evidence of a localized solution of continuity in the nasal mucous membrane itself. In all such cases, were the lesion situated externally, so as to be easily

visible and readily gotten at, what authority would lay stress on internal medication to constringe the arterioles, as an aid to checking the hemorrhage? What surgeon would propose astringent or styptic applications to the bleeding site?

It is because the site of the lesion, in most cases of even persistent epistaxis, while not easily visible, is nevertheless as easily subject to compression as though on the external surface of the body that, in all the cases I have encountered within the last fifteen years or more, compression of the bleeding site has been as readily accomplished, and has been as promptly successful, as though it had been located on the external surface.

All that I have found necessary has been to fashion with a pair of scissors a dry plug of prepared sponge, in size and length comparable with the little finger of a twelve-year-old boy. This should be carefully soaked in boiled water, to free it of grit, squeezed dry to free it of unnecessary fluid, and inserted its full length, gently, along the floor of the bleeding nostril. No styptic is necessary; it would be needlessly irritant. The expansive pressure of the soft sponge against the bleeding site, increased by the coagulation of a few drops of blood in its interstices, will check the bleeding at once. Remove it in twelve hours. Under no circumstances let it remain longer than twenty-four. Melted vaselin containing .5 per cent. of carbolic acid, applied with a medicine-dropper in liberal quantities is the only local treatment called for afterward.

---

**Xeroform in Corneal Ulcer.**—Marcinowski finds that xeroform is much preferable to iodoform in the treatment of corneal ulcer. Having succeeded with xeroform in a case which had previously given bad results with iodoform, he has since relied solely upon the former, with uniformly good results, both in ulcerations and in dressings for corneal injuries. Wounds heal quickly under its influence without leaving a scar.—*Therap. Monats.*, xii., 38.

---

**The Conditions of Uric Acid Formation.**—Dr. J. Weiss *Ztsch für Physiologische Chemie*, Bd. 25, Hft. 5 and 6) has found that the addition of 1½ lbs. of cherries, 1 lb of strawberries, or 2 lbs. of grapes, to an ordinary diet, causes a diminution in the amount of uric acid excreted, which is sometimes reduced to even half the normal quantity. Of the three fruits mentioned, cherries produce the greatest effect.

In order to determine which ingredient of the fruit it is that influences the uric acid output, the writer administered separately tartaric acid, tannic acid, sugar, and quinic acid. The latter alone produced the the results noticed. The amount of hippuric acid excreted was increased at the same time. Greengages were found to be specially potent in this direction.

It is possible that the quinic acid produces its effects by diminishing leucocytosis.

The results are of interest for their bearing on the dietitic treatment of gout and gravel. They confirm the experience of Linnæus, who found a "strawberry cure" a means of ridding himself of gout.

## A COMMON CAUSE OF CRYING IN THE NEW-BORN.

BY THOMAS S. SOUTHWORTH, M.D.

Attending Physician, Nursery and Child's and Randall's Island Hospitals; Physician to Dispensary of Babies' Hospital; Lecturer on Pediatrics, New York Polyclinic.

On the evening of November 29, 1898, a primipara was delivered of a strong male child, which cried lustily and, after being bathed, fell asleep. As the mother's breasts were well developed and the child strong, instructions were given that the child be put to the breast every six hours for the first day, and every four hours the second day, and that boiled water, sweetened with cane sugar, be given every two hours between the nursings.

It subsequently transpired, that as the child slept soundly between the nursings, the latter part of the order was disregarded entirely or the water given but a few times. At noon on the third day word was received that the child was sick, and on arrival at the house the nurse said that it had cried almost constantly for the past eighteen hours as if suffering from colic, sleeping but little and passing no urine since the early hours of the morning.

When the child was undressed for inspection marked priapism was noticeable, and the placing of the somewhat cool hand over the region of the bladder was followed by the discharge from the penis of some four to six drachms of urine of so turbid brown a color as to attract the attention of all present. This left a yellowish brown discoloration upon the napkin with no traces of pink. Priapism immediately ceased, and the child who had before been crying steadily fell into so sound a sleep that the subsequent examination did not awaken him. The thermometer placed in the rectum registered 102.6° (inanition temperature?). A weak modification of milk was ordered to be given every four hours alternating with boiled water after taking the breast. These, however, were again not given as the child thereafter slept soundly after each nursing. The rectal temperature the following morning had fallen to 100°.

The so-called uric acid infarctions of Virchow formed by the deposits of uric acids and urates in the straight tubules and papillæ of the kidneys in the new-born infants have been recognized for some time as a possible source of irritation as they remain *in situ*, or are washed out by the scanty secretion of urine. Most modern text-books make some mention of the subject although it is frequently incorporated in the section dealing with the formation of calculi. Yet it is rare to find the practitioner who thinks of this cause of crying in infants, unless it be *post facto* from the colored stains upon the diaper.

It is extremely probable that much of the supposed pain of colic in the new-born for which they have, from time immemorial, been dosed with fennel and other aromatic teas, is due to these sources of irritation in the kidney, ureters, bladder, or urethra. Boiled water, which should be given to every infant at regular intervals, for more reasons than one, pending the establishment of lactation, will dilute the urine and prevent or alleviate the discomfort. The rather unusual opportunity afforded the writer of observing matters in this case, together with the subsequent course of events, point clearly to the urine as the cause of the crying, whereas, had no such observation been made, hunger and inanition might readily have been considered a sufficient explanation of the symptoms.

## TREATMENT: AN IMPORTANT POINT.

At the present time the function of the physician is the treatment of disease. For this the doctor is called in. Prevention may be the first duty. It is now only the ideal practice. Time will doubtless greatly develop preventive medicine. To-day the doctor treats or "cures" diseases. The term cure, however, in this connection is going greatly out of use. It has been said that nature cures, the doctor having placed the patient in the best possible condition to favor natures efforts,—instructed the patient how to live and remove and avoid the causes which have given rise to the disease, etc. But that is not the whole truth. Man is in a large measure above and superior to nature. He not only obstructs and thwarts her rules and course, but he may often guide and assist her efforts.

Usually, however, the first object of the physician, and that first expected of him, is relief from the disease—from any urging symptom or symptoms: it may be from pain, localized, or general, as in influenza, or from nausea, or high fever, from sinking or marked failure of the vital powers, from hæmorrhage, obstructed respiration, etc.

When any one of these symptoms is excessive, it is very desirable to give relief as soon as possible, by any means at command—means, however, when possible, which do not jeopardise the future condition—the future health and life of the patient.

And herein is perhaps the crucial test of the physicians' skill; herein is his acuman and knowledge and judgment most severely exercised and tested. How far shall he go with remedies for giving immediate relief at the risk of the future? How far shall he draw, or overdraw, on the patient's savings-bank of vitality for present pressing needs at the risk of future financial embarrasment? How far shall he resort to narcotics, or antipyretics, or stimulants? The physician is tempted to display his skill and gain or strengthen the patient's confidence in him by giving at once if possible complete relief. The countless new remedies in the medicine "market" particularly for relieving pain and reducing fever, add to the temptation.

And countless, for often doubtless unrecognized, have been the fatalities, it is to be feared, from this line of practice, fatalities even amongst physicians themselves, More especially has this been the case in respect to the coal-tar preparations.

It has been truly said, we believe by the late doctor Holmes, that the physician puts remedies or compounds "physic," about the nature of which comparatively, he knows but little, into a living organism, about which, especially in its diseased, perturbed state he knows less. Still less, we all know about what may be the effects or consequences, near or remote, resulting from the contact and mingling of the elements of the chemical compound with the physiological elements, cells or structures of the living diseased body.

We may know that in some way the drug will allay the pain—destroy for a time the sensibility of the nerves, and give relief—ease in place of the "disease"; as phenacetine of ten grain doses in la grippe, for example. But how? It is not enough for us to know that simply. We do not, nor can we ever, probably know at what vital cost it soothes the pain. We should at least know before administering the drug that it will not reduce the vitality of the patient whose future health and life as well as present condition has been placed in our care, that its chemical affinities will not destroy physiological or vital affinities that may reduce to a perilous extent, or an approximation to this, the respiratory or circulatory action—that it will not in any way weaken the heart's vital force. It is to be much feared that these powerful remedies not infrequently, if not very often, do a great deal of harm in the way indicated.

What is the physician to do? Or what is he not to do? Briefly, it can only be said, to bring into exercise his most penetrating mental powers, his best judgment, short though the time at his command for the purpose may often be—weigh well the present absolute needs, the future possibilities; and not allow any doubt as to future possibilities to be outweighed by the temptations to relieve the patient of what may not be great suffering but possibly a wholesome lesson, or, especially, by any desire to make a show of skill by giving prompt relief, and which may yet shake confidence at a future time. Sometimes symptoms may need prompt relief, if not entire suppression; but not infrequently, others, such as pain, nausea or fever, when not excessive or causing great restlessness may well be bourne by the patient for a time until relieved less promptly, by safe remedies. An explanation will usually satisfy the patient as to this line of practice, and with many patients to be recognized as the greater wisdom and skill.

Here, it may be noted, we may usually fall in with safety and the prospect of the greatest success with three measures as named by Wassermann, but in connection with the infectious diseases: (1) attention to the diet; (2) hydrotherapeutic means; (3) good nursing.

And in conclusion it may be stated that, the application of heat or cold or both by the skilful practice of hydrotherapy, will, on such occasion give to the physician a power, a safe control over symptoms, which no other line of practice can do.

## VALUE OF A HEALTHY BODY TO A HEALTHY MIND.

BY JOSEPH EASTMAN, M.D., LL.D., INDIANAPOLIS, IND.

It is a serious question whether the advancing civilization, with its physical deterioration, has added to or detracted from the sum-total of human happiness. Only a few years ago the proportion of insane to the sane in the State was 1 to 1500. Dr. Rogers, of the Logansport asylum, in a plea for enlarging the capacity of that institution, said that we must provide accomodations for one insane person out of every 650 inhabitants. Surely the time may come predicted by Oliver Wendell Holmes, when the sane will have to occupy asylums to protect themselves from the insane.

It is quite customary for parents to move to towns and cities to educate their children—educate them in what? and for what? and what is education anyhow? If it is to strengthen the mind and weaken the body, to stuff them with knowledge with no wisdom to apply it, I object; if to dicker off health for book knowledge, I protest. If it is to develop the physical as well as the mental, as is suggested by the modern gymnasium in connection with college; if it is to teach the simpler modes of eating, sleeping, and exercise of our ancestors, the art of living according to Nature's laws; if it is to fill the mind with such principles as make the coming generation 'healthier and, therefore, happier; happier and, therefore healthier; to develop brawn as well as brain, I approve.

