

The Journal of the American Medical Association

Vol. XIX.

CHICAGO, NOVEMBER 19, 1892.

No. 21.

ORIGINAL ARTICLES.

FOOD AND HYGIENE OF OLD AGE.

Read by Title in the Section of Physiology and Dietetics, at the Forty third Annual Meeting of the American Medical Association, held at Detroit, Mich., June 7, 1892.

BY J. M. FRENCH, M.D.,
OF MILFORD, MASS.

Old age is a period of diminished energy. This is its primary, central characteristic, and carries with it a diminution of all the powers of manhood. The machinery of life is wearing out. The old man's activity is less, his paces are slower and his pulse less vigorous than when he was in his prime, his grip is less strong and his way less forceful. He no longer attempts great enterprises, nor could he carry them out if undertaken. He does not readily adapt himself to changes in his environment. His food is more slowly digested and less perfectly eliminated. His bones have become brittle, and when broken unite but slowly and imperfectly. He does not rally readily from even slight attacks of sickness, and finds himself losing each year something of the strength and elasticity of manhood. His teeth are decayed, his cheeks are sunken and his brow is wrinkled, his arteries are hardened and his hair has turned white or is fallen out. His sight is dim, his hearing dull, and all his senses have lost their acuteness; while his memory of recent events is well nigh gone, and all his mental faculties are growing weaker day by day.

The period at which this condition approaches is determined less by the number of years through which a man has passed than by his constitution and habits of life. Some men are far advanced in senility at fifty, while others seem hardly to have entered within its borders at eighty.

The man who has reached that period of advanced life which borders upon old age in reasonable health, has left many dangers behind him, and is safe from many causes of death which have menaced him along the way. The susceptibility to contagious and zymotic diseases which characterized his early life has been exhausted, and with it one great source of danger is gone. The period of manhood, which is marked by the greatest development of hereditary and general diseases, has also passed, and from it he has come forth with a constitution hardened by the storms and trials of three-score years. But now is at hand the season of old age, when local diseases manifest their greatest comparative activity and virulence. It is the weakest which now give way, and these are the three vital organs, the lungs, brain, and the heart, in the order named, and after these the stomach, liver and kidneys. Of single diseases, pneumonia carries off more aged people than any other.

There remains a considerable proportion—probably from one-third to one half—of those who reach the age of sixty-five, who, by reason of inherited endurance and favorable circumstances, survive the accidents of life, and are carried off at last by old age, that gradual fading away of the vital forces which is the only natural death.

To enable the old man to reach this end at last in safety, but not to reach it until it has been postponed to the very latest practicable moment; to adapt his environment meanwhile to his changed conditions; to conserve his strength and favor his weaknesses; and thus to conduct him safely through the dangers incident to advancing years, and bring him to the close of life by as easy a road as possible, with the greatest amount of comfort and the least of suffering—these are the objects of the hygiene of old age.

The first necessity of age as of youth is food; but errors in diet are specially harmful now. The young man has a reserve fund of vitality to draw upon, and though he may suffer acutely for a time, when too much food is taken, or food of an improper character or not properly prepared, yet he soon throws it off, and does not seem to suffer permanently. But the old man's bank account is already overdrawn, and he is living from hand to mouth. The gluttonous debauch which in early life might only have caused him a day's discomfort from indigestion, or of misery from a bilious attack, would now be liable to result in sudden death. He must therefore carefully measure his digestive power, and adapt his food, both in quantity and kind, to the needs of his system.

The old man no longer needs food to promote the growth of tissue, for tissue-growth in him has long since ceased. In his present condition of diminished activity, the waste of his tissues is also greatly lessened, and the need of food to repair this waste is correspondingly less. To maintain the vital heat is still his urgent need, and with increasing years the task grows more and more difficult.

As a whole, then, it is evident that he now requires less food than in youth or middle life, and food of a somewhat different character. Flesh food, and especially lean meat, which is chiefly useful in promoting the growth and repairing the waste of tissue, should not form a large part of the old man's diet. And observe how perfectly nature has adapted his capabilities to his needs. The teeth, which are required most of all in tearing and grinding the fibre of meat, to fit it for digestion, have now disappeared entirely, or become so weak and decayed as to be unfit for performing this office. And it is a significant fact, that in healthy individuals, whose digestive organs have not been ruined by the overmuch artificiality of civilized life, the decay of the teeth is coincident with the approach of old age. As the active period of life has passed, and the food which fosters activity is no longer needed, so the

means of preparing such food is no longer furnished.

Since the digestive force is now less, the food must be of such a character as to require less effort to fit it for assimilation. As the teeth can no longer grind and tear the food, it must therefore be furnished in such a form as to be early acted upon by the digestive fluids. The tendency to sluggish action of the bowels which is common in old age, requires that the nourishment should not be taken in too concentrated form, but should be of sufficient bulk, should contain enough waste matter, and be of such a character as to stimulate digestion. Of such a nature are the simpler preparations of the common cereals, as wheat, rice, oat-meal, and indian-corn; also most ripe fruits and fresh vegetables. Light mixed animal and vegetable soups are often wholesome, as is also an occasional dish of fresh fish. Nor need eggs, or even flesh food, be entirely forbidden, but only taken in great moderation. As a drink, pure water is the best, and may be taken freely. For those who, from lifelong habit, prefer warm drinks instead of cold, weak tea and coffee may be allowed. Milk may be taken as a food, provided it "agees with the stomach," but it can hardly be considered as a drink.

Again, since large quantities of food burden the stomach and oppress the system, it is better, in old age as in infancy—in man's second childhood as in his first—that he should take food not only in much smaller quantities than in middle life, but also at more frequent intervals—say four meals a day instead of three.

All this is no new doctrine, but one that is justified by experience. Luigo Carnaro, who died at Padua, in the sixteenth century, "without any agony, sitting in an elbow-chair, being above an hundred years old," wrote several essays when between eighty-three and ninety-five years of age, in which he advocated a decreasing quantity of food at lessened intervals for the aged, to correspond with their increasing age and diminished activity.

"There are old lovers of feeding," he writes, "who say that it is necessary they should eat and drink a great deal, to keep up their natural heat, which is constantly diminishing as they advance in years; and that it is, therefore, their duty to eat heartily, and of such things as please the palate, be they hot, cold, or temperate; and that, were they to lead a sober life, it would be a short one. To this I answer, that our kind mother, nature, in order that old men may live still to a greater age, has contrived matters so that they should be able to subsist on little, as I do, for large quantities of food cannot be digested by old and feeble stomachs. By always eating little, the stomach, not being much burdened, need not wait long to have an appetite. It is for this reason that dry bread relishes so well with me; and I know it from experience and can with truth affirm, I find such sweetness in it, that I should be afraid of sinning against temperance, were it not for my being convinced of the absolute necessity of eating it, and that we cannot make use of a more natural food. And thou, kind parent nature, who actest so lovingly by thy aged offspring in order to prolong his days, hast contrived matters so in his favor, that he can live upon very little; and in order to add to the favor, and do him still greater service, hast made him sensible that, as in his youth he used to eat twice a day, when he arrives at old age, he ought to divide that food, of which he was accus-

tomed before to make but two meals, into four, because, thus divided, it will be more easily digested;—provided, however, he lessens the quantity as his years increase. And this is what I do, agreeably to my own experience; and therefore my spirits, not being oppressed by much food, but barely kept up, are always brisk, especially after eating, so that I am obliged then to sing a song, and afterwards to write. Nor do I ever find myself the worse for writing immediately after meals, nor is my understanding ever clearer, nor am I apt to be drowsy, the food I take being in too small a quantity to send up any fumes to the brain. Oh, how advantageous it is to an old man to eat but little! Accordingly I who know it, eat but just enough to keep body and soul together."

Such a regimen as this which was advocated by Cornaro does not, of course, tend to corpulence; and indeed, old age has few greater enemies than corpulence. Heart, lungs and brain, stomach, liver and kidneys, are all oppressed thereby. Apoplexy and Bright's disease carry off the heavy-weight, while the lean and slender man, who has escaped the dangers of the middle period of life, outlives him by many years. Indeed, in looking over the octogenarians of my own acquaintance, I have been impressed by the fact that there was not one among them who could by any possibility be called corpulent, but every one was thin and spare. Surely this is a significant fact. (The Secretary confirms this.)

With reference to the use of alcoholic stimulants in old age, what shall I say? It has long been taught, and generally believed until of late, that in old age there is an especial indication for the use of spirituous liquors. But this doctrine is closely allied to that which teaches the need of large quantities of concentrated nutriment "to keep up the strength" of the aged, and the two must stand or fall together. If the principles I have been advocating are correct, then old age is the period of all others when the use of alcohol is injurious, dangerous, suicidal. With advancing knowledge, there is no longer any justification for the supposition that alcohol fosters vital heat or imparts vital force; for science has demonstrated that the sensations which seem to indicate this in either case are opposed to the fact; that alcohol lowers the temperature, lessens the powers of resistance, and at the bottom is not a stimulant at all, but rather a paralyzant. In its primary action, in moderate doses, alcohol greatly increases the work of the heart—but one of the chief dangers of old age arises from over-action of the heart; it dilates the arterioles and increases the blood supply to the brain and peripheries—but in old age all the arteries are suffering from fatty degeneration or sclerosis, and rupture easily, resulting in apoplexy, paralysis, death; it is a whip, which incites the jaded system to intenser effort—but the safety, the very existence, of old age, demands that no intense or unusual effort be required of it; it is a draft payable at sight, which enables a man to draw for to-day's needs upon the bank of to-morrow—but *old age has no to-morrow.*

It may be laid down as a general principle, that those substances whose chief action upon the nutritive system is to retard the normal rate of tissue change, while they may be valuable therapeutic remedies in conditions of disease, or even highly useful in occasional emergencies in health, cannot be considered, so far at least as this action is concerned, as

proper physiological foods for daily use: for, by preventing the excretion of worn-out cells, and thereby favoring the accumulation in the system of waste products, they promote the atheromatous or fatty degeneration of healthy tissues, whether nervous, muscular, secretory or connective. As these degenerative changes throughout the whole organism are those which chiefly characterize senility, it may be said without exaggeration that whatever tends to retard tissue change, hastens the approach of old age. This is true of a large class of substances, sometimes known as accessory foods, of which alcohol, opium and tobacco are representatives. While the same property is also found to a certain extent in tea, coffee, chocolate and other articles of this class, it is in them overshadowed by other and more important ones, so that the question of the advisability or otherwise of their use cannot be decided upon this one fact alone.

Statistics show that only a small number of the habitual users of alcohol reach the age of 80 years, compared with the number of total abstainers from, or exceedingly moderate indulgers in, its use. On the other hand, so large a proportion of old men are tobacco-users in some form, as to render it somewhat questionable whether tobacco can be considered as shortening life. As to tea and coffee, it is very rare to find an abstainer among men and women of advanced life.

Rev. Peter Kimball, of Perth Amboy, N. J., will be 100 years old if he lives to March 3, 1892. He has not used rum since 1810, nor tea nor coffee since 1830. He thinks his longevity due to these abstinences mainly. March 23, 1892, he wrote me a beautiful autograph letter with thoughts, style, expression and chirography of remarkable excellence.—(Note by Secretary, March 21, 1892.)

In this connection it may be well to refer to the need of special attention to the excretory organs on the part of the aged. Regular action of the bowels and frequent evacuation of the bladder should be scrupulously maintained. The term "regular action," however, signifies quite a different thing in one person from what it does in another. While it is generally understood that one movement a day is normal, it is nevertheless true that in some persons three or more movements daily are habitual and needful for comfort, while others can go two, three or more days without discomfort and apparently without injury. But whatever the normal standard for the individual may be, once ascertained, it should be maintained with zealous care as a hygienic, I had almost said a religious duty. Chronic constipation is the deadly foe of clear-headedness and bodily vigor, and the fruitful source of unnumbered evils, especially in women. It should be avoided as far as possible, by dietetic measures, by the force of habit, and if necessary, by medical treatment.

Of scarcely less importance is a careful attention to the kidneys and bladder. It should be an inviolable rule with the aged to attend to the calls of nature in this direction at the first indication, whatever else may wait. Enlarged prostate is a common disease in men past 65, and one which requires careful management. When aggravated by "taking cold," by the jar produced by riding over rough roads or taking long journeys in the cars, or by the irritation of a distended bladder from lack of attention to the indications of nature, obstinate retention of urine is

often the result, necessitating the frequent use of a catheter, or sometimes of a trocar or aspirator, and not infrequently hastening or even directly resulting in death.

I have spoken of old age as a period of diminished activity. But I desire it to be distinctly understood that I do not mean that it is or should be a period of inactivity, but only to emphasize the change from the more intense and wider activity of manhood. For no fact is better established than the need of abundant exercise, both physical and mental, to the prolongation of life, health and vigor. Few things are more disastrous to these ends, than for a man in advanced years, accustomed to a stirring and active life, abruptly to "retire from business," thereby exchanging habits of labor for those of ease, of care for freedom, under the mistaken notion of thereby enjoying a well-earned rest for the remainder of his days. Rather should his relinquishment of business be gradual, with his lessening duties adapted to the failing energies of body and mind, but always sufficient to preserve his interest in life, and incite him to a reasonable degree of exertion. Not only is it "better to wear out than to rust out," but it takes longer to do it. If his business is such as to keep him much of the time out of doors, so much the better for his health. If not, then he needs some additional incentive to lead him into the pure air and sunshine, essential to age as to youth.

His power of resisting external influences, which in youth was strong, is now almost gone. He needs, therefore, to use special care to protect himself from heat, cold and atmospheric vicissitudes, for these are responsible for a very large proportion of what may be called the premature or accidental deaths among the aged. Especially is cold a mortal foe to old age. According to the English Registrar-General, a sudden decline of temperature results in a mortality based upon a given rule in regard to age. In persons under 30, the effect of cold is not indicated by an increase of mortality: above that age it doubles with every nine years of life. That is, for every one person at the age of 30 whose death is caused by a certain low temperature, there will be two at 39, four at 48, eight at 57, sixteen at 66, thirty-two at 75, and sixty-four at 84.

Add to the effects of cold those of heat, moisture, winds and sudden changes of temperature, and we have, in a climate like ours, a most formidable array of dangers to old age from atmospheric causes. To guard against these, the old man must not only suit his food to the climate and season, but he must clothe himself warmly—preferably in woolen garments, as being the poorest conductor of heat—must avoid all undue exposure either to extreme or sudden changes of temperature, and must occupy a comfortable room. His sleeping-rooms should be warm, well-aired and dry. Many a time has the "spare room" proven fatal to gray hairs and decrepit age, resulting in "a cold," pneumonia, death.

Statistics show that more women than men become old. In Massachusetts, out of 203 persons dying at the age of 100 or more, from 1880 to 1890, 153 were females, and only fifty-two males. It may reasonably be supposed that a part of the superior longevity of woman is due to her more quiet, regular and temperate life, less injury from passion and excitement, and less exposure to atmospheric vicissitudes. If this be the case, it furnishes a valuable

as to the kind of life which should be followed, not only by those who would grow old, but by those who, having already reached advanced life, desire still further to prolong their days.

The integrity of the heart and nervous system demands that the old man should avoid all extreme or sudden physical exertion, all intense and depressing mental emotion. Running to catch the cars, lifting a heavy weight, making an eloquent and impassioned after-dinner speech, or indulging in a paroxysm of passion—all these have often been proven to be only forms of suicide for the weakened heart and brittle arteries of the aged. The safety of gray hairs depends rather upon the regular continuance in accustomed paths, where to go on is easier than to stop or turn aside. Habits are strong in the decline of life, and not easily changed. To act in accordance with these is to travel in the line of the least resistance.

The man who has ceased to take an active concern in what is going on in the world about him, has but a feeble hold upon the world itself. When the wish and the will to live are gone, life is sure soon to go too. Dr. George M. Beard has well said that it does not take much experience in practice for a physician to learn that men die who might just as well live if they only resolved to live, and that myriads who are invalids could become strong if they had the native or acquired will to vow they would do so.

A cheerful disposition, which enables its possessor to see the bright side of everything, and prevents him from wearing himself out with worry when things do not go to suit him, is a potent factor in prolonging life. Mental activity, if not coupled with too much nervous strain, may with advantage be kept up to the close of life. It is a well-known fact that literary and scientific men are as a rule long-lived. In all countries, ministers among professional men, and farmers among manual laborers, are the longest-lived classes in the community, and they are exactly the ones who enjoy the benefits of mental and physical labor under the most favorable conditions.

Of prime importance is sleep. Sleep oils the wheels of life, and lessens the friction of labor. The want of it causes all the machinery of life to run with difficulty, and wear out rapidly. Sleep recreates the nervous system—and sleeplessness breaks down the strongest frame. Especially does old age need abundant sleep, that all the vital forces may be carefully husbanded.

To sum up briefly: The food of old age should be simple, nutritious but not too concentrated, not too largely nitrogenous. It should be taken four times a day, in less quantity as a whole than in middle life, and in a soft and friable condition. Stimulants and narcotics should be avoided, unless required by lifelong habit. Tea and coffee may be allowed in moderation. The calls of nature should be promptly attended to. All excesses should be avoided, and regularity, temperance and moderation observed in all things. Careful protection from cold and atmospheric vicissitudes is required. The mind should be kept active to the last. Avoid worry and fret. Look on the bright side of life. Take plenty of sleep. Have the best of care in health, and of nursing in sickness. Avoid passion, excitement, luxury, over-exertion. Thus will life be lengthened, and old age made enjoyable.

HYPERTROPHY OF THE PHARYNGEAL TONSIL.

A clinical lecture delivered at the College of Physicians and Surgeons, Chicago, May 12, 1892.

BY O. PRESCOTT BENNETT, M.D.,

INSTRUCTOR IN LARYNGOLOGY AND RHINOLOGY, CHICAGO POLICLINIC.

Synonyms.—Hypertrophy of Luschka's tonsil. Adenoid vegetations of naso-pharynx, post-nasal growths or vegetations.

Definition.—This affection may be defined as an abnormal enlargement of the lymphoid structures normally found at the vault of the pharynx, frequently causing partial deafness, alterations in the voice, more or less nasal obstruction, with occasional deterioration of the general health.

History.—Czermak¹ was probably the first to have seen these growths and as early as 1860 described them with considerable accuracy, but failed to recognize their clinical importance. Voltolini², in 1865, described a case of deafness associated with, and probably due to this hypertrophy. Löwenberg³ published a similar account of three cases in the same year and made some commendable suggestions as to their pathological anatomy. Meyer,⁴ of Copenhagen, in 1868, was the first to insist on their clinical importance. His interesting paper, in which he gave an admirable account of the symptoms, detailed the microscopical appearances and pointed out the mode of treatment which he had found most useful, was based on a study of one hundred and two cases.

Subsequent writers have given us little of any importance that was not thoroughly understood by Meyer, while our increased clinical experience with the disease, has also demonstrated the correctness of most of his original views.

Etiology.—For convenience the causes of this condition may be divided into the predisposing and exciting ones. Among the former may be mentioned heredity, which so far as known plays very little part in its etiology, yet the disease has been understood for so short a time that it is impossible to determine whether the parents of these patients have ever suffered from a similar condition or not. Several children of the same family are commonly found so affected.

The disease is said to be more frequently found among those of the Jewish race, than of any other. It is essentially a disease of children and young adults, being rarely found after thirty years of age. Sex appears to have no influence in its production. Cold, damp climates are said, by some, to be very productive of this disease, but this has doubtless been unduly exaggerated by a majority of writers. Anterior stenosis of some form or other is associated with a large number of these cases. This is more often caused by hypertrophy of the inferior turbinated body, but not unfrequently do we find some deviation of the septum sufficient to produce more or less obstruction of one or both nostrils. About sixty per cent. of all cases of enlarged oral tonsils suffer from post-nasal growths and nearly all patients having cleft palates have them also.

Meyer⁵ attributes the latter fact to the direct irritation of the mucous membrane, produced by the food passing into the naso-pharynx, but this is a rare complaint in these cases and probably has nothing to do with its cause. Bilroth⁶ has pointed out that by the contraction of the upper constrictor, the