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ADDRESSES.

ADDRESS ON DIETETICS.

Delivered at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

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The growing importance of and interest in dietetics would seem to be a sufficient justification for the action of the American Medical Association in appointing a committee to report on that subject at this session.

Through lack of acquaintance it was impossible to name a committee that would comprise all, or even a large number of, persons especially fitted for the work. The embarrassment from that cause has been made less through correspondence with many physicians in different sections of the country, with the result of securing the services of several who are willing to act, not to formulate an exhaustive report at this time, but to give aid and encouragement to a more complete organization by which the subject may be more systematically presented in the future. But, even with this gratifying success, your committee feels that very many able men are, through no discourtesy, not on its roll of membership. On account of these hindrances organization was impracticable, and we come before you as a preliminary committee with a preliminary report.

We respectfully recommend that the Association take such action at this session as shall insure a continuance of the work thus begun, either by the organization of a large special committee, or by the establishment of a Section on Dietetics.

Food and drink have ever held the highest place in human affairs. As populations increase and communities advance in culture, alimentation becomes more diversified, while tastes, habits and customs evolve an almost endless variety of foods, drinks, cooking, eating and drinking. In savage and pioneer life the chief concern is how to get food; with highly civilized people, but especially with Americans, who revel in plenty, it is not so much a question of how to get food as how to cook, and how and what to eat and drink, as well as what to avoid. With the savage it is feast or famine, with starvation as the chief men-

ace to vigor and life; with the civilized it is generally plenty, but with loss of vigor, or disease, or premature death as the frequent penalty. The early loss of the teeth, contracted jaws, dyspepsias and diseases of nutrition constitute the constant menace to the luxuriously fed American man or woman. Thinking Americans are beginning to realize their peril, and to carefully consider the questions how to cook, and how and what to eat and drink that shall secure the greatest degree of comfort, the highest vigor and the longest life. Thus from forced observation and experience was dietetics born, and, based as it is on the law of self-preservation, it is destined to live and grow into an intensely practical branch of knowledge.

From this start in necessity, in which empirical generalities constituted the chief stock in trade, have been rapidly evolved the principles of dietetics, now shorn of much of its empirical crudities, and, although still incomplete, it stands to-day in the very front ranks of medical art for accuracy, efficiency and importance.

Dietetics has joined hands with organic chemistry to solve the problem, What is the pabulum of physiological life, and what are its relative and component elements? From that department of scientific research we now know accurately the kinds and amounts of the several food elements that will maintain human life in vigor from the cradle to old age, and under all vicissitudes and conditions.

Dietetics has joined hands with physiology to more clearly elucidate the occult functions—digestion, assimilation and nutrition, the waste and repair of vegetable and animal tissues. Where once it was believed that digestion was a simple and single process, it is now known to be highly complex in its processes, and consisting of at least three kinds, differing in the manner of doing and the kind of work done. By this accurate knowledge we are enabled to so arrange the work that the best results may be had. We know that inharmonious action of the three kinds of digestion not only provokes disease of the digestive organs, but also supplies the economy with impoverished pabulum, unfitted to maintain normal nutrition, or with a rabble of vicious products that poison the system with gout, rheumatism, neurotic and skin affections, and other maladies until lately

never suspected of being connected with disordered digestion.

Dietetics has joined hands with the cook, and raised her from the scullery to the position of the artist of the noblest of all arts. The cook is rapidly learning that cleanliness is next to godliness, and that tidiness is the religion of housekeeping. Wives and mothers are learning, what should have been learned long ago, that pleasing the palate is sweeter than pleasing the eye or ear, that properly cooked food is the best health preserver, the best health restorer, and a powerful social and moral agent.

Dietetics has recently taken another step. It has joined the kitchen with the public schools. The maidens who are soon to be the mothers of this nation are learning therein that their loved ones at home will look more proudly on the kitchen than on the drawing-room, and that the urn simmering for tea on the domestic hearth makes sweeter music than the pianoforte. Dietetics is teaching that tidiness in the dining-room—the snow-white cloth, the smoking viands prepared by the loving hands of a dimpled, white-aproned wife, will keep the husband from the grogshop, or reclaim him if he ever went there, with a thousand-fold more power than all the temperance sermons ever preached.

Dietetics has taken the American by the hand, and is showing him how he may escape from the thralldom and disgrace of our National curse, dyspepsia. It has long been charged that dyspepsia is a prevalent malady in America. This charge has never been denied, as it never has been proved. It is time we were finding out the exact truth of the charge. The charge is probably true, and we must begin to look the truth square in the face. If we are a nation of dyspeptics—and probably we are—then consequences the most dreadful—no less than the extinguishment of our race, threaten us. The medical profession of this land, if actuated by no other motive than patriotism, should begin investigating the evil, its cause, and the definite and effective plan for its arrest. The people's attention must not only be called to the consequences of dyspepsia to the individual, but they must be aroused to the awful fact that, by the laws of heredity, the dyspepsias of one generation will crop out in the degeneration of the offspring; that neurotic diseases, tuberculosis, drunkenness, and crime itself, may, and that some of them will, entail themselves on the child as the legacy of a dyspeptic father or mother. Americans must be taught that no nation of dyspeptics can long survive as against the aggressive competition of robust nations.

Dietetics is taking the physician in hand and leading him into fresh and richer fields. The route of his retreat from the moss-grown domains of custom and prejudice is littered with lancets, and blisters, and antimonials and mercurials. It

is found to be easier and more profitable to lead a patient back to health by the food instead of the drug route. Not that drugs or lancets should or will be dispensed with as remedial agents in many conditions of disease, but that their employment is much less demanded than was formerly thought possible. Enlightened and experienced physicians are coming more and more to depend on dietetics and sanitation, and on drugs and lancets less. Dietetics not only reveals the wonderful resources of alimentation in pathological conditions, but it also, while narrowing the sphere of drugs, more clearly defines their mode of action, makes plainer their indication, and makes them more efficient. It may be confidently claimed that he who relies least on drugs has the greatest confidence in them. This seeming paradox is explained away when we remember how often drugs fail when given exclusively or promiscuously, and how common their success when conjoined with suitable regimen. Again, the proper supply of nutrients is the all-important object in nearly all cases of disease; in many cases alimentation is all that is required, while drugs may perturb; in other cases wherein drugs are indicated they are of secondary importance, to correct some incidental symptom. In a very few cases, simple in form and of transient duration, drugs alone are required. In this *rationale* of modern physic, medicines have become not only subsidiary, but also come to possess a specific relation, not to the disease *per se*, but to the disease symptoms. Thus, a drug may reduce pyrexia, a *disease symptom*, and is therefore a specific for that special condition, but its use ends there, as should its employment, while alimentation is the beginning, the middle, and the end—the *vis preservatrix* in the treatment of all diseases.

Medicines used in this way rarely disappoint and, what is nearly as good, they rarely do harm. The practitioner who thus employs them will have the greatest confidence in their ability to do the work required. Many families in this land, and their number is yearly increasing, are content to allow their physicians to treat their maladies by rest and dieting, to the more or less exclusion of drugs, from having experienced the gratifying success of such a mode of treatment. As drugs drove the lancet from the field, so will rational dietetics restore bleeding to its legitimate place, and limit the usurpation of medicines, and both will be the servants, not the masters, of alimentation and nutrition.

Perhaps in no other class of maladies is the reliance on alimentation so apparently remedial as in the malnutrition and diseases of infancy and childhood. The mortality of children under 1 year of age is frightful and criminal; frightful from the large proportion of deaths, and criminal because nine-tenths are from preventable causes. It is believed that a large majority of the cases of

sickness among children, especially during the summer months in cities, are caused by overheating, bad ventilation, improper food and faulty feeding, and the prevalent opinion is probably correct. But in the multiplicity of causes precision is impossible. All these causes play parts in the terrible drama, but too little is known of the exact influence of each cause separately considered. Of them all it is almost certain that improper food and overfeeding, especially in cities during the hot weather, are the two which preponderate.

There are two classes of people that need looking after: the first is the vendor of unwholesome milk. This class must be taken in charge by the strong arm of the law. Milk kept in foul vessels, watered milk, adulterated milk, and milk from wretched cows chained up all their miserable lives in dark stables and fed on brewery slops, slay annually thousands and thousands of helpless babes in our cities. Such milk is unfit for any purpose, and it should be kept out of the market. Those who vend such milk are deliberate murderers, and they should meet with the punishment commensurate with their cowardly crime. The other class consists of the mothers and nurses, who will persist in overfeeding babes, dreading starvation, ignoring the fact that babes need water, not milk, when fretful and feverish from indigestion. The crime of this class is ignorance, and they must be educated out of their pernicious practice. Thousands of children may be saved by lessening the amount of food during the heated term.

The questions, What is the best substitute for human milk, and what is the best food for weakly and invalid children? although more frequently asked than formerly, still remain *sub judice*, or at least the solution of the questions is not generally accepted in practice. Accurate knowledge in regard to them must be given by some authoritative body.

Cow's milk, sometimes slightly modified, seems to be the most rational and favored as the substitute for the mother's milk. This generally accepted belief is based partly on experience, and partly on the physiological precept that there can be no digestion of starch foods prior to dentition. But experience and precept are sometimes both upset in cases of infants who do not digest milk but who do digest modified starch foods. In the absence of precise knowledge on the subject of infant foods and feeding, we go on treating infantile maladies with an empiricism redeemed only by the common sense and experience of the individual practitioner. The aggregated and formulated experience of the whole profession is wanting, while tradition, united with straggling experience, serves as a fickle indicator rather than a reliable guide in the dietetics of infancy and childhood.

Among the besetting evils of Americans are rush, overwork, great plenty and variety of food, great food waste, bad cooking and badly cooked

food, hurried eating, foul water supply to cities, and dram-drinking. Any one of these evils tends to the impairment of health, and all of them aggregated are sure to result in the deterioration of the race. The duties of the medical profession have so widened that it is become to a large extent the custodian of public health. The world cannot produce such a field of useful, necessary work as lies before the profession in America—the work of arresting the decay of the American race. Can this Association, whose grand function it is to crystallize medical thought and direct medical art in this country, longer refuse to lend its authority to warn our people of the danger ahead, and to direct its powerful organization against the evils which, if not arrested, will result in disaster to our people and our Nation?

When the first submarine cable was laid a scientist predicted that some deep sea animal would turn up to eat the covering of the cable. The prediction was verified. Dietetics already has its parasites. To hear these barnacles prate of foods, and peptones, and artificial digestors, one is led to believe that dyspepsia will soon be numbered with the lost tribe. Their advertisements are to be found in many respectable journals. The wares they offer are generally a discredit to the few physicians who have, perhaps thoughtlessly, praised them, and the whole business—wares, journals, and praising doctors—brings discredit on dietetics. On this subject the American Medical Association must exercise its authority in the most positive manner. Not only is the public wronged by the avalanche of "food" products on the market, but the busy and honest practitioner, who has no time to investigate, nor has he authority on the subject, is at the mercy of these vendors of "physiological foods," "chemical foods," invalid foods," *ad nauseum*, that flood our drug-stores. What is wanted is thorough investigation of these often worthless compounds before a tribunal of competent men who can voice the truth with that authority which will command attention and confidence.

Is there danger of going to extremes in dietetics? Is it possible to attach too much importance to digestion and nutrition? Yes; a few people will ride nothing but a hobby-horse. But dietetics will not be carried to extremes; it will, however, have many radical disciples. From Hippocrates down there has been a constant conflict between ultraism and conservatism in medicine, and the strife will continue until medical science ceases to progress, and until the art is exact. If the conservatives have fought more stubbornly, the radicals have won more victories. The disciples of Jenner won a brilliant success over their jeering opponents; the ultra bacteriologists are likely to defeat the conservatives; Listerism is more reliable than former methods, and Lister is an extremist.

Dieticians will incline to ultraism, but the principles of dietetics cover too much ground to ever assume specialty, or build up an esoteric class of practitioners. Dietetics is too broad for the specialist. Ultraism is not always an evil nor its practice a sin. All great medical pioneers have been regarded as extremists in their day. The ultraism of a generation ago is the conservatism of to-day.

And what is the ultraism of dietetics? Briefly, that digestion and nutrition constitute the all in all of animal life; that many forms of disease, as gout, rheumatism, Bright's disease, many neuroses, skin diseases, and other affections, are but manifestations of faulty digestion or malnutrition; that maladies belonging to the above class can only be successfully treated by judicious alimentation, while drugs hold a very subordinate place in their cure. This kind of ultraism will grow and deserves to grow. Many advanced thinkers believe that phthisis pulmonalis cannot exist without antecedent indigestion, followed by faulty nutrition; that the lung lesion often begins as dyspepsia, and that no case of consumption was ever cured except by restoring digestion and nutrition, and that the more complete their restoration the more thorough the cure of the lung disease. With all the investigations, lasting through centuries, seeking for a drug to cure consumption, and with all the various claims that have been made for medicines which held the boards for longer or shorter periods as specifics in consumption, not one of them remains to-day as a remedy for that affection, and, although ignorant faith may cling to some of the medical myths of the past, not an enlightened physician in this land but what selects his remedies more to restore digestion and nutrition than for any direct effect they may have on the disease of the lungs.

There is one abuse which has crept into modern practice under the seeming sanction of dietetics, and which calls for loud protest. Allusion is had to what may be termed *vicarious digestion*. This term applies to all methods by which the digestive organs are relieved of all or a part of their work, and includes the employment of all bland and easily digested foods, malted foods, predigested foods, and food per rectum. This practice, so efficient and necessary in acute stages of disease, and in all conditions where there is suspension of digestion, is pernicious when, as it often is, too long continued, or employed in cases where the digestive act is even moderately well performed. The pabulum supplied by vicarious digestion is not, it cannot be, endowed with that robust vitality belonging to the product of normal digestion, and hence can supply only a low grade of nutrition, sufficient it is true to bridge the system over a short interval of interrupted digestion, but lacking the vigor to sustain a strong and active state of health. Again, if vicarious digestion is too

long continued, or employed unnecessarily, paupers are made of the digestive organs. Our teeth are going because there is no longer need of that vigorous mastication peculiar to an age of crude cookery, and, if we persist in carrying vicarious digestion to the extent threatened, the stomach will lose its function and waste away toward the state of a rudimentary organ. The only way to keep the stomach strong is to force it to perform its legitimate work.

Vicarious digestion may become a habit if indulged in for too long a time; the papoid habit may become as enslaving and as destructive as the opium habit. The tissues will starve on cells that enter over the wall instead of by the appointed portals of vital action. Such nutrition does not stay, the puny cells have not received the stamp of genuineness and every emunctory is up in arms to turn the rascals out.

Food and drinks, feeding and drinking, would seem to exert a wonderful influence over the habits of thought, the customs and manners of races of men, and their diseases also. By searching we might find that the egotism, conservatism and tenaciousness of the Englishman are as much the results of his beef and ale as is his gout; that the sparkling *bonhomie* of the Frenchman comes from his dainty *cuisine* and bubbling champagne, as does also his mercurial disposition and his passionate life; that the macaroni and fortified wines bestow song and art on the Italian, as does beer and *sauer kraut* stamp solidity and patriotism on the German. America, ever able to give the world a lesson, contributes rush and dyspepsia as the product of hog and whisky.

CONSIDERATIONS ON THE ANATOMY, PHYSIOLOGY, AND PATHOLOGY OF THE CÆCUM AND APPENDIX.

*Read in the Section on Surgery, at the Thirty-ninth Annual Meeting
of the American Medical Association, May, 1888.*

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Having been requested to present a paper on this very comprehensive subject, I believe to be best enabled to meet the requirements expected by considering the subject in its anatomical, physiological and pathological aspects, since here as elsewhere, a knowledge of the first of these is a pre-requisite to the understanding of vital processes, normal and abnormal. To enter into anatomical details requires no apology here, since this is the Section of Anatomy as well as that of Surgery.

Anatomy.—Strange as it may appear, the topography of the cæcum, the vermiform appendix, and the ileum is greatly misapprehended, not only by the profession as a body, but by most