A cultivation of that genius of industry which in the race of life comes out far ahead of every other type of genius is much to be desired. A healthy body is essential to a healthy mind. A healthy body without a healthy, pure, and happy mind is unthinkable. Matthews in his little book entitled, "Getting On in the World," remarks that in all professions, in all departments of business and trades, the race of life is being so hotly contested, that if one stops to tie his shoestrings he will be run over.

The men who fill the pulpits and draw handsome salaries, or even take in a sustenance for their families, must have strong healthy bodies to nourish and maintain healthy brains. There is such a continual tax upon their vital forces, in reading, thinking, sifting out from the chaff the best thoughts of the best thinkers, with frequent interruptions to visit the sick and dying, and hear the tale of woe of many a poor unfortunate, that even with them it is a survival of the physically fittest. The men who talk to juries must delve deeply into the statutes, and look up all the amended laws, and with the most profound research accumulate all possible evidence in favor of their client, and then, perhaps, speak for hours to convince the jury of the justice of their cause. With the doctor it is such a labor of love that he must not think of self. The merchant and the tradesman are no exception to this rule. The facts are that the laws made for the benefit of the laboring class are intended to catch votes, do not even favor the women, and do not touch a larger number of the toilers of earth—the real working-classes. The eight-hour law for the few aids in making sixteen hours for the many.

The man who does manual labor is presumed to be physically strong. The young man who leaves the plough or the anvil for the store or the profession, thinking he will get a easier job by doing brain-work, will realize his mistake sooner rather than later. Behold the heads of our great railroad system, of our great manufacturing establishments, of our great educational institutions, the representatives of this republic's wealth and brain—they are toilers, and regard it as one of their chief virtues to be numbered among earth's great laborers!

Labor is a pleasurable law in all that deserves the name of real pleasure, all that appeals to man's nobler feelings, and obtains the endorsement of his self-respect; all that adorns the brow of true manhood springs from the activity of human life, Man is so constituted that he attains the acme of pleasure, not in physical action alone, as in the brute creation, not in idleness and ease, but in mental activity, and the more intense the action the more intense the pleasure. Too much rest is rust. To the successful man rest is a species of restless desire to be doing something. The object of every one's existence should be to unfold and perfect his own individuality, and to improve the race. A strong, healthy organization is the first essential to success. Upon this healthy organization depend intelligence, beauty, and amiability; indeed, there can be no strength of body or talent of mind that ill health will not undermine. Self-knowledge must include the body as well as the mind, whether we take the view of the theologian, and think of the heart and the soul as synonymous, or the idea of the physiologist, that the heart is a mere pump for the blood. In a body that is not well balanced the mind soon becomes feeble and is lost:

> Could I but own the universe, and with one hand
> Hold Heaven in span:
> I'd still be measured by my soul. The mind's
> The measure of the man.

Health is accord between all the organs and functions of the body and mind. Disease is discord between organs and functions.

The trinity of health may be summarized: (1) A proper quantity of well-digested and assimilated food to make good blood. The Bible has said, "The blood is the life thereof" (2) An ample amount of exercise (physical movements) to keep the blood in circulation. (3) Full and complete inspiration and expiration to supply oxygen and to carry off carbonic acid.

With regard to the first, it might be well to have in every restaurant and dining-room the motto, "Refreshments for Man and Beast" It was intended that man should be neither herbivorous nor carnivorous, but omnivorous, using a variety of food. The dispositions and propensities of man and beast can be determined to a certain extent by noting the kind of food on which they live. There are as many people to-day digging their graves with their teeth as there are drowning their souls in alcohol.

I was called to a neighboring city recently, and stopped at a new hotel, which I was told had cost $30,000, and that it's owner had a hundred thousand more. I asked in what business the money had been made. The answer was, "Educating dogs and ponies." My curiosity was intensely aroused; why such a success? A little later I was asked to make an operation upon the brother of this king of canines, so I watched him with interest while his brother was on the operating-table and more genuine and sincere evidence of kindness of heart I have never seen in the operating-room. Kindness is a great power over men as well as dogs. Wishing to know still more of a character, I asked him to show me his "dog-school," which contained seventy-eight dogs, some ponies and a few monkeys. While doing so he explained to me that he could teach them very little until he broke them of the habit of eating meat; that they were sullen, irritable, and vicious so long as their diet contained meat. Such food developed the brute, not the intelligence of the animals.

My consultation-room has often been the scene of inquiries which reminded me of the dog-trainer's art. The non-eliminated products of nitrogenous food undergoing crystallization cause disease of the blood-vessels. and many a death from apoplexy. Indigestion is spoken of as an American disease. This disease may be attributed in a large measure to the food being swallowed too rapidly; the stomach not being given time to half do its work of digestion. With bad digestion all manner of poisonous ptomains are produced, the absorption of which not only impairs the blood-making process, but poisons the citadels of life, rendering the individual mentally and physically unfit for the duties a wise Creator had intended him to perform.

The Universities of Cambridge and Oxford, of Harvard, Yale, and Princeton, have graduated many a one who did not even know what to eat or how to eat it. As a matter of fact, it is more important to know what food to eat and how to eat it; how that food digests, is transformed into blood; how that blood flows; something of the molecular and atomic changes upon which secretion and excretion depend, and by which the phenomena of life are continued, than to be able to parse a Greek sentence, or know how to trace the constellations in the heavens, or to find the whereabouts of an ursa major or an ursa minor.

Barring the possibilities of getting tuberculosis from tubercular cows, milk as an article of diet has two very strong recommendations: (1) It contains all the different constituent elements which go to make up each and every tissue of the body. It especially provides lecithin to to feed the famishing nerve-cells. We all lived on it for a time, when we first came to this country, and then we had dimpled cheeks and dimpled fingers. There is a good deal of jesting about the Bostonian and New Englander living on baked beans, but beans, next to milk, come nearest to nourishing each and every part of the entire human system, and no one part in particular more than another. The pills which have been taken to relieve conditions resulting from lack of proper diet and exercise, would, if showered from the skies, maintain a hail-storm over this country for days.

We view with admiration the wonderful inventive genius displayed in the engine, as it faces a thousand miles of rails, with nerves of steel, with blood of steam and breath of fire. The combustion of coal originates the propelling force. So the baked beans, mush and milk "johnny-cake," hominy and apple-sauce in New England stomachs, producing healthy physical organizations, strong and inventive intellect, are in some degree to be credited with the continent being cobwebbed with railroads, running over bridges, tunneling mountains, and keeping up with enterprises, admired and applauded by the civilized world.

Healthy bodies and healthy minds cannot exist without good sewerage. "If disease is bred from bad drainage and defective sewerage from without the body, how much more from bad drainage and defective sewerage from within the body. Excretions retained in the body ferment and decompose. The pestilential gases thus generated dissolve nerve-centres and paralyze the action of vital organs. Here cause and effect aid and abet each other." Regular and unconditional attention and obedience to Nature's demands should be given with more fidelity than a business man heeds a notice that his paper is to be protested in the bank. For in the latter instance creditors near and far would rush in and destroy his financial hopes, whereas in the former case, a liver, a stomach, a heart, a pair of lungs, or other viscera, having labored long and faithfully to ward off the approach of disease, subsisting meantime on blood poor in albumin and red corpuscles, are compelled to go into pathologic bankruptcy when blood from which bile, gastric juice, and lymph are to be formed comes to their respective laboratories so loaded with poison absorded from the excreta.

### PHYSICAL MOVEMENTS TO CIRCULATE BLOOD.

Young men are too prone to succumb to that "tired feeling" often induced by that over-indulgence in nitrogenous food, such as meats, and avoid every possible physical exertion, which they so much need. They will ride when they should walk. Some will take more exercise sitting in a chair than others will walking, as in the latter there is no vim and vigor in their movements. Health must be earned; it cannot be bought. I say this in contradiction to the wonderful promises made by the patent-medicine vendors, whose disgusting advertisements in our daily press, setting forth in flaming flambeaus of felicitous fiction the testimony and portraits of distinguished people who claim to have been benefited by wrapping themselves around a few doses of "Gripan's Gabules," "Giddy Stinkham's Vegetable Compound," "Dr. Billiam's Pale Pills for Pink People," and "Nervy Eura's Greens for Green People," and other forms of "laly-ke-dope" *ad nauseam.*

If they ride a bicycle it does not give circulation equal to that which one could induce by a brisk walk. They ride through the country as fast as a coyote over the prairie, and on returning describe what beauties of nature they have seen about as well. The mind is so occupied in guiding the wheel, there is little mental relaxation. Examination of soldiers in

New York disclosed the fact that bicycle riders had weak hearts, necessitating the rejection of a considerable percentage of applicants for enlistment. Frank Hamilton said: "The best thing for the inside of a man is the outside of a horse." The "tired feeling" which so many young men have makes it seem too great an undertaking to even climb on a horse's back. Physicians will tell you that to cure an old, chronic case of dyspepsia, as a job, is no "walk-away." I insist, however, that some of the worst cases of indigestion can be "walked away." The increasing demand for treatment by massage, Swedish movements, physical culture, in our sanatoriums, suggests the thought that much of this might have been prevented had the individual kept his blood in proper circulation by muscular activity.

With regard to the third proposition, that the blood must be purified by free chest-expansion, let me say that any man's capacity for physical and mental endurance is in direct proportion to his chest capacity. The college-student too often becomes full-chested in the back, where his projecting shoulder-blades suggest the sprouting of angel wings, and a tendency toward the spirit land. The man who can go without several meals in succession, lose two or three nights' sleep, do two or three days' work in one, mental and physical, is the man who has swept the cobwebs out of the basements and garrets of his lungs with good, full breathing. There are many young men in the cities who never draw a full breath from one year's end to the other; not even as much as a sigh when the bicycle dealer demands payment on that wheel, or the landlady insists that his board-bill is overdue.

The nervous system must be renewed by sleep. Courage versus cowardice is on the bulletin-board of life. The heart to dare, the head and hand to do, are soon exhausted without Nature's sweet restorer, balmy sleep. The Apostle Peter was cold, had lost sleep, and lost courage when he denied his Master. Given Peter a night's rest, a good breakfast and a cup of good coffee, the cock might have been crowing on to this time, with Peter standing up and swearing that the lowly Nazarene was a friend, and he would never go back on Him.

Our bodies contain thousands of nerve cells, and each one is a citadel of life. The cell has an affinity by which it attracts from the passing blood-stream, and stores away within itself, a sufficient amount of nutrition to maintain accord between all the organs and functions of the healthy body. With every thought, emotion and effort we expend a certain amount of vital force. Consequently, while awake we are constantly using up this energy; while asleep or in a passive state we are left to nature's own law of action, and it is a natural law. While in a normal condition the nerves attract and draw vital force, and are constantly accumulating this vital energy around their nerve-centres, we are vitalized and refreshed during sleep, or in a passive state we are preserving what is already accumulated. Birth, development, maturity, and death is the simple story of every animated thing. During the growth and development of the young man's body, at least eight hours' sleep is necessary, and it should be started at 9 p.m. The sleep-train should be started promptly on time and have the right of way. Convince

me what a young man eats and drinks, how he spends his evenings, and what books he reads, and I will convince you what music, if any, he will ultimately make in the grand orchestra of life. Holmes says the truest lives are those cut rose-diamond fashion, with many facets, answering to the many plain aspects of the world about them. Society is constantly trying to grind these diamonds to a common flat surface. It takes strong manhood to maintain originality and individuality, despite alluring fickle fancies of city life.

An absolutely healthy body cannot exist without an absolutely healthful and happy mind. The possession of a healthy, happy mind will depend less upon the head you have on you, than the heart you have in you.

A happy mind is essential to a healthy body. Solomon says in his Book of Proverbs: "A merry heart doeth good like a medicine." It is easier for some people to be happy than it is for others. A good digestion is conducive to a happy mind. A happy mind is one of the most potent agents in a good digestion. Some one has said: "Whether life is worth living depends on the liver." This is true of that organ under the ribs on the right side, with five lobes, and five ligaments, and five fissures, and weighing nearly five pounds; it is particularly true of the life of the liver. I picked up the other day a prescription for happiness, which reads as follows: "Do not keep the alabaster boxes of your love and tenderness sealed up until your friends are dead. Fill their lives with sweetness. Speak approving, cheering words while their ears can hear them, and while their hearts can be thrilled and made happier by them; the kind things you mean to say when they are gone, say before they go. The flowers you mean to send for their coffins, send to brighten and sweeten their homes before they leave them. If my friends have alabaster boxes laid away, full of fragrant perfumes of sympathy and affection, which they intend to break over my dead body, I would rather they would bring them out in my weary and troubled hours, and open them, that I may be refreshed and cheered by them while I need them. I would rather have a plain coffin, without a flower, a funeral without an eulogy, than a life without the sweetness of love and sympathy. Let us learn to anoint our friends beforehand for their burial. Post-mortem kindness does not cheer the burdened spirit. Flowers on the coffin cast no fragrance backward over the weary way." Every life has its dark days and its darker hours. If we would have others to make and put sunshine into our hearts and lives, we must think of some one else whose lives we can make happier by word or deed. It is really the best source of happiness. Happiness consists in making others happy:

> The microbe trembles, when he sees
> A body cheerful and at ease.

I can never believe the man who sits on the fence and wants everything done some other way is healthy in body and mind. If you look for dirt you are sure to find it. Human life is by no means immaculate. But, none the less, the world is full of purity, of innocent childhood, glorious womanhood and noble manhood.

Who would have the orchestra of life made up entirely of piccolo or bass drums? Variety is life, monotony death, to the human soul. If you want the job of making everybody do as they ought, the job is open, with a placard on the door of the shop, "Help Wanted." If you would raise yourselves above the common level of mankind, you must seek for virtues and not vices in your fellow-men. If you would poison the mind and body, make yourselves miserable, and all around you miserable, rake up the vices and shortcomings of all your associates and neighbors. As your life-work moulds your thinking, and as your thinking moulds your countenance, by the time you are forty you will wear the countenance of a pessimist, critic, and hypocrite, and be shunned by all those who love humanity and are seeking by love to raise their fellow-men to a higher and happier plane.

It is not only important that you do not become hypercritical of others, but that you do not allow your digestion to be disturbed, or your usefulness in life impared, by cringing like a weak and worthless puppy because of the criticism of others. Do not become cringing cowards, nor truckling sycophants. No man ever struck out to do something for himself, for humanity, or for God, without having a pack of dogs barking at his heels, and the more he rose above the common level of his fellow-men, the more their envy, jealousy and malice made them snarl and whine. They had Grant "drunk,' Sherman "crazy," and Lincoln "an idiot" for not dismissing them. See how time adjusts things and glorifies these names. No man's character can be essentially injured except by his own acts. You will at last get the reputation you merit, and reputation is the shadow of character.

Brave men and women are healthy, cowards are sickly. The coward whose mind is in a dungeon of fear and apprehension, suspicious of everybody, suffers death a thousand times. Heroes never taste death but once. The world at last admires the strong character, one who, tested in the crucible of truth comes out a piece of crystallized manhood:

> Fit for the highest or the lowliest lot,
> Self-poised, imperial, yet of gentlest ways;
> At home alike in palace or in cot;
> True to his aim, though others blame or praise.

See how the world to-day applauds that combination of healthy mind and healthy body, that vigorous body, that human dynamo, Roosevelt. What a record to be proud of is being shown in the recent war by General Miles, General-in-Chief of the army, who left mercantile pursuits in Boston, joined the army in 1861, and at twenty-five years of age commanded 25,000 men! These men are good illustrations of what a combined healthy body and healthy mind can accomplish. However, future wars are to be too short to enable men to achieve much in fame, for the reason that to have the war long continued there must be Americans on both sides of the line of battle.

Some years ago I had the pleasure of going from Munich in Bavaria to the great passion-play of Ober-Ammergau. It was necessary to go the day before in order to be there in the early morn at the beginning of the

services. The thing which impresses every visitor is the absolute absence of the artificial modes of life of our cities. Though the village has been there for hundreds of years, the same simple modes of living have remained unchanged. On retiring for the night I climbed up a ladder to a nice, clean bed in the attic of the little house. In the morning I sat at the table and noted the simple and healthful food. I sat all day and watched the play, the trial, the crucifixion and resurrection of the Savior; some forty young ladies upon the stage at one time, singing, their cheeks aglow with the banners of health and beauty; their voices pouring forth music which fairly echoed from the surrounding snow-covered Alpine peaks. When thinking of this simplicity of life, I could not help marking the contrast with the deterioration of health and morals in the cities, London, Berlin, Vienna and Munich, through which I had just passed. In this village they still cling to natural modes of living, to Nature and to Nature's God. On trees and fence corners, along the winding way to the village, on the street corners, and on the higher mountain peaks, you can see their Roman crucifix. While, nominally, Bavaria has a King, and Germany an Emperor, the inhabitants of this village, in the simplicity and purity of their lives, believe that God is King of Kings and consequently their King.

We look with wonder and admiration upon the great monument in our circle. We see with absorbing interest how the sculptor's chisel has made the cold, inanimate marble almost to smile with animation. We sometimes grow envious of the painter's art, by which the dull canvas is made to glow with human life; but what high art can paint the beautiful pigment of the blood, as shown in the blush of beauty, in the crimson of shame, and the pallor of fear? The gorgeous hues of autumn, the golden glories which the Sun Queen gathers about her as she sinks to rest beneath the western horizon, give no tint of beauty comparable with the ruddy cheek and ruby lip of health.—*The Dietetic and Hygiene Gazette.*

## THE PROPOSED EXTINCTION OF TUBERCULOSIS.

The confident hopes now entertained that tuberculosis can be exterminated as a disease, and the present active interest in the subject of its prevention, are facts of the times worthy of serious consideration. It may be well to study also certain other facts that may be encouraging in some of their aspects, and yet not altogether so in others. The bacillus of tuberculosis is, perhaps, of all pathogenic microbes the most widely disseminated—no one in our civilization is absolutely free from the possibility of its infection. It is said that the results of postmortems show that from two-fifths to over one-half of all persons dying from whatever cause, that come to the autopsy table, give evidence of tuberculous infection in the lungs—the region where the germ exerts its most deadly action—and this result has been confirmed in the living by the X-rays (KELSCH). This goes to prove that while the tuberculous germ is everywhere, and that while it finds a favorable soil for its development in the lungs of a very large proportion, if not a majority, of mankind, in only a minority is it able to so far overcome the vital resistance of the organism as to develop its most damaging and fatal effects. The majority of mankind appears to have required a partial or total immunity to this pathogenic species.

It appears to be also a fact that tuberculosis has within the past few decades been diminishing in importance as a factor in human mortality. This has, doubtless, especially of late years, been due in part to our better knowledge of the nature of this special diesase and the best means of avoiding and counteracting it; and in this line we may hope for still greater results in the way of both prevention and cure. In part also a better knowledge of general hygienic requirements and improved modes of living have had their share. There still remains, however, another possible factor, an acquired immunity derived from a racial familiarity with the disorder. That such an immunity exists, to a certain extent at least there is ever reason to believe. First, we have in play the natural selective action of the disease itself culling out the defectives and leaving a more vigorous stock more resistant to its own attacks; second, the analogy with other diseases from the more or less completely self-protected ones, like measles or smallpox, to those more remotely such, as typhoid and diphtheria. Then we have the well-known fact of artificial immunization, which is probably paralleled by natural processes, which we see, to some extent, actually at work. Asiatic cholera runs like wild fire through Europe, while in India, where it is endemic, it is hardly a dreaded disorder. Measles, a trivial disorder here, has depopulated the Pacific Islands. The transplantation of diseases to new fields is characterized by their aggravations; microbes, like other members of the vegetable kingdom, grow best in virgin soil.

If this immunity exists, it remains a serious question whether, if we are successful to any extent in our efforts to exterminate tuberculosis, we may not be preparing the way for a greater virulence of the disorder when it does occur. That it can be totally destroyed among us is practically outside of all probabilities; its range in the animal kingdom, both

domestic and feral, is too great to make this even a possibility. Could tuberculosis be made extinct in one part, with modern communications it could not long remain so, and its severity when once introduced would be possibly enhanced. The house, swept and garnished, might be only made ready for a sevenfold more virulent invasion.

It may be well, therefore, to moderate our expectations, while not abating any reasonable efforts for the restriction of the disorder. Improved hygiene, fuller disinfection of houses where tuberculosis has existed, restriction of public expectoration, especially in crowded apartments and conveyances, better instruction of the public as to the questions of infection, heredity, etc., and, perhaps, also notification and registration of cases, are measures that may all be legitimately resorted to. On the other hand, any too rigorous or inhuman restrictions on the unfortunate victims, absolute isolation, muzzling (as has been actually proposed, to prevent infection by the breath), and a host of other inconvenient methods and appliances that zealous reformers have proposed, can only overdo the work and bring it into disrepute. We should remember that under existing conditions nearly or quite one-half of us are or have been tuberculous, and that, fatal as it yet is, consumption is speedily becoming less formidable to the human race, even without the elaborate measures now being devised to combat it.

---

**The Significance of Bell's Phenomenon in Facial Paralysis.**—Koster (*Münchener Med. Wochenschrift*, September 20, 1898) discusses the value of phenomenon observed in peripheral paralysis of the poatio dura, consisting in an upward rotation of the eyeball on the paralysed side when the patient attempts to close the eyes. The exact movement was upwards at first inwards and finally outwards. It was described by Bell, but seems till lately to have attracted so little attention that, in 1897, Bordier and Frenkel (*La Sem. Méd.*, September 8) described it as a "new phenomenon." Koster has looked for this symptom in hundreds of cases of natural sleep, hypnosis, narcosis, and paralysis, and draws the conclusion that the rotation of the eye-ball upwards and inwards and then outwards is a physiological act associated with every kind of closure of the eye-lids, but that it is naturally more apparent and striking when the lids are prevented from closing either by paralysis or by the fingers of the observer. For instance, it is always present in central facial paralysis if looked for. Bernhardt *Berl. Klin. Wochenschrift*, No. 8, 1898) states that as the paralysis, especially that involving the orbicularis, improves, the upward rotation of the eye-ball on attempting to close the lids becomes less, and eventually disappears when the paralysis is cured. Koster denies this, the diminution of the rotation being, according to him, merely apparent, depending as it does on the lids closing too quickly for the movement to be noticed. The symptom is, therefore, not in any way pathognomonic of peripheral facial paralysis, and Bordier and Frenkel, Bonnier, Negro, and to a certain extent Bernhardt, who have lately attributed to it a diagnostic and prognostic importance are wrong. The electrical reaction of the muscles is still the only means of foretelling the probable duration of the paralysis.

# EDITORIAL NOTES.

THE special correspondent of the *Lancet* reports that the progress of the plague in India continues on the whole satisfactory. The new cases reported from the Bombay Presidency up to the end of last month showing a distinct falling-off in the death rate. In the city of Bombay, the returns are not so favorable, there being a considerable rise both in the number of fresh cases and the mortality. The disease is said to be increasing in virulency. In the Madras Presidency the situation remains unchanged, but a great improvement since last month has taken place at the military and civil stations of Bangalore.

DR. ALLBUTT believes that however logical isolation may be, it is clearly inexpedient This view is certainly justifiable, as there seems to be grave doubts as to the logical position. It is curious, but nevertheless a fact, that the biological status of the bacillus of tuberculosis has never been definitely decided. Koch himself assumed it to be a pure parasite, and his views have been accepted without question by most pathologists. There are, however, several points in connection with the question, that are left unexplained by the theory of parasitism, points which lose their obscurity if the bacillus be regarded as a saphrophyte. The question, which is both interesting and important, is extensively considered from a practical standpoint in a work entitled *The Prevention of Consumption*, by Dr. Chandler of Melbourne (Kegan, Paul, and Co.), which may be consulted with advantage by those interested. The necessity, or otherwise, for isolation is really dependant entirely upon the solution of this question. If the bacillus tuberculosis is a pure parasite, then isolation is just as imperative theoretically as it is in anv other infectious disease, but if it is merely an accidental parasite, a saphrophyte, then the necessity for isolation does not exist. This aspect of the matter is, we think, well worthy of the attention of investigators who have the necessary opportunities for attempting to solve the problem.

LORD LISTER'S address at Liverpool, in November last, has prompted the Hon. Stephen Coleridge, who is a prominent member of the National Anti-Vivisection Society, to enliven the pages of the *National Review*, in the December number of that periodical, with an edifying article entitled "Lord Lister's Anodyne." The article was apparently provoked by a passage in Lord Lister's address, which, to the ordinary reader, would seem to be singularly free from objection. The passage in question,

which at the time aroused much vituperation from the anti-vivisectionists, reads as follows: "Of animal suffering I need hardly speak, because, in truth, the actual pain involved in these investigations is commonly of the most trifling description. Anæsthesia has come to the aid of experiments on animals . . . . . and enables needful operations to be done without disturbance from the struggles of the animal, while it affords to the operator the unspeakable comfort of knowing that he inflicts no pain." Mr. Coleridge's complaint is, substantially, that Lord Lister, in using those words, was either speaking of matters on which he was insufficiently informed, or that he was guilty of something very like misrepresentation. This is a strange charge to prefer against one who is no less honoured for his character than he is distinguished by his attainments; yet Mr. Coleridge undertakes the task in a long article, which, oddly enough, opens with an unctuous homily on the value of right conduct. According to Mr. Coleridge, vivisectors themselves have "confessed" to making their observations while their victims are under no better anæsthetic than morphia: with regard to the effects of which Claude Bernard has said that the animal "feels the pain but has lost the idea of self-defence." He thinks that Lord Lister being "the guardian of his own reputation" should "reconcile his statement with the confessions of the vivisectors themselves."

MR. COLERIDGE'S absurd perversion of Lord Lister's remarks would probably have been ignored, had he not sent a copy of the *National Review*, with his own contribution marked, to Professor A. E. Schafer, of University College. The reply, thus challenged from the distinguished physiologist, duly appeared in the January number of the magazine. It is deserving of study as a specimen of what such things should be; brief, lucid, judicial in tone, and overwhelming in argument. After pointing out that Bernard's words, "l'animal reste encore sensible" are properly rendered into English as "the animal still responds to stimuli," and that, as used by physiologists, sensibility is in fact the equivalent of irritability; he proceeds as follows:—"whether or not Bernard really meant by the statement, 'il sent la doulcur,' that such animals are capable of feeling pain in the ordinary sense of the word, I am not prepared to say, but even if he did mean to convey this expression, it is a mere statement of opinion and not one of fact, and is out-weighed by the universal experience of the medical profession and of large numbers of the laity,"

PROFESSOR SCHAFER expresses surprise that Mr. Coleridge should be unacquainted with the merits of morphia as an anodyne. "Every medical man, every nurse, every person who has had to watch the progress of

a painful disease, is familiar with the instant and complete relief from pain afforded by a dose of morphia in one-fiftieth the relative amount which physiologists are in the habit of administering to dogs as an anæsthetic." As Professor Schafer says, it is surely evidence of a weak case that Mr. Coleridge has selected as experiments of a peculiarly revolting character, those in which the animals are absolutely deprived of all consciousness of sensation by the employment of a drug than which no better or more complete anæsthetic exists.

THE *Medical Directory* for 1899, reveals an extraordinary decline in the number of young men who joined the medical profession in the course of last year. It contains 34,994 names, an increase of only 91 in comparison with an increase of 619 in the previous year. The directory for 1897 shows an increase during the preceding pear of 958, and that of 1896 an increase of 730. That the number of new names should have fallen from 619 in the last issue to 91 in the present issue, is presumably indicative of the over-crowded state of the profession, and the great difficulty that prevails in finding suitable openings for young medical men in this country, The distribution of the members of the profession holding British degrees is as follows:—London, 6,117; Provincial England, 15,497; Wales and Monmouth. 1,100; Scotland, 3,394; Ireland, 2,551; resident abroad, 3,795; naval, military and Indian medical services, excluding those who appear in other lists, 2,528.

WHATEVER the cause of the decline may be the increasing popularity of lady doctors is evidenced by the fact that 21 public or official appointments were bestowed upon qualified women last year. Among the important posts thus filled was that of medical examiner for defective children under the London School Board, conferred upon Mrs. Berry, M.D., Lond. At the Camberwell Infirmary, Miss Meakin. M.B., is a junior resident medical officer, and a similar appointment is held in the Chorlton Union Hospital, near Manchester, by Miss Lewin, M.B. Miss Christie, M.D., was appointed on plague duty in India, after having been for some time assistant medical officer at the Greenwich Infirmary, and is now working in Bombay in collaboration with Miss Corthorne, M.D. Four ladies holding distinguished diplomas—Mrs. Colman, Miss Keith, Miss Thorne, and Mrs. Hawkes—are lecturers under the London School Board on health and hygiene. The profession of medicine is obviously fast gaining popularity as a career for women. 47 new students have entered the London School of Medicine for Women since the opening of its science laboratories by the Princess of Wales last summer.

AUTHORITIES have long dilated upon the superiority of brown bread to white, but according to Drs. Lauder Brunton and Tunnicliffe *(St. Bartholomew's Hospital Reports)* the popular preference given to white bread has to a certain extent a sound physiological basis. The higher nutritive value which might, on purely chemical grounds, be ascribed to brown bread cannot physiologically be maintained. Distinctly less nutritive elements pass into the circulation in the use of brown bread; white bread being weight for weight actually more nutritious than brown. In cases of intestinal irritability white bread is to be preferred, but in constipation brown bread may be indicated as it tends to excite peristalsis. If the proportion of mineral ingredients, and especially of lime salts, in other articles of food or drink be insufficient, brown bread is preferable to white. It is possible that in the case of operatives living chiefly upon bread and tea, the preference for white bread which prevails may be responsible, in part at least, for the early decay of the teeth. An abundant supply of mineral constitutents is required in women with babes, and in growing children, and if the dietary is insufficient in fat, or if the subject is unable to digest fat readily in other forms, brown bread may be found to be preferable to white. Drs. Brunton and Tunnicliffe pertinently call attention to the absurdity of taking the mere chemical composition of food stuffs as an index of their nutritive value.

DR. LABORDE, the well-known physiologist, has informed the French Academie de Medicin of an important scientific discovery recently made by M. Georges Joubert. M. Joubert has been endeavouring for some time to solve the problem of how to supply air artificially to a man in a hermetically enclosed space. His hypothesis is that the 79 per cent. of the nitrogen contained in respirable air remains intact after the 21 per cent. of oxygen has been consumed, and that the same nitrogen, if mixed with a new supply of pure oxygen, would form respirable air, if the carbonic acid and other products of respiration were removed, This inference has been found to be correct. The difficulty has been to devise a means of generating the oxygen, and it is claimed that after long research, Joubert has discovered a chemical compound which, by contact with the atmosphere, clears the vitiated air of the impure gases produced by respiration, and furnishes automatically the requisite quantity of pure oxygen. Dr. Laborde states that six or eight pounds weight of this chemical substance will enable a man to live at least 24 hours in a sealed diving-bell. If Dr. Laborde's statement can be substantiated, it is clearly evident that a most important discovery of very great practical utility has been made.

THE SECRETARY OF STATE for the Colonies has written an important letter to the principal of King's College, London, stating that in selecting candidates for the Colonial Medical Service preference should be given (other things being equal) to medical men who have received such bacteriological or similar special training as King's College provides; but that when candidates have been definitively selected they should be required to attend at the School of Tropical Medicine, which is being established at the Albert Dock branch of the Seamen's Hospital, to go through the complete course of instruction that is now being settled by a Special Committee of experts appointed for the purpose. As the LANCET has pointed out, this is the first public departure, of the Secretary of State for the Colonies, from the elaborate and expensive scheme put forth by Sir Henry Burdett in his letter to the *Times* of July 11th; for obviously no fully equipped bacteriological laboratory will now be needed, but merely one for clinical investigation and research in tropical diseases. The necessary requirements for such a school have been clearly set forth by Dr. Glazebrook and Mr. Adamson, President of the Southern Hospital, Liverpool.

MR. A. L. JONES, who has so munificiently furnished the funds for starting a school, in Liverpool, for the study of tropical diseases, in defining the scope of the proposed undertaking said: "They would open a school partly at University College and partly at the Southern Hospital, and would appoint a lecturer on tropical diseases and a demonstrator to deal with the cases and the work. Nurses, who desired, would be trained for tropical service as well as medical men." In this practical way, Liverpool has set to work to carry out Mr. Chamberlain's valuable suggestions. Bacteriological study at the University College, and clinical obervation and research at the Southern Hospital, will be called on simultaneously. As 41 cases of malarial fever have been admitted into the hospital since July, and as Liverpool's trade with West Africa is large and direct, a school of tropical medicine in that city will be most valuable. The London School for Tropical Medicine now in course of building at the Albert Docks will be opened on the 1st October, next.

DR. LEITETSTORFER, who superintended the experiments, proposes that sugar be added to the men's rations in one of the three following ways: (1) as a supplementary allowance, with a view of improving the men's daily rations; (2) as an integral part of the men's reserve store of provisions, and of the supplies for fortresses, hospitals, and ships; and (3) as a temporary allowance for strengthening men, and renewing their vigor on the march. Dr. Leitenstorfer's experiments with men are quite

in accordance with Chauveau's experiments with animals, and as there no longer seems to be any doubt as to the high nutritive and tonic value of sugar, it should occupy a more prominent place in our nourishment. As sugar is found to be specially beneficial in combating and resisting fatigue, it will be found valuable not only for soldiers, but also for others subject to exhausting physical labor, and for growing boys and girls in general. As a substitute for alcohol or wine in all the conditions in which it is now thought fit to serve alcoholic drinks as a stimulant, sugar would seem to be indicated. It affords nearly, if not quite, the same stimulus as alcohol, without the danger associated with the latter; it has furthermore the advantage of being a food of the first order, as, unlike fats, sugar contains a sufficient amount of oxygen for the complete oxidation of its hydrogen.—*Review of Reviews.*

## PERSONAL.

Dr. H. B. Andersons left for England last week and will be absent for three months. It is the doctor's intention visiting the principal cities in Europe. On his return he will assume the editorship of THE CANADA LANCET, in connection with a very strong staff. It is his intention to make arrangements with some men of high standing in special work in the old country, Boston, and Johns Hopkins.

Dr. G. R. McDonaugh returned to Toronto a short time ago, after a very enjoyable trip, having visited Gibraltar, Rome, Constantinople and many other cities.

Dr. Ernest Hall, of Victoria, B. C., called on his return from Johns Hopkins. We understand it is the doctor's intention returning to Toronto to take up special work here.

Dr. Richardson, late of Bloor street east, has removed to 10 Carlton street.

Dr. Harley Smith has been laid up for some time from an attack of septicemia. His condition was serious for a time, but, we are pleased to learn, convalescence is now about complete.

Dr. Warner has removed from No. 10 Carlton street to one door north of the corner of Church and Alexander.

Dr. Shepherd, of Montreal, was in town last week, the guest of Dr. Sylvester. During the afternoon he visited the General and Emergency hospitals, and spoke in the most flattering terms of the management and equipment of both these institutions.

Many doctors are out of town this month enjoying the trout fishing in various districts—we wish them luck.

# EPITOME OF CURRENT MEDICAL LITERATURE.

## SURGERY.

**Traumatic Cataract from Pressure of Forceps.**—By Edward S. Peck, M.D. (*Med. News*, November 26, p. 689).—A primipara, aged 21, had been in labor 72 hours, and there was extreme uterine inertia under anæsthesia. The high forceps operation was performed, with the result that the right blade fell across the right eye just under the inferior lid. The skin of the forehead was injured a little to the right of the median line, and the helix of the right ear was tightly compressed and turned back, but not torn. There was a large sub-conjunctival hæmorrhage, the whole inferior cul-de-sac of the conjunctiva being filled with blood, and the lower lip correspondingly swollen. The eyeball was softened and flattened from above downward, and of a quadrilateral form. The cornea was steamy, the pupil larger than its fellow, and the pupillary field rapidly changed from a dull greyish reflex to a dense whiteish. Under atropine the opacity of the lens was seen to slowly increase until a soft cataract entirely filled the area of the lens. These changes in the lens occupied about 20 minutes.

On the following day the conjunctival hæmorrhage and swelling of the lid had nearly disappeared. A fully formed milky cataract filled the area of the pupil, ocular tension had increased, but the eyeball still retained its square form.

40 hours after the injury the eyeball had resumed its spherical shape, ocular tension was equal to that of its fellow. On the 33rd day both eyes opened equally well, the cornea had regained its clearness, the soft cataract still persisted.

The child was next seen at the age of 5½ months. There was a soft and diffuse cataract, the opaque spots showing themselves in flocs. The scar on the farehead was adherent to the frontal bone; the helix of the right ear was bent back.

At the age of 7 in the right eye—V = 20/70: with a 1.D. lens, V = 20/50: reads Jaeger handtypes No. II. with a + 2.D. lens, the head being slightly turned toward the light. Left eye—V = 20/11; Jaeger No. I. is easily read at 3 to 16 inches. Right eye has a divergent strabismus of 2½ lines. There is a probability of almost, if not entirely, perfect vision in this eye. The frontal scar was still present, but the integument was no longer adherent to the bone.

A record of any similar case could not be found. The absorption of the cataract and restoration of vision are remarkable.

**Amaurotic Family Idiocy.**—Hirsch (*Journ. of Nerv. and Ment. Dis.*, July, 1898) reports a case of amaurotic family idiocy, the infantile cerebral degeneration of Kingdon and Russell. The infant, as in the other cases, was Jewish; two other children had died with similar symptoms. The patient was healthy till 6 months old, when he became weak and unable to

sit up. Perception of light was normal; the typical symmetrical white patches at the maculæ were present. Sensation and reflexes were normal. The child became gradually weaker, and died at the age of 22 months. The necropsy showed nothing abnormal macroscopically except an unusual prolongation of the second temporal fissure. Microscopically a striking change was found in the cells of the cerebral cortex and the nuclei of the cranial nerves, and also in the cells of the grey matter of the cord. These cells were enormously enlarged and rounded as if blown up; the Nissl bodies had disappeared. There was some degeneration of the pyramidal tracts. The changes in the grey matter of the cord have not been noticed before, but otherwise the appearances agree with those found by other observers. The changes in the eyes are explained by the same swollen condition of the ganglion cells of the vesicular layer, which are normally arranged in several layers only at the macula, and therefore, being much swollen, cause the opaque white appearance seen at that spot. Peterson (*ibid.*) records another case: The infant was of Russian Jewish family; one other child had died at the age of 10 months with similar symptoms. Blindness was noticed at 4 weeks; there was much restlessness; the patient became weaker; there was some rigidity, with twitchings of muscles, and death occurred at the age of $7\frac{3}{4}$ months. The fundus could not be seen, and *post-mortem* examination of the eyes was unsatisfactory. The brain showed some defective development, and the cells of the cortex were very small and deficient in number. There were no tract changes in the cord.—*Brit. Med. Jour.*

**Neuromata.**—Knauss (*Virchow's Archiv.*, 1898. Bd. cliii. Heft 1, S.29) gives particulars of a remarkable case of a multiple true neuroma. The patient was a girl aged 11. The parents were healthy, and had four other healthy children. She was rather small for her age, but stoutly built and of a lively disposition. In her third year there appeared a number of small swellings under the skin of the trunk. They slowly and uniformly increased in size and number, but were never painful. They looked like flask or bullet-shaped swellings of the skin, distributed irregularly all over the trunk and upper part of the thigh. The head, forearm, hand, leg, and foot along were free. They lay beneath the skin, which was stretched over them. They were not tender on pressure. They were firm and elastic. They varied in size from that of a cherry to that of a hen's egg. The largest was about the size of an orange, and situated just below the umbilicus. There were sixty-three or more similar swellings in all. Electrical reactions along the course of the nerve trunks were normal.

The tumours had capsules and could be easily shelled out from the surrounding connective tissue. Section of the swellings presented a homogenous light yellow transparent appearance, with thin white fibrous-looking streaks running through it. The consistence was firm and elastic. The microscope showed the tumours to consist of nerve fibres medullated and non-medullated, and very numerous ganglionic nerve cells. The non-medullated nerve fibres were by far the more numerous. The

nerve cells were rounded or oval, mostly fairly large. Their protoplasm was granular or clear. A round nucleus was generally present, with clear nuclear substance and a distinct nucleolus. They were not unlike the ganglion nerve cells of the sympathetic, and many of them were seen to have non-medullated nerve fibres coming from them both unipolar and bipolar.—*Edinburgh Med. Jour.*

## THERAPEUTICS.

**Orthoform and New Orthoform.** — Klaussner (*Münchener med. Wochenschrift*, October 18, 1898) draws attention to a new modification of orthoform ("Orthoform neu") introduced by Einhorn and Heinz. The new orthoform has the same action as the original, but presents the following advantages over it:—(1) The powder is more homogeneous, whiter in colour, and does not cohere into lumps to such an extent. (2) It is considerably cheaper, and since its action is manifested in a 10 to 18 per cent. mixture with starch or other powder, its price is no longer prohibitive

Orthoform, though introduced so recently as August, 1897, has proved serviceable in a great variety of painful affections, both external and internal, through the local anæsthesia, which it produces whenever the nerve endings are exposed. Neumayer and others have found that, insufflated in tuberculous laryngitis, accompanied by severe pain, it causes anæsthesia for 18 to 36 hours, allowing solid food to be taken with comfort, and thus improving the general health. Other clinicians have employed it in painful gastric affections in doses of 15 grains, and have found that, while it relieves the pain of gastric ulcer, simple or malignant, with certainty for some hours, it has no action if there is no solution of continuity. On this account it is a very valuable aid to diagnosis in these cases. Good results have been obtained in skin affections such as prurigo or herpes zoster. A 5 per cent. ointment relieves the pain of corneal ulcer. It has also been reported on very favourably by dentists, as relieving the pain accompanying exposed pulp or excavation of carious teeth, and by gynæcologists as a local anæsthetic for curetting or plugging the uterus. Surgeons have praised it as an application to anal fissure, malignant ulcers, and bed-sores. Hirchbruch used it in a 3 per cent. emulsion instead of cocaine for infiltration anæsthesia, and Lob adds it to injections of mercury in syphilis. Orthoform has the great advantage over cocaine of being absolutely non-poisonous.

**The Hypodermic Administration of Iron.**—Birgelen (*Münchener med. Wochenschrift*, No. 30, 1898) believes that iron should be administered hypodermically, only in cases where it is not tolerated by the stomach in any form. His results were not very encouraging. In two cases there was no improvement whatever, in one the injection caused so much pain that the treatment was suspended. Redness, swelling, and pain were always more or less present after an injection, though other writers have not observed them. In one case a local abscess formed, and

in another the whole arm became swoolen, though it was doubtful whether these were caused by the iron. In two cases the results were very satisfactory.

The preparations employed were 10 per cent. watery solutions, either of ferrum citricum oxydatum or of ferri et ammonii citras. The former caused more unpleasant local symptoms, and the double ammonia salt is on that account to be preferred.

---

**Only Nervousness.**—A writer in the *St. Louis Medical Journal*, who signs C. R. B., calls attention to the wrong inflicted by the popular harsh estimate of "only nervously afflicted people."

Doubtless doctors know that a person who is nervous or inclined to hysteria, is in a serious condition; but they make a mistake when they imagine that every one understands the possibilities of such a state The following true sketches are addressed to the doctors who do not wish to be cruel:

A woman working in a hotel had an attack that bordered upon pneumonia. The mistress and her husband, and all the household, felt sorry for the sick woman. She was moved into a room that could be warmed, and was well taken care of for a few days. The writer called about 11 o'clock on the third morning and found this sick woman cold and neglected—no fire in the stove, no breakfast. The first kind inquiry was answered by a smothered storm of tears. Inquiry as to the sudden change from kindness and care to coldness and neglect evoked the information that "the doctor says it is only nervousness."

Instead of pneumonia it was a case of nerves, and the patient was to be left cold and faint and unwashed till she gained strength by some miracle to go down three flights of stairs and dish up her own meal in a hot kitchen. The doctor, when questioned, said: "Yes; she is in a serious state; nervous system all run down; I told them so." This was not quite the same as the report of the doctor's opinion.

The next case was a school girl, away from home in a boarding school. At the beginning of her indisposition teachers and pupils were kind and attentive; but one day the writer on her way to the sick girl's room was waylaid by one of the teachers who said: "Miss So-and-So says Mary must be left to herself. The doctor says she is not sick, only hysterical. You need not bother to go to her any more." Not being under madam's control, the writer went to the girl's room, and arrived just in time to keep the child from crying herself into a fever. The sudden change from care and kindness to neglect filled the child's mind with fears of all sorts.

This doctor, when questioned, was surprised to find that madam had placed such a construction on his remark. He had said she was nervous. "It was no real illness."

Perhaps some day—thanks to public libraries, where every child may have access to books concerning all manner of medical subjects—every one will have a correct understanding of the medical meaning of "only nervousness" and "hysterical." In common parlance they mean selfishness, foolish fear about one's health, a vain wish to create a sensation and "make a fuss."—C. R. B.

## DRUNKENNESS OF WOMEN AND THE DEATH OF CHILDREN.

There has recently been in progress in this city a discussion of the liquor question which has given rise to many and diverse opinions on the part of men and women of every station of life. Bishop Potter, speaking at the Waldorf-Astoria, some few weeks ago, raised the storm by referring to the saloon as a social necessity. However, with the social side of the question we have nothing to do, but we notice that one phase was not touched upon, that is the influence intemperance exerts on infant mortality. Dr. Samuel W. Abbott, Secretary of the Massachusetts Association of Boards of Health, commenting on the matter, says: "The records of every country and every city give ample proof of the assertion that intemperance is a direct cause of infant mortality. The poverty, the neglect, the cruelty, which are the inevitable result of a system of licensed saloons, are all handmaids of intemperance. Cities in which intoxicating liquors are sold freely under local option laws have a higher infant mortality than those in which license is forbidden by the popular vote." The London *Lancet*, speaking on the same subject, so far as Great Britain is concerned, remarks that Dr. Ashby, at a recent conference on public health in Manchester, has directed attention to the rate of mortality amongst the children of the lower classes. In Manchester it is very serious. Dr. Ashby is a physician to a children's hospital with a dispensary department in Manchester. Of 10,000 cases admitted into this institution, 4,000 were those of children under two. Dr. Ashby says that the death rate of children in Norway and in the rural parts of England is at the rate of 100 per 1,000 births, while in Manchester it is at the rate of 203 per 1,000, and in some of the congested districts, where poverty, drunkenness, and vice abound, it amounts to 300 and even 500 per 1,000—something like one-half the infants born dying before the age of 1 year." In this country drunkenness, and particularly amongst women, is much less than in Europe, but, notwithstanding this fact, there can, unfortunately, be no doubt that intemperance has a very prejudicial effect on infant life. Sanitary improvements, undertaken at the instance of health authorities, while greatly benefiting the health of the public at large, have done little to limit the death rate of infants, and there is a wide field of labor lying before those whose desire it is to raise the condition of the poor.

## HE HANDLES REPUBLIC STOCKS.

One of the most enterprising and successful brokers in Toronto is E. Gartly Parker, who was for some time in Rossland. Mr. Parker is making good use of the knowledge he obtained of this country while in Rossland by devoting himself largely to Republic stocks. He takes big advertising space in the Toronto papers, and is making a fine market for the shares of our best properties. His dealings are on a large scale and he is proving himself a good missionary for us.—*The Republic Miner, Saturday Feb 25, 1899.*

**Nervous Vomiting.**—This includes those forms of vomiting which are caused neither by anatomical lesions of the stomach nor by quantitative or qualitative changes in the food. It is pre-eminently reflex, and may be caused either directly by the vomiting centre or indirectly from other points in the central nervous system; or from other organs. As far as we know, the causes of this condition may include palpable changes in the brain and spinal cord, kidneys, uterus, liver and certain organs of sense. These forms of nervous vomiting may be classed among the reflex neuroses.

I have had the opportunity of observing two such cases of nervous vomiting in close succession; during their course they seemed to be very much alike, yet the nature of the primary affection caused them to terminate very differently.

The first case was a married lady, thirty-six years old, who had been suffering for three weeks with uncontrollable vomiting and a continuous flow of saliva, together with strong fœtor from the mouth. This condition had come on after an attack of catarrhal jaundice, traces of which were just recognizable in a slight discoloration of the sclerotics at the time I first saw the patient. She had emaciated very little considering that she had taken scarcely any nourishment during this period, for she vomited everything immediately after eating. On examination, nothing could be found anywhere, not even in the liver. The passages were loose and bright yellow. Only temporary relief was obtained by the hypodermic use of morphine with atropine, washing out the stomach with chloroform water, and chloroform internally. Finally, the attacks were controlled by withholding all food and drink by the mouth, and using nutritive enemata for several days. But the salivation kept up some weeks longer, when it ceased entirely. The condition here was probably a reflex irritation from a gallstone; hysteria was excluded because the patient was otherwise healthy and the mother of several grown-up children. I must not conceal the fact that for a long time the patient caused me a good deal of anxiety on account of the absence of definite points on which to base a diagnosis.

The second case was a lady in the fifties, living outside of Berlin; unfortunately I had the opportunity of seeing her only once. In the early part of 1888 she experienced profound emotional disturbances; since the following summer she had suffered from mild gastric troubles which lasted, with variable intensity, till November. After that every meal was regularly followed by vomiting, which had continued with few intermissions till the beginning of January, when I saw the patient. The woman who had formerly been strong, was now very much run down; she had frequent attacks of unconsciousness, and complained of great weakness, especially in the legs. Sleep was good. The urine had been repeatedly examined, but albumen and sugar were not found.

I found a bedridden patient who was quite well nourished in spite of the emaciation she complained of; she could move quite readily in the bed; she spoke with deliberation; in short she seemed less affected than was to be expected from her history. On examination I could find

nothing but a struma, and tachycardia up to one hundred and twenty beats per minute. There was no tumor nor any tenderness in the abdomen. Patellar reflexes normal; pupils reacted well; no limitation of the field of vision, and no complaints about sight. Sensation everywhere normal. Heart and lungs negative.

In my presence the patient ate two pieces of toast and drank a glass of water without vomiting. The tube was easily introduced and the stomach-contents expressed twenty-five minutes after. No hydrocholoric acid found; the fragments of toast were scarcely at all digested. This result left the diagnosis in doubt between a severe neurosis and an occult carcinoma; yet the absence of true cancerous cachexia favored the former. The rapidity of the pulse was attributed to the struma; tabes accompanied by gastric crises was excluded on account of the absence of its specific symptoms.

The condition seemed to improve at first by using nutritive enemata and restricting feeding by the mouth as much as possible; small doses of digitalis and atropine were also given. But she soon relapsed into the old condition; she gradually grew weaker, till one day she was seized with epileptic convulsions and died several days later. An autopsy was not allowed, yet the whole clinical picture led me to diagnosticate an affection of the medulla oblongata, probably a tumor, involving the roots of the vagus, thus causing the persistent vomiting and the rapid pulse. At all events, this presupposes such a situation of the suspected tumor that the nucleus of the fibers of the vagus distributed to the heart was paralyzed or destroyed, while those fibers going to the stomach were kept in a condition of chronic irritation. The soundness of this supposition remains in doubt, although it is by no means without a parallel (Rosenthal).

Both of these cases are typical examples of severe vomiting caused by nervous irritation, and at the same time they show how difficult (sometimes even impossible) it is to make a diagnosis at a given time during life.

For a certain group of cases we are unable to find this proof, although we may suspect the reflex origin. Pre-eminent among these stands the vomiting of neurasthenic and hysterical patients; it is uncommon among the former, but occurs frequently in the latter. It is characteristic of this form of vomiting that it usually occurs without any true nausea, and that the retching is reduced to a miuimum. Hysterical vomiting may occur after every meal; sometimes it is less frequent. Either all food may be rejected or only certain kinds, or even individual dishes. I made use of this fact in making my first investigations on the course of normal digestion in human beings; my subject was a hysterical girl who could retain all kinds of solid food, but was compelled to vomit whenever she swallowed any fluid. Another young girl, who has now been over five years at the *Siechenanstalt*, regularly vomits nearly all that she has eaten almost immediately after every meal. The general nutrition suffers surprisingly little from this persistent vomiting; thus the second patient's weight has been almost the same during the past

four years; she has come down from 40.5 to 39.5 kilogrammes (89 to 87 pounds). In other cases the vomiting does seem to affect the weight. Thus Tuckwell reports that three children were very greatly emaciated after prolonged vomiting which lasted for months; it was controlled by sitting the little patients up as soon as any tendency to vomiting occurred (and also, to be sure, regulating the diet). Barras speaks of a woman who suffered from nervous vomiting, but who ceased to vomit while she was in the bath; she was cured after her meals were given to her in this way.

This affection may pursue an acute or chronic course; it may begin spontaneously or may follow some demonstrable cause. One young girl was attacked immediately after the death of her father; another as the result of breaking off an engagement of marriage. As in other neuroses, the female sex is especially liable.

I must confess that my experience of the infrequent occurrence of vomiting in neurasthenics does not agree with that of Rosenthal, who claims to have seen it not infrequently in this class of patients. I shall simply content myself with giving the headings of two of his histories:

Observation No. 31.—Neurasthenia, hyperæsthesia towards acids with consecutive gastric colic and vomiting. Cured by local remedies (small pieces of ice, with two or three drops of tincture of nux vomica) and general invigorating treatment.

Observation No. 32.—Neurasthenia following onanism, with frequent vomiting. After the latter had ceased it began again after each coitus, while a heavy meal did not cause any complaint. Neurasthenia and vomiting cured by prohibiting sexual intercourse at the beginning of the treatment, increasing doses of potassium bromide, with some pyrophosph, ferri citronatric [Ph. Austr.] Neptune's girdle, galvanization of the sympathetic, and hydriatic procedures.

This difference in observation may appear striking; yet it may be readily explained by the fact that two observers in places at some distance from each other (Berlin and Vienna) deal with different kinds of patients. Concerning the multiplicity and intensity of all neuroses it is peculiar that they most frequently attack the easily excitable Southerners, and especially the nationalities living near the military border. Hypersecretion seems also to occur more frequently there than in Germany.

Finally, I must speak of a form of nervous vomiting which was described by Leyden. It may occur as a primary neurosis, or as a secondary spinal affection, or as a reflex form. A peculiarity of this variety is the periodicity of the attacks (whence the name periodical vomiting), which may last from a few hours to a number (ten) of days. They begin with sudden nausea and colicks contractions of the intestines, but the abdominal wall is relaxed. At first the vomit consists of food *debrs* and slimy masses, later of bile and streaks of blood; the attacks accompanied by migraine and tearing sensations in the limbs; they are followed by obstinate constipation, which is due to a spasm of the intestine. The trouble may last for years, but its origin can only be sought in the direction indicated above. In two of my cases the autopsies gave negative results.

## LOCOMOTOR ATAXIA.

SYMPTOMS.—Among the disturbances of sensibility in locomotor ataxia, hyperæsthesia of the trunk seems to appear regularly and usually early. This consists for a long time only in an oversensitiveness to slight touches while in opposition thereto there is usually observed in the beginning on the legs a diminution of the pain and posture senses. This latter appears to precede somewhat in development the trunk hyperæsthesia, which in the beginning corresponds usually to the area of distribution of the middle thoracic nerves. Its subsequent development ensues symmetrically in horizontally-encircling zones above and below, and spreads out over the arms in a characteristic manner. There occurs implication of the area of distribution of the lumbar and sacral nerves, in which, between hyperæsthetic, there are found normal zones. These may also be demonstrated for a long time in the lower thoracic area. The distribution of the tactile anæsthesia is characteristic; it corresponds not to the area of distribution of the peripheral nerves, but to that of the spinal roots or their intramedullary fibres, in which respect it simulates disturbances of sensibility following lesions of the spinal cord and the posterior roots. There may also occur various sorts of other anæsthesias in consequence of peripheral nerve-disease. On the periphery of hyperæsthetic and between hyperæsthetic zones there occurs usually a marked hyperalgesia, especially for cold. The reflex irritability of the skin is here very much diminished or totally abolished. Symptoms of sensory irritation are a very frequent, though not constant, accompaniment of the anæsthesia. A marked ulnar-pressure analgesia with other disturbances of sensation in the ulnar region appears to be the rule in tabes dorsalis. Lahr (Archiv für Psych., vol. xxvii, Pt. 3).

---



---

## NOTICES.

The next annual meeting of the Ontario Medical Association will be held in Toronto on the 13th and 14th of June, and promises to be one of the most interesting meetings ever held of the Association. Dr. Vincent Bowditcti, of Boston, will open the discussion on "The Sanitarium Treatment of Tuberculosis." Dr. Wilson, of Philadelphia, will present a paper on "Perforation in Typhoid Fever," and it is also expected that Dr. Fenger, of Chicago, will open the discussion on surgery. It is desirable and absolutely necessary that the members throughout the Province that intend reading papers should forward the title of the same to the secretary, Dr. Parsons, 97 Bloor Street West, as soon as possible. We feel positive it would be to the advantage of the rural practitioners to become members of the Association, if not one already. You will find it interesting and instructive and makes a nice holiday in a season, that, as a rule, is not a busy one. The profession in Toronto always make it a point to secure you a pleasant time and this year special efforts will be made in that direction. Many remember the pleasant visit to Windsor two years ago. We hope to have a repetition here, and a hearty welcome will be given to all visitors. Come and bring your overworked confreré that needs recreation.

On August 30th, 31st and September 1st, 1899, the next annual meeting of the Canadian Medical Association will be held in Toronto, under the presidency of Mr. Irving H. Cameron.

It is now some ten years since this Association met in Toronto and every effort will be put forward to make this the most successful meeting ever held. One of the most interesting features of the meeting will be the probable arrangement is the final details of a scheme whereby Dominion Legislation will become, in the near future, an accomplished fact. This together with an ever growing interest in the value of the association as a promoter of scientific research, will add materially to the success of the Toronto gathering.

---

## ADJUSTABLE FIBRE SPLINTS.

The originator of DePuy's Adjustable Fibre Splints has for a number of years realized the necessity for a splint that, while it must be firm, adjustable, light and cleanly, should be composed of such materials that it could be placed on the market at a price less than half that charged for any of the many kinds from which the physician has to choose. He is more than pleased to state that he is now in a position to offer a splint that perfectly fills every one of the above requisites.

The splint is a fibre that has been saturated in a compound that renders it firm and non-pliable at ordinary temperature.

In the event of them having to change their shape in adjusting, the best results will be obtained by immersing in hot water for a few moments

or holding over a hot stove, turning from side to side until evenly heated, when they become perfectly plyable, conforming both longitudinally and laterally to any fracture, and when cold regaining their former rigidity.

Unlike many kinds of manufactured splints and splint material they are not sufficiently porous to absorb septic matter, and by washing in hot water they can be made aseptic, and used several times if care is taken to preserve them.

Having a rough exterior, they will never slip under a bandage, and this is a feature highly recommended by physicians who have used splints with a smooth outer surface and experienced difficulty in keeping them in place.

They are impervious to moisture and unaffected by ordinary temperature of the body or excessive perspiration. When used with a suppurating wound, a portion of the splint can be cut away to allow free drainage, and the piece replaced at a slight cost,

To physicians who use the x-ray in fracture cases, the "DePuy" is invaluable, as it offers no resistance.

The price alone of the DePuy Splints, when considering their many points of superiority and the satisfactory results obtained by their use, is so low that the physician cannot afford to lay out money needlessly in higher priced and inferior splints.

On the following pages we present a few cuts, showing the forms held in highest esteem by the physician, and a few of the many testimonial letters we are constantly receiving unsolicited.

CHAS. L. SPALDING,
Sole Agent for Canada,
13 Aberdeen Chambers,
Toronto.

---

**A CASE OF CHRONIC SALPINGITIS—CONDEMNED OVARY SAVED.**

Mrs. McC——, Stamford, Conn.; American; age 32; admitted April 11, 1898: Salpingitis of left ovary. Had been under the care of a leading physician who advised her to have the ovary removed. This was absolutely refused, and I was called in consultation. I did not agree with my colleague that the removal was absolutely necessary. This pleased the patient so much, that she decided to enter the hospital for treatment. Digital examination revealed a soggy mass posteriorly on the left side, the womb considerably retroverted, and severe endometritis. My theory was that absorption had taken place through the tube, and that if the endometritis were thoroughly cured, the ovarian condition would subside; there being no positive evidence as yet of any pus. I therefore decided to put the patient on the following course of treatment: a teaspoonful of bovinine in old port wine, every two hours, with a hot vaginal douche of plain sterilized water. This treatment was continued to the 27th, when the pain, which had been previously very severe, was entirely relieved. On the 28th, after etherizing the patient, I thoroughly

curetted the womb, and after depuration with the bovinine-peroxide reaction, packed it with bi-sterilized gauze satuated with iodoform-bovinine. This was removed in forty-eight hours, the womb was again bovinine-peroxidized, and repacked with gauze satuated with bovinine pure. These depurations and packings were repeated until May 5th, when they where discontinued, and bovinine tampons were applied twice a day. The bovinine by mouth was increased to a wineglassful in grape juice every four hours. Patient now felt, as she expressed it, well and happy, aside from the weakness resulting from former sufferings. The bovinine tampons continued to be applied until the 20th, when the womb was found in a normal condition, there was no tenderness over the ovary, and the patient's general condition was better than it had been for years. A Thiersch douche was now employed at bedtime, up to the 28th. May 29, 1896, she was discharged cured, and delighted that her ovary had been saved.

---

**Bicycling for Children.**—The time is fast approaching when once again the hum of the wheel will be heard in the land, and therefore a few remarks on the benefits and drawbacks of this particular form of exercise for children will be seasonable. Bicycling for anyone who is sound in wind and limb, when not carried to excess, is beneficial, and the same may be said concerning wheeling for children above a certain age. But the practice which unfortunately came into vogue last year, of allowing and encouraging infants to ride, is a most reprehensible one and calculated to do infinite harm. The *London Field* has this to say on the matter: "A most pernicious practice has sprung up of encouraging very young children to ride the bicycle, and certain people have appeared to vie with each other as to which should produce the youngest rider. To such an extreme has this senseless competition been carried that in the United States a baby of 18 months was taught by his father to steer and propel a diminutive bicycle. The child has now been riding for over a year, and has done as much as four miles at a stretch. Its case came under the notice of Dr. Elliott, who made a communication on the subject to the New York Academy of Medicine. The child was just over 3 feet high, weighed 31 pounds, and rode a machine weighing 11 pounds geared to 46 inches and driven by a 4-inch cranks. In making some critical remarks on the case, Dr. Elliott said that he considered that at an early age the bones were soft and the ligaments undeveloped and unfitted to stand the special requirements of riding a bicycle, and the result might be as in this instance, a reduced ligamentous system. He also gave it as his opinion that bicycle riding tended to disproportionate the legs when compared with the arms." An instance like the foregoing is nothing less than pitiful, and seems almost a case for legal interference. Another form of riding to which a stop should be put is that of small boys and girls riding bicycles in the crowded streets of a city. The practice is not only dangerous to themselves but to other people.

## PUBLISHER'S DEPARTMENT.

We hasten to apologize for not giving credit to the journal of the American Medical Association for two articles that appeared in Apirl Number of Lancet, viz., "Treatment of Diseases of Pigmentation" and "The Relation of Chorea to Rheumatism."

**NOTICE.**

A splendid opportunity for an experienced Physician to purchase the residence, library and instruments of a physician, deceased a short time. It is situated in the most flourishing town in Ontario, terms easy to the right man, and none but those of good standing and experience need apply.

CANADA LANCET OFFICE, TORONTO.

**"PURITY AND STRENGTH."**

One of the most popular remedies at the present day for conditions of anemia, etc., is extract of malt. The public seem to have confidence in it, and several firms are now doing a large and lucrative business in the sale of it. There is no doubt that the nutritive principles of a good, well-prepared malt extract are most efficacious, and also easily digested by the most delicate stomachs. Malt is the seed of hordeum distichum caused to enter the incipient stage of germination by artificial means and dried. Extract of malt is made with water at a moderate heat and evaporated by means of a vacuum apparatus to the consistency of thick honey.

When properly made, the extract and diastic extract of malt not only contain all the nutritive substances of malted barley, but also a peculiar ferment (diastase), which has the power of converting starch into the soluble form, thus assisting in the digestion of amylaceous food. Extract of malt is a valuable food in concentrated form, and is easily assimilated. Liquid malt is made by fermentation, several varieties being sold, varying in alcoholic strength from the smallest traces to eight or ten per cent. A good liquid malt is a valuable remedy in cases of general debility, deficient digestive power or loss of appetite. It is probably one of the best agents for increasing muscular tissue and augmenting fat, many persons gaining considerable weight by taking it. A liquid malt extract which recently has been placed upon the market is one made by The Walkerville Brewing Co., of Walkerville, Ont. It has had immense sales already and is very palatable. It contains less than five per cent. of alcohol, and has a silky head on it resembling almost a Guiness' Stout. Analysis shows that it is absolutely pure. It will prove a boon to invalids. The water used in the manufacture of this malt is pure spring water, and the hops those grown by the firm, thus guaranteeing purity and strength. It has received the endorsation of many medical men, and the price is within the reach of all on account of the fact that the bottles used are of Canadian manufacture.

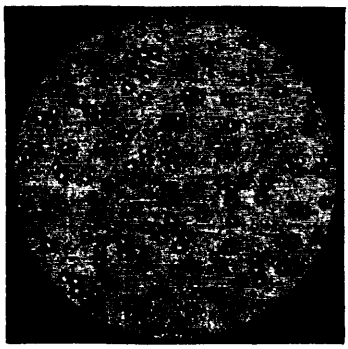
*"The greatest therapeutic discovery of the age, and of the ages, is that where we cannot produce good blood we can introduce it."*

# What is Hæmatherapy?

A New Thing—and a New Name which, though literally translated (Blood Treatment), may not convey to every one a definite idea. It is a treatment which consists in opposing to a condition of disease the very power—good and sufficient Blood—that would naturally prevent it, that would still cure it spontaneously, and that actually does cure it spontaneously, wherever the blood-making work of the system is perfectly efficient; and therefore also *will* cure it, if a deficiency of the vital element be supplied from without, under proper medical treatment.

That Blood is such a power as here described, is an undisputed physiological fact. Its transmission from one animated organism to another, for the purpose of supplying a defect in the latter, is the substance of the Blood Treatment; and How to Do this, in different cases, is the form or description of the same. Blood may be taken from a healthy bullock (arterial blood—elaborated with due scientific skill); or it may be obtained in the well-attested living conserve known as bovinine, from any druggist; and may be introduced into the veins of the patient in either of four ways, that may be most suitable to the case: viz.: by the mouth and stomach; by injection, with one-third salt water, high up in the rectum; by hypodermical injection; or by topical application to any accessible lesion.

A Film of Bovinine: Showing the Blood-corpuscles Intact.



Micro-photographed by Prof. R. R. Andrews, M.D.

THE CURE OF PULMONARY CONSUMPTION

is one of the latest and most wonderful developments of Blood Power—introduced mainly by the mouth, and sometimes also by spraying bovinine into the trachea by an atomizer. Every week of judicious internal blood treatment, with proper medical and hygienic care, has resulted in steady improvement as to all symptoms, with scarcely an instance of check, much less of relapse, until complete apparent cure, and that in the more advanced stages of the disease. As further examples, may be mentioned: Anæmia, Cholera Infantum, Typhoid Fever, Hæmorrhagic Collapse, and many other of the most dangerous and aggravated diseases.

IN SURGERY: A CHRONIC ULCER,

of no matter how long standing or obstinate and aggravated character, can be cured with certainty—at least, the first instance of failure has yet to be heard of—by constant application of bovinine to the wound with proper surgical treatment and sterilization. Such cases are usually cured in from four to six weeks. So of traumatic injuries of all kinds; carbuncles, fistulas, abscesses, and even gangrene.

NUMEROUS CLINICAL REPORTS

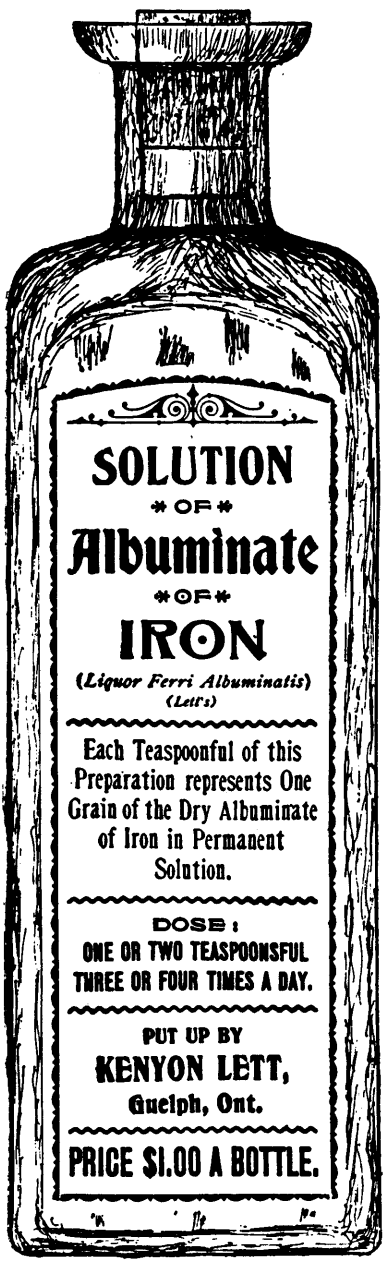
of well known Physicians and Hospitals, where the Power of Supplied Blood is constantly relied on as a cardinal factor in the cure of disease and support of surgery, are at the service of every practitioner who desires to keep up with the progress of his profession, and may readily be obtained (including, of course, the technique and subsidiary treatments pursued) by applying to

THE BOVININE COMPANY, 75 West Houston Street, New York.

**Leeming, Miles Co., Sole Agents for the Dominion of Canada.**

# LETT'S

## Solution of the Albuminate of Iron




**is a definite** chemical compound containing iron in the form in which it is found in the blood. So prepared that it is ready for **immediate** absorption and assimilation.

**Par Excellence,** the blood producer and proper form in which to administer salts of iron in **Anæmia** and **Chlorosis.**. It readily increases the **Red cells** of the blood, raises the percentage of **Hæmoglobin** and markedly improves the character of the **Leucocytes.**

**It is very palatable,** perfectly bland and will not disturb the most delicate stomach. **It does not blacken the teeth** or stools, and **will not constipate** the bowels or dry up other secretions.

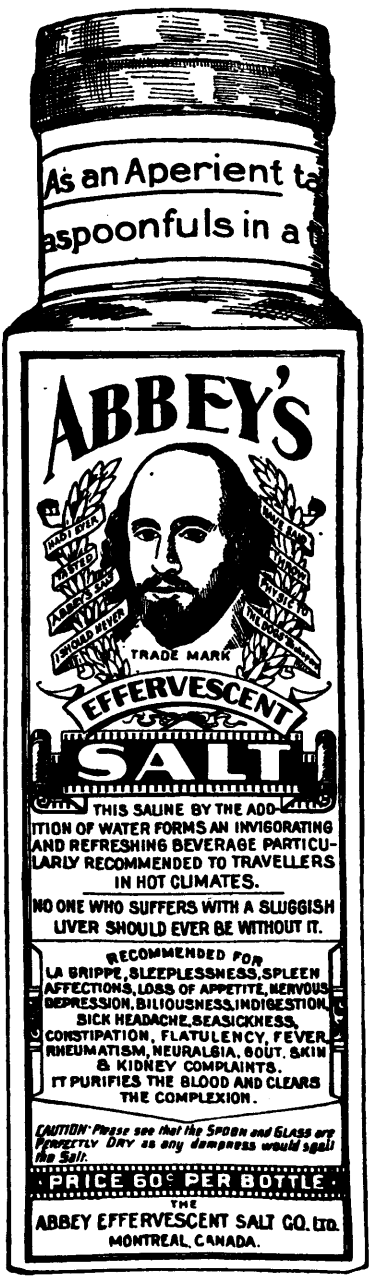
Put up in xvi.-oz. bottles only at **$1.00** each, or in lots of not less than 1 doz. at wholesale rates.

Physicians' samples sent upon application.

ADDRESS

**KENYON LETT,**

GUELPH, ONT.




# Abbey's EFFERVESCENT SALT . . . .

✱

A pleasant effervescing aperient, taking the place of nauseating mineral waters.

✱

Recognized and prescribed by eminent members of the profession in Great Britain, Europe and Canada.

✱

PRINTED BY WARWICK BRO'S & RUTTER, TORONTO.