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Hayward, G.

A

LECTURE

ON

SOME OF THE DISEASES

OF

A LITERARY LIFE.

DELIVERED BEFORE THE

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BY GEORGE HAYWARD, M. D.

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DISEASES OF A LITERARY LIFE.

THE subject of education is of the deepest importance to our countrymen. The government under which we live is strictly a government of popular opinion, and if great and untiring efforts be not made to keep the public mind duly enlightened, all our valuable institutions will be swept away. If our citizens should become indifferent to the cause of popular education, the tone of public morals would be lowered, the reverence for religion would decay, and our country would soon be distracted with lawless anarchy, or fall an easy prey to some ambitious and popular leader. No one therefore who loves his country, and duly appreciates the inestimable privileges we now enjoy can be indifferent on this point.

The deep interest which I feel in the subject, and my readiness to co-operate with you in this great cause, have induced me to accept the invitation with which I have been honored by your committee ; at the same time I can declare with the utmost sincerity, that it is with extreme diffidence that I appear in this place on this occasion. No one will be surprised at this, who calls to mind the learning and acquirements of the * two individuals who have addressed you on the former occasions on physical education, the character of the audience before whom I appear, and the extent and importance of the topic on which I am to speak.

But I have yielded my own opinion to that of others whom I am accustomed to respect, and have been induced to comply with the request to offer some observations on physical education be-

* John C. Warren, M. D., and James Jackson, M. D.

cause I was anxious to show the interest I felt in your institution, though I was at the same time confident that there were many others better qualified for the task.

It has been truly said that man is the creature of education. His moral, intellectual and physical powers are all susceptible of a high degree of improvement. At birth he is the most feeble and helpless of animals, and at a period when the lower orders of the creation, by the development of their bodily powers and that peculiar faculty which we call instinct, are enabled to provide for their wants, man is dependent on those around him ; but by a proper cultivation of his faculties he becomes associated with a higher order of beings. It is the province of others to speak of his moral and intellectual culture ; my remarks will be confined to his physical education, and I shall occupy the time allotted to me in saying something of those diseases of the body which are the most likely to be induced by the exertion of the intellectual faculties. I wish not to have it understood that any diseases necessarily follow the cultivation of the mind ; on the contrary I am convinced that this cultivation, if judiciously managed, promotes the health of the body. But it cannot be concealed, that in our country at least, literary men rarely attain a great age, and that not unfrequently during the greater part of their lives, they are subjected to severe and distressing disease. This is not a necessary consequence of their pursuits ; there must therefore be either no regard to system in their mode of life, or there must be some radical error in the system which they adopt.

I shall probably be better understood in what I am going to say, if I offer a few general explanations in relation to the animal economy. The human body is composed of many distinct parts, which are destined to perform functions, all of which are more or less important to the preservation of life, and which have an intimate relation with and dependence on each other. These parts are called systems ; a few of which I shall briefly notice.

One of the most important is the *nervous system*. This is composed of the brain, the spinal marrow and the nerves. The brain occupies the whole cavity of the skull ; the spinal marrow, which is a continuation of the brain, is situated in a canal in the spinal

column, and the nerves go out from the brain and the spinal marrow to all parts of the body. The brain is the seat of perception, and the nerves are the agents by which it is connected with external objects. How this communication is effected is totally inexplicable; but physiology abounds with theories sufficiently wild and visionary on this subject. But our business is only with facts. The nerves have not all the same functions. Some are nerves of sense, others of sensation, others again of motion, and another class is destined to endow particular organs with the power of executing certain functions. The nerves of sense, with the exception of those of feeling, which are spread throughout the body, arise from the brain and are carefully protected from injury by passing through bony canals. But though these nerves are exquisitely sensible to their own peculiar stimulus, as the optic nerve to light, &c, they have not the power of imparting motion or ordinary sensibility to the organs to which they are distributed. If the gustatory nerve should be divided, the tongue would retain its power of motion and sensation, though the sense of taste would be lost; and it is well known that all the motions of the eye are independent of the optic nerve, and in a recent surgical operation, in which I had occasion to divide that nerve itself, the patient afterwards informed me that it gave him no severe or peculiar pain.

