siderable lead." Improvement under treatment by iodide of potassium.

The following cases, although not of spinal origin, are certainly not without interest:—

CASE IV. A German lady, rather stout, but not unhealthy in appearance, was seen by me two years ago in consultation with Dr. Ruddick, of South Boston. The symptoms of which she complained were mainly vague dizziness and obscure sensations of discomfort in the head, ringing in the ears, and dyspepsia. The ears were examined by Dr. C. J. Blake, and some middle-ear trouble found, which he succeeded in removing in a measure, with partial relief to the symptoms.

Although the classical symptoms of lead-poisoning were absent I had the urine analyzed, and lead was found. There was no syphilis nor nephritis.

The water which this patient drank ran from the street main to the house through a lead pipe. I asked her to send me a gallon of this water, and this was found on analysis to contain a relatively large quantity of lead, a good deal more than is usually found in Co-chituate water under these circumstances. It cannot, unfortunately, be positively asserted that this patient had not been taking bismuth.

Apropos of the contamination of water from lead pipes, I will mention a point of practical interest spoken of to me by a plumber with whom I have talked. It is, namely, well known that hot water is more apt to dissolve lead than cold, but it is, I think, not generally realized that this fact makes it objectionable to run hot and cold water-pipes side by side through the house, especially where the latter carry water for drinking purposes. The plumber, Mr. W. H. Greenleaf, assures me that the cold-water pipes under these circumstances are apt to be considerably corroded.

CASE VII. A man, thirty-two years of age, a gas-fitter by trade, came to the Massachusetts General Hospital, Out-Patient Department, in September, 1882, complaining mainly of sense of numbness and pricking of hands and feet, rather worse during the day, but felt also at night, and sometimes remitting altogether. When this "numbness" was severe the legs felt heavy and helpless. He complained also of headache; of attacks of dizziness, without loss of consciousness, recurring every day or two; of twitching of the muscles, mainly left arm and leg; and of a sense of coldness and trembling throughout the entire left side. The hands could be thrown into full extension, even with the fingers spread and extended, but when in this position some trembling was seen, and at a later period a careful electrical examination of the extensor muscles of the fingers showed a marked diminution of reaction to the faradic current. There were no distinct spinal symptoms, unless somewhat delayed micturition at times be such, and the heart and arterial system appeared normal. The complexion was pale and sallow, and the conjunctivæ of yellowish hue. Examination of the gums revealed the presence of a faint "blue line," and examination of the urine after iodide of potassium had been taken for a few days showed the presence of "much lead." Possible partial causes of his condition were syphilis, since he had had a chancre, without secondary symptoms, ten or eleven years before, and abuse of tea, coffee, and tobacco. His improvement under treatment has been very great in all respects, but the urine still contains lead, or did a short time ago.

Generalized tremor of the muscles, without paralysis, is a symptom which, though rather rare, is well recognized,¹ but when so slight as in the following case, and so completely unattended with characteristic symptoms, the difficulties in the way of diagnosis might be considerable.

CASE VIII. An athletic and previously healthy medical student came to me some months ago complaining of very slight trembling of the muscles all over the body, though noticeable to any one else only in the hands with the fingers in extension. No loss of power was discoverable, nor other symptoms of any kind, except some obscure signs of general debility, referable to confinement at work.

As a matter of precaution the urine was examined for lead, and a "considerable quantity" was found.

Subsequently a very careful examination with electricity revealed a diminution of irritability of the extensors of the fingers to the faradic current, though so slight that its presence could hardly be asserted with confidence.

No source for the lead could be discovered.

DIETETICS FOR THE SICK.²

BY CHARLES M. SELTZER, M. D.

In presenting this paper it is but justice to state that it has been prepared during the leisure of the past week as a substitute for one by another member who was unable to keep his engagement. The subject has been selected more from the hope of eliciting some practical ideas, and a desire to emphasize its importance, than to announce anything new, or to exhibit the best paces of a hobby. Close attention to the methods of our most successful general practitioners convinced me that in dietetics was their stronghold. At the same time there was plainly to be seen a distressing lack of knowledge as to variety of foods, and the preparation of them. In order to find out whether there was a practical remedy for these two great faults, I have gone over a thorough course of preparation of diet for the sick, under the instructions and guidance of Mrs. S. T. Rorer, in whom are combined the practical attributes of cook, chemist, physiologist, and nurse, and I can safely say that if every member of this Society were to do likewise their *armamentarium*, success, and self-satisfaction in the practice of medicine would be increased many fold.

It would be almost an endless task to discuss the literature of this subject. Let us condense the opinions of physiologists, chemists, hygienists, and all others in authority, by stating that food is divided into nitrogenous or albuminous, hydro-carbons or starch, sugar, and fats, and mineral or the various salts of the alkalies. Of these the nitrogenous and minerals are the building materials, and the hydro-carbons are the heat and force producers. Food may also be classified into liquid, semi-solid, and solid, and as the sum total of digestion is a matter of absorption and assimilation, it follows that the more liquid or dissolvable food is the more readily will it be absorbed; hence this is the form to be chosen when it is desirable to obtain nourishment at the least possible expense of organic action.

¹ Vide Axenfeld and Wuchard, l. c., page 663.

² Read before the Philadelphia County Medical Society, September 12, 1883.

There are also conditions in which bulk and solidity are necessary, and here we select the semi-solid or solid food, or even indigestible matter.

Nitrogenous food, in its natural combination with mineral matters, is mostly made absorbable by stomachic digestion. It rebuilds the tissues, and the waste and refuse are excreted by the kidneys and skin as uræa and uric acid and its salts.

Hydro-carbons are digested in the mouth and small intestines, are burnt up by union with the respired oxygen, thus supplying heat and force to the body. The waste and refuse are excreted by the lungs and bowels.

About three ounces of nitrogenous and twenty ounces of carbonaceous food are necessary to sustain the life of an adult man in idleness. With these epitomized facts in mind let us consider the importance and use of dietetics in the treatment of disease. The importance has been signalized by Bence Jones, who has said that the effect of diet is far beyond any known remedy. This fact has been so well known for the past century that volume after volume has been written on "dietetics," "diet cures," etc. A few of these have become standard works of authority because of their scientific and exhaustive treatment of the subject, while hundreds of others have had but an ephemeral existence. All have had to reiterate the same facts, because very few new ones have been learned, and, aside from the knowledge of artificially digested food, the student of a hundred years ago knew as well as the student of to-day about what diet was necessary for the sick. True, theirs was an empirical teaching; they knew nothing of the physiological actions of diastase, pepsin, and pancreatin, but they were all the more practical for that. Our present scientific reasonings on digestion are but the formulation of rules and theories for very old facts. The importance of the subject is made more manifest when we consider how much of the sickness that we are called upon to treat is the result of some error in eating or drinking, and as "removal of the cause" is the first step towards the promotion of recovery, it is easy to perceive how essential it is to know what constitutes proper and improper diet. Life depends upon diet, and the restoration of health depends upon the same principles as its preservation. Disease is the result of the violation of the laws of health, hence the first step towards recovery is to reestablish those laws, and as the material for repair and support must come from diet, we, as thorough physicians, should have a complete *practical* knowledge of dietetics and a proper appreciation of their curative value. But almost a decade of experience among physicians compels me to acknowledge that this is not the case, and that the most lamentable deficiency is in the practical application of the subject. Nature's simple and easily understood remedies are either lost sight of or ignored in the blind endeavor to find a medical specific for every human ill, or to establish an ideal notion, theory, or pathy. For the treatment of chronic affections some good points may occasionally be gained by even observing the *modus operandi* of quacks, homœoquacks, and proprietary medicines, for in connection with either a depurative or inoperative preparation such dietetic and hygienic directions are almost invariably insisted upon as would in themselves relieve temporarily, and perhaps permanently, some of the most obstinate cases.

The methods of dietetic treatment of diseases are as

various as are the ills that flesh is heir to, but all of them contain some of the following principles as essential features: In acute diseases rest is of primary importance; it is the fundamental principle of their medical and surgical treatment, and the same idea must be carried out in dietetics by remembering what part each organ serves in absorption, assimilation, and excretion, and by avoiding such food as would cause the performance of that function. Of course this plan is only to be pursued while the disease is advancing, and as soon as recovery begins there must be a gradual return to a promiscuous diet, very little at first, just enough to slightly exercise the crippled organ, using as great care as we would in instituting passive motion in a limb that has been fractured. Nature enforces this principle by the loss of appetite that marks the onset of nearly all acute diseases. The dietetic rest of an organ does not necessarily imply a depletory diet, for while it is non-active other organs may be made to perform a compensatory amount of work, and thus sustain or even increase the patient's vitality, so great is the versatility of our organic functions. It is upon this idea that we must act when we obey the command of Graves to feed fevers. In chronic diseases—those in which the natural course is direct from bad to worse until death or some interposing process puts an end to them—every organ must be made to do its utmost; the whole system must be awakened to the threatening destruction. Herein lies the broadest field of action for our subject. No time should be lost; food should be administered as frequently as assimilation and proper amount of organic rest will allow; the appetite should be kept active by using liquid, semi-solid, and solid food, prepared in such a variety of ways as to allow no charge of monotony or disgust. Surprise is frequently a useful element. Instead of leaving the patient to vacillate over his or her likes and dislikes, the nurse should be privately instructed how and what to prepare for each time, and how to serve it in the most appetizing manner. A valuable aid, usually lost sight of, is condiment. Think but for a moment how a savory dish will sharpen our appetites while in health, and I am sure you will perceive its stimulating influence upon a debilitated patient, to whom the flat and insipid preparations usually offered are loathsome or even nauseating. This disgust might frequently be avoided, and the amount of prescribed medicine be lessened. Many of the bitter tonics and carminatives of our materia medica are the same as are used in cookery, and are none the less efficacious in a palatable dish than in the nauseous pill or draught. Therefore let the delicate aroma of herbs, celery, and bay leaves pervade the soups; use India curry on starchy foods, and when desirable add *capsicum*, *piper nigrum*, etc., to animal broths and substances. In so doing, if necessary, you can satisfy the qualms of your professional dignity by remembering that in catering to the palate you reflexly stimulate the organs of digestion.

Some articles of diet may be administered simply for their curative effect. A five-ounce cup of strong coffee contains about sixty-six grains of extract, or an equivalent of about two grains of caffeine—quite sufficient to relieve a neuralgia, or a headache and sick stomach after a dose of opium. Beef tea, made red-hot with red pepper, is the very best treatment for delirium tremens. A patient to whom I once administered such a dose, made so strong that I would not

have dared to taste it myself, afterwards told me that it was the most refreshing and *cooling* drink he had ever taken. A London surgeon to the police told me that he had treated a hundred and fifty cases of delirium tremens with this remedy *alone*, and had not lost one. The use of chloral in these cases is criminal, and many a death certificate of "delirium tremens" ought to be "heart failure from chloral poisoning." Mucilaginous teas and drinks made from gelatine, isinglass, Irish moss, and flaxseed are very soothing to any inflammation within the digestive track. Green vegetables are necessary to cure as well as prevent scurvy.

An old practitioner, who had spent his early professional life in the country, told me that when he first commenced practicing he used all the ordinary remedies in typhoid fever without any satisfactory results, until the introduction of turpentine by the late Prof. George B. Wood. In it he soon discovered a useful ally, not so much in the drug *per se*, but because convenience and time compelled him to use a thick flour gruel as a vehicle, and the patients were nourished sufficiently to live through the attack.

In the science and art of preparing sick diet there is a most lamentable lack of knowledge, especially among physicians. They know the preparations by name, but not by nature, and the only way to learn the latter is to don the apron and take a practical course from a practical and scientific cook. Such a course was inaugurated last winter in this city and in Boston with a very satisfactory result. The prospect for this season in this city is that the course will be very well attended. It is the only way to learn. I could read you receipts by the score, but it would be as useless as reading off that many medical formulæ.

DISCUSSION.

DR. L. TURNBULL, in opening the discussion, said: In reference to these questions, my opinions are rather of the old-fashioned kind, and I believe in courses of instruction on cooking, which will be of much use to physicians. Dr. Benjamin Rush was accustomed in his lectures to remark that "a physician should spend six months in a kitchen before entering upon his practical career." He desired to heighten the importance of a knowledge of the effects of food, and also the correct way of preparing it. All these advantages could be combined with a course on pharmacy. Physicians should learn how to make beef tea, extract, etc., and similar articles. The important preparations of mush, of Indian and oat meal, for instance, are rarely properly made. They should be prepared over night, so as to be thoroughly gelatinized; if made in the morning just before being served they will not be digestible. In cases of very weak stomachs, many articles of diet may be peptonized with great benefit by using a small amount of a mixture of sodium carbonate and pancreatin, these being allowed to act for a short time at a temperature of about 80° F. Fairchild, of New York, prepares powders containing these peptonized materials in convenient amount. Such peptonized foods are like the old-fashioned preparations made with rennet and warm milk, and will be well borne by delicate stomachs. An article that is often wrongly prepared is barley. It may be softened and extracted with water, or it may be torrefied so as to make a sort of malt extract. In the latter form it is very suitable as a substitute for the diastase-like principle of the saliva in cases where

that secretion is deficient. It can easily be given mixed with other food, as in puddings, for instance.

This summer we have been very successful in relieving the irritability of the stomach and bowels of both children and adults, due to temporary indigestion, by substituting first barley-water alone, and after a time a wineglassful of barley-water, with half a tumbler of milk, or its equivalent of condensed milk.

Too little attention is given to character of water. It is sometimes very bad, containing either injurious mineral or vegetable matter. The Boston water supply was much injured lately by certain sponge forms.

Butter is an article of food which is often impure, and besides objectionable substitutes for it are often sold. The mixtures of animal fats known under the names of oleomargarine and butterine should not be used in the preparation of food.

Beef tea contains often but little nourishment, and in debilitated conditions, such as most cases of typhoid fever, beef essence made not from the round of beef, but from the neck, in which blood is found, will be much more nourishing. A valuable form of beef juice can be prepared by cutting up in pieces fresh beef, and placing it under a block of ice until, by the pressure, all the blood has been extracted. With the addition of a little salt it has been found to be retained by the most delicate stomach, and is very useful in cases of great exhaustion.

DR. ALBERT H. SMITH. The older we get the less disposed we are to rely on medicine and the more on diet. The remarks in the paper in reference to the importance of teaching physicians the art of cooking are deserving of full indorsement. On one point, however, I cannot agree with the author of the paper. He seemed to advocate the use of highly stimulating food in acute diseases; in other words, the methods advocated by Dr. Thomas King Chambers in his fascinating work — a work, however, which has done great injury. Dr. Chambers' idea was that all disease was due to depression, and therefore the remedy was to stimulate the system. This is an attractive theory, but is not true. In cases of disease attended with high temperature, we only add fuel to the flame by the use of stimulating food.

Nature has admirable powers of taking care of herself, even under a starvation regimen. The use of a low form of diet, with refrigerants and depressants, may often be of the greatest benefit. I can look back on my early experience, and recall cases in which, after operative measures, patients have been treated on the theory that plenty of pabulum should be furnished in the system, but such patients have perished. A strong patient will in such cases do much better on a low diet. Adhesive inflammation will be secured more satisfactorily on the low diet system.

DR. J. M. BARTON. I had under my charge during three years a patient who sustained life on about a pint of milk a day; never more than a quart a day. He was a physician who had his own views on questions of diet and therapeutics. Dr. A. H. Smith is right in his position as to the importance of low diet after operations, but in typhoid fever we have a very different indication. In the first case, that is after operations, food frequently acts as an irritant, but in the low fevers the patient is exhausted and needs support.

DR. FORBES. I am reminded of a compliment which I heard the younger Larrey pay to Orfila, the great French chemist. He said that he (Orfila) was the

greatest cook that ever lived. He said Orfila understood the disintegrating power of hot water. The effect of thorough boiling is most important, and since the days of Washington it has been an article of war that beans should be boiled for six hours. In the Crimea marked difference was seen between the French and English troops on account of the superior attainments of the French officers and surgeons in reference to many of the details of a soldier's life, and especially in cooking.

DR. SELTZER, in closing the discussion, said: I did not wish to include in the paper a discussion of the methods of preparing food, but merely to express the idea that it is important that doctors should know what to cook and how to cook. Many articles of food, that as ordinarily prepared are unfit for the sick, can be cooked so as to be palatable and digestible. Mrs. Rorer's method of cooking liver is an instance of this. She exhausts it with water to remove blood, then places it on ice until required, when it is cut into thin slices and toasted; sweetbreads are somewhat similarly prepared.

As to the use of stimulating food, we must judge Dr. Chambers' views by his own method. He draws the line between acute and chronic diseases, not making time the basis of the classification, but the tendency of the disease. Acute diseases tend to recovery, and these he leaves undisturbed; chronic diseases tend to fatal results, and in these he uses a highly nutritious diet, stimulating when a depressed state exists.

In reference to the suggestions made by different speakers as to the importance of systematic instruction of physicians in the art of cookery, I may say that such courses are now being organized. I do not think that such instruction can be advantageously given with pharmaceutical teaching. A woman's taste and tact are essential to the art.

Reports of Societies.

THE AMERICAN GYNECOLOGICAL SOCIETY.¹

THIRD DAY. MORNING SESSION.

A BUSINESS meeting was held at 8.30. DR. A. H. SMITH, Vice-President, in the chair.

The general session was opened at noon. The first paper read was one entitled

MENSTRUATION AFTER EXTIRPATION OF THE OVARIES,

by DR. HENRY F. CAMPBELL, of Augusta, Georgia. The influence of the ovaries in normal menstruation was not questioned, but the object of the communication was to suggest a possible explanation of those cases in which menstruation has persisted after their removal. Where a menstrual discharge has recurred regularly after the performance of double ovariectomy various explanations have been offered to account for this occurrence; it has been attributed to the habit of periodical plethora, to disease of the uterus, and recently it has been held to be due to the incomplete removal of the Fallopian tubes, which are claimed to be the real inciter of the menstrual nisis by Lawson Tait. Without denying or accepting any of these as

the sufficient explanation, the lecturer offered another which had not been hitherto noticed, or received proper attention. Taking into consideration the importance of the ovaries in normal menstruation, it might be anticipated that their removal would affect this function, and that it would be likely to cease, as it usually does. But it is known that conditions of the mammary gland exercise an influence over menstruation, and mental emotions also can affect it. If these remote causes may bring on or check menstruation in a healthy subject with active ovaries, it proves that there exists somewhere in the body behind the ovaries, inciter points to menstruation, a centre presiding over this function in the cerebro-spinal system, which may continue to produce periodical congestion of the uterine mucous membrane, and a sanguineous discharge after the ovaries themselves have been removed. If such inciter points exist it is possible that, for some reason, they may continue to act upon the uterus after ovulation has ceased.

The following case was cited: A young girl, some eight or ten years of age, was brought to him by her parents. They seemed very much alarmed by the fact that the child had menstruated twice, and sought an explanation. The patient was apparently a healthy child, had a good appetite except during her monthly periods, and at the time she came she had her third menstrual flow. It was a source of uneasiness and mortification to the parents, who feared precocious development. Upon investigating the case, however, there was nothing in her conduct or in her appearance to indicate premature development, but there was some enlargement and tenderness of the breasts; the pudendum was not examined. Inquiring carefully if there had been any recent illness, the parents said that she had never been sick but always healthy, and had never had anything but mumps in her life; closer questioning revealed that she had had an attack of mumps within three or four weeks. Having recently attended a case of mumps in a young man with metastasis to the testicle, he concluded that this was an analogous case, the metastatic irritation of the ovaries having excited them to premature activity and the phenomena of the menstrual nisis. He ascertained that the periods were irregular, the last interval being only twenty-one days, and that they were less marked than at first. He told the parents his view of the case, and almost promised them that it would be only a temporary condition. The results were as predicted, all the appearances of the menstrual nisis gradually subsided in the course of a few months, and finally disappeared, leaving the child as before; she returned to her normal condition. Some years later the menses appeared at the proper time, at about fifteen years of age, and the child changed and developed into a young woman.

This case might be cited as one proving that the ovaries are the cause of the menstrual nisis, and this he would not deny; but it also proves that an influence existing outside of these organs may excite their functional activity, as well as that of the uterus, so as to determine the appearance of menstruation.

In another child seen in 1867, the child had more decided evidences of puberty; there was enlargement of the breasts, development of the nipple, enlarging of pudendum; everything indicated a premature condition of puberty, and there had been three or four monthly flows. There was only one way in which this could be accounted for, and this was the existence of an acute

¹ Concluded from page 305