There are no less than twelve pairs of nerves sent off from the brain and thirty pairs from the spinal marrow. Those of the brain are distributed to the organs of sense, respiration and digestion, and two small nervous filaments go out from this organ, which seem to be the rudiment of a system of nerves which supplies nearly all those organs over whose action the will has no control.

The brain is evidently the instrument of the mind, and its derangement is followed by a disturbance of the intellectual faculties. If its functions are interrupted, either by injury done directly to the brain or through the medium of the nerves, the mind ceases to act. A slight compression or a powerful jar are frequently sufficient to suspend for a time the operations of the mental powers. So dependent are these powers on the organization of the brain for their healthy exercise, that many have supposed that the mind was nothing but matter exquisitely organized; and it

seems to be on this foundation that has been reared, the whole superstructure of what is familiarly known under the name of Phrenology. The teachers of this doctrine, as far as I understand them, maintain not only that the brain is the seat of the mind, but that the intellectual faculties, the moral powers and the animal propensities reside in different parts of it, and that these parts are more or less developed in proportion to the degree in which these properties are enjoyed by individuals, with a corresponding development of the skull, and that it is easy to discover by an examination of the skull, the extent to which these properties are possessed. The intellectual faculties are said to reside in the forepart of the brain, the moral powers are placed in the upper part of the centre, and the animal propensities at the base. And then we have charts of the skull on which are marked the precise situation of each of the various faculties and powers, though it must be confessed that the professors have not till of late been agreed as to the exact spot in which these different faculties reside.

Too many distinguished men however, have been the advocates of phrenology to allow me to speak lightly of it. But if it be maintained, that mind is the result of organization, and that its various faculties and powers are placed in different parts of the brain, which are exclusively assigned to them, I must say that the doctrine is not only fraught with dangerous consequences, but that it is at variance with facts familiar to almost every physician.

A belief that the intellectual character of men can be determined by an examination of the skull, will often lead to very erroneous and unjust conclusions, and may tend to discourage individuals, who may not happen to possess the external characters of great mental powers, from all efforts at improvement. But this would not be a substantial objection if the theory were well founded. Is the brain anything more than the instrument by which the mind operates? We know, that the brain may be wounded, extensively lacerated, and large portions of it, amounting to a quarter of the whole, actually removed, without impairing in the slightest degree the intellectual faculties. Abscesses and tumours of large size have often been found in the brains of individuals after death, who retained during life the full possession of their mental powers.

It has not unfrequently happened in wounds of the head, that the very organs of certain faculties, according to the phrenological system, have been removed, without impairing these faculties.

Though the mind is affected in most diseases of the brain, it does not necessarily decay with the decay of the body. It is not unfrequent, a few hours before dissolution, when the tongue is hardly able to give utterance, and the whole animal frame is wasted and worn out, to witness displays of intellectual power that would astonish at any time. The mind, acting with more freedom, soars higher, as if in anticipation of the disenthralled state on which it is about to enter.

It is true that the brain is the instrument by which the mind operates, and the more perfect the instrument, the more perfect will be the mental operations. But we know not in what this perfection consists. It cannot be in the mere size of the organ, as is frequently supposed; for this is contradicted by what we see in other animals. Nor is it in its resemblance to the human brain, for some of those animals in whom this organ resembles that of man most closely, are surpassed in sagacity by others in whom the resemblance is much less complete. We had better admit then with Buffon that "the soul, thought, and speech do not depend on the form or the organization of the body." It may be thought humiliating by some to acknowledge our ignorance, but it is better to do this than to fall into dangerous error.

I have however, already digressed too long to pursue this subject farther, and I will now proceed to notice some other parts of the animal economy, which are important, both from their connection with the vital functions and their liability to disease.

Among these the digestive apparatus holds an important place. The food during mastication becomes intimately mixed with the saliva, and is then conveyed by a powerful muscular action into the stomach. It is brought in this organ, by the agency chiefly of the gastric juice, a peculiar fluid which is secreted by the stomach, into a homogeneous mass. As soon as this mass enters the first intestine it comes in contact with a set of absorbent vessels, which, from the milky appearance of the fluid they contain are called lacteals. These vessels take up all that part which is adapted to nourish the

body, they then unite in a common trunk, which conveys this nutritious fluid into the blood vessels. But this fluid is not yet sufficiently assimilated to the blood to form a part of the circulating fluid, which is destined to convey nourishment to the whole body. How this purpose is effected will be seen by attending to the circulating and respiratory functions. The fluid received from the lacteals is poured into a vein, and is thence carried to the right side of the heart. In man the heart is a double organ, each part of which is the centre of a distinct circulation. That of the right side circulates the dark colored blood, which is returned by the veins from all parts of the body, after having parted with a portion of its nutritive principles; and with this blood, just before it enters the heart, is mixed the fluid which is furnished by digestion. This dark colored blood is sent by the right side of the heart to the lungs, and it there undergoes a change, either by parting with some noxious principle which it contains, or by absorbing something from the air, and it then becomes of a bright scarlet color. It is then returned to the left side of the heart by what are called the pulmonary veins, adapted to all the purposes of life, provided the lungs be in a healthy state.

The instant it enters the left side of the heart, it is sent by that organ with great force through the arteries to all parts of the body. It has been calculated that two ounces of blood are thrown out at each contraction of the heart, and as there are about seventy of these in a minute, nearly ten pounds of blood must consequently pass through the heart in that time; and as the whole blood in a male adult is estimated at twentyfive pounds, it follows that the whole blood of the body is circulated, in less than three minutes. This action of the heart continues during life; it cannot cease for a moment without producing death; so necessary is the stimulus of the red blood for the support of the vital functions.

The heart does not move with the same rapidity at all periods of life. In infancy its pulsations are more than one hundred in a minute, these gradually become less frequent, till in old age they rarely exceed sixty. During the early periods of life the body is continually increasing, and the circulation is more rapid to supply the demands which are made by the growth of the various organs.

A principle of decay seems to be implanted in the structure of the animal machine at birth. The circulating system, which is so essential to the continuance of life, is from its very activity doomed to destruction. So long as all the systems act in perfect harmony, the circulation goes on well; but the least interruption in one is sure to produce embarrassment in the others. In the early periods of life this is not sensibly felt, because the machine can at that time accommodate itself to great irregularities; but as we advance in age, the case is different. If the respiratory or digestive functions are disturbed, the circulation labors, the blood accumulates in some organs or vessels, producing immediately serious effects or laying the foundation for incurable disease.

But even without this, the heart and arteries cannot carry on the circulation for any length of time beyond the term of years usually allotted to man. The brain becomes gradually less sensible, the nervous energy is of course diminished, the heart consequently acts with less power in distributing the blood, and nutrition is less perfectly performed. The valves of the heart and the great vessels become thickened, and finally converted into a bony substance, and the vessels themselves lose their strength and power of resistance. The circulation is languid and carried on with great labor, nutrition in the different parts is not perfectly effected, and the whole functions of the animal body finally cease, without the occurrence of any disease. We see then in what light we should regard the pretensions of those who boast of discoveries, which will confer perpetual youth and immortality on man's bodily frame. Should not the strong marks of dissolution, which are impressed on it by its Creator, and the evidence which we have of the imperishable nature of the human mind, rather teach us to consider the present state as the beginning only of existence?

The functions of respiration are intimately connected with those of the circulation. These are performed by the windpipe and the lungs. The lungs are large organs, divided into three parts or lobes on the right side and into two on the left, and occupy the principal part of the cavity of the chest. They are composed almost entirely of air tubes and cells and blood-vessels. The blood in an impure state is brought from the right side of the heart and distributed

in numberless vessels throughout the lungs. In the act of inspiration the air is brought into the air cells and the blood is separated from the air by a delicate membrane only. The blood in health is immediately changed in color and properties, though it is not determined precisely how this change is effected or in what it consists. The air we breathe is composed of two different constituent principles, with a small mixture of a third. Soon after this discovery was made, and it is of modern date, it was thought that in the process of respiration the blood absorbed the oxygen or vital part of the air, and hence this red blood received the name of oxygenated blood. It is very certain that the air thrown out from the lungs is very different from that which is taken in, containing a much greater quantity of fixed air or carbonic acid gas. Some chemists have undertaken to show that all the oxygen, which is taken from the atmospheric air in respiration, is no more than what is contained in the fixed air which is discharged by the lungs, and that this air is formed in the process of respiration by the union of the oxygen of the air and the carbon which is given off by the blood in a volatile state. They assert therefore that the blood in respiration does not absorb oxygen from the air, but that it parts with a portion of its carbon, and that it would be more proper to say, that in this process the blood is decarbonized and not that it is oxygenated.

Without stopping to discuss the comparative merits of these theories, it must be acknowledged that the change produced in the blood in its passage through the lungs is essential to life. If it be completely suspended, even for a moment, death follows. When the air is prevented from entering the lungs, the circulation continues in them, but the blood undergoes no change, and is returned to the heart with the same color and qualities as before it entered the lungs. The instant this black blood is thrown by the left side of the heart to the brain, life ceases. Hence we understand the manner in which death is produced in drowning, hanging, and in entering places in which the air is unfit for respiration, as in wells and cisterns. In these cases death is not instantaneous, because some air finds access to the lungs, and in some cases of hanging, life is destroyed by a fracture of the spine and a consequent pressure on the spinal marrow. The Turkish punishment by the bow-string, which consists

in drawing a cord so tightly around the wind-pipe, as completely to prevent the entrance of the air to the lungs, produces instantaneous death.

It is evident I trust from what has been said, that the functions of the brain, stomach, heart and lungs, are essential to life, and it follows that when they are deranged or imperfectly performed, disease is the consequence. It is true also that they are the organs which are in most cases primarily affected in the disorders of literary men. In speaking of the diseases most likely to occur in connexion with a cultivation of the intellectual faculties, the only order which I shall observe will be that of time, that is, I shall describe them in the different periods in which they are the most liable to occur. Till the body has attained its full size, all its powers seem to be directed to its nutrition and growth. These powers bear a different relation therefore to each other at the different periods of life. Before the adult age, all the nutritive powers are in excess; the brain and nervous system, which give energy to the whole, are more developed in proportion in the child than in after life, and in consequence children are more liable to affections of the brain and nerves. Even cutting the teeth or overloading the stomach will not unfrequently produce in them violent and sometimes fatal convulsions, and there is a strong tendency in many of the diseases of childhood to terminate in dropsy of the brain. These facts should teach us, that the minds of children should be gradually developed, and that there is danger that the brain will suffer if they are early excited to action. Epilepsy and other affections of the brain, are known to be often the melancholy attendants on precocious childhood. The minds of children, under ordinary circumstances, are developed spontaneously at a period as early as is consistent with health, and it may well be doubted whether the premature display of intellect, which is sometimes witnessed in them, can compensate for the hazard which must necessarily accompany it.

A derangement of the digestive functions, in some of its forms, is among the most frequent and troublesome diseases which afflict literary men. It is most likely to occur between the ages of fifteen and thirtyfive, though no period of life is wholly exempt from it. There is, as we have already seen, a direct connection by means

of nerves between the brain and the stomach, and we know that a blow on the head is often followed by vomiting, and that a disordered stomach usually produces pain in the head. Various affections of the mind have a powerful influence over the digestive functions. Grief will not only destroy for a time the appetite for food, but will also interrupt and suspend the power of digesting it.

Under the name of Indigestion, or the more popular one of Dyspepsia, is included a great variety of morbid affections, which all agree in one particular, viz. that the stomach, whatever may be the cause, does not readily and with ease digest the food taken into it. This sometimes proceeds from the state of the brain, at others from that of the muscular coat of the stomach; at one time the secretion by which digestion is effected, is imperfect, deficient in quantity or of a quality not adapted to the purpose for which it was intended. It not unfrequently happens that the lining coat of the stomach is in a state of low inflammation, which sometimes terminates in serious and incurable affections of the organ; and again all the symptoms of dyspepsia may arise from a disordered state of the liver, which acts sympathetically on the stomach. If this view of the subject be correct, it must be perceived, that the same means cannot be adapted to all cases of dyspepsia, and that those who pretend that they possess a remedy suited to every individual laboring under the disease, must either deceive themselves or be willing to deceive others. It is not necessary to be acquainted with medical science to know, that what would be beneficial in inflammation would do mischief in debility and want of action.

But though this enfeebled state of the stomach is often an attendant on a literary life, it is by no means a necessary consequence of it. Few men, certainly in this country, are injured by too much study; there are none among us who devote more hours to mental labor, than is compatible with health. The difficulty arises rather from a sudden change of habits, and a neglect of those means which are essential to a sound state of the body. Our students, the moment they become so, are too apt to abandon exercise; confine themselves too long in hot and perhaps ill-ventilated apartments; place no restraint on their appetite for food, which is usually as great in those who lead a sedentary life, as in those who labor daily many

hours in the open air, and in addition to all this, indulge themselves not unfrequently both in smoking and chewing tobacco, and then if the stomach should flag and seem unable to accomplish the task that is required of it, the whole difficulty is referred to studious habits and mental labor, while all the other circumstances which have been named, and which no doubt are the real cause, are entirely overlooked.

Another trouble, and one which is intimately connected with the derangements of which I have just been speaking, is frequently met with in professional men, I allude to a disturbance in the functions of the liver. This most frequently occurs in those individuals, who in addition to intellectual labor, are in situations of great responsibility, and the disease is perhaps more often seen among the clergy than any other class of society.

The liver, whose office it is to secrete the bile, is the largest gland in the body. But unlike other glands, it is not supplied with the arterial or pure blood for this secretion; on the contrary, the bile is secreted from the venous or dark-colored blood, which is returning to the heart for the purpose of undergoing the change which is effected in it by the lungs. One of the objects of this secretion therefore seems to be to rid the blood of a portion of its impurity, and the bile may be regarded as an excrementitious fluid. If the liver fail to perform its office or if there be any obstruction in the passage of the bile to the intestines, the blood is impure, and the effect of this is felt by no part of the system more sensibly than the brain; and it is perhaps fair to conclude that the brain may have some influence in producing this state of the liver. At any rate we know, that in all those morbid affections, which arise from a disordered state of the liver, whether it be only a derangement of its functions, or whether the organ itself be actually diseased, the mind is sensibly affected. This remarkable sympathy did not escape the observation of the ancients; they attributed nearly all cases of mental disease to a derangement of the abdominal organs, and the term which is employed to denote one species of this disease, melancholy, is derived from two Greek words meaning black bile.

This disordered state of the liver is usually attended with a tor-

pid state of the whole alimentary canal, a great depression of spirits, a general lassitude and an indisposition to bodily and mental effort. It must be overcome at an early period, or it will prove almost unmanageable. It sometimes requires great sacrifices on the part of the patient for its removal. Change of scene, change of habit, change of diet and sometimes even change of occupation, must be made before it can be cured.

The next in frequency to the diseases of the digestive organs are those of the lungs, and they are unfortunately for the most part of a more severe and alarming character. Though the respiratory apparatus is often deranged, the only wonder with those who are acquainted with its structure and functions is, that it is able to keep in order as long as it does. The lungs are of the most delicate organization, composed almost entirely of air vessels and cells and blood-vessels, and covered by a membrane of the finest and most attenuated texture, and this membrane is every moment of our lives, in contact with the atmospheric air, which is not unfrequently loaded with foreign substances of a highly acrid and deleterious nature. Hence the lungs are oftentimes disturbed and irritated; but if the rest of the system be healthy, the equilibrium is soon restored, and the organs regain their wonted activity. If on the other hand the functions of the other parts are imperfectly performed, if there be a general torpor and want of action throughout the system, an accumulation of blood takes place in the respiratory organs, and it sometimes lays the foundation for incurable disease, though it is frequently thrown off by that conservative principle which seems to preside over the animal economy. But if instead of being removed by the efforts of nature or the interference of art, this derangement is suffered to continue, it increases on every slight occasion, till a violent hæmorrhage ensues to relieve the crowded organs. And this bleeding at the lungs is one of the most common diseases of literary men. Their habits of life are well calculated to produce this. Their want of active exercise, which prevents the circulation from having that vigor so essential to its well being; their long confinement in close rooms, breathing an atmosphere not the best calculated to impart energy to the system, and the quantity of food which they take, usually much more than they require with their limited

exercise, all seem to predispose them to the disease in question. The irregularity of their habits too, both as to sleep and exercise, is not to be overlooked in estimating the influence of the causes which produce hæmorrhage of the lungs. This disease, though alarming, is by no means always necessarily fatal. If it be properly treated at the time of its occurrence, and the patient afterwards adopt an entire change as to diet, regime and exercise, if there had been any error in these particulars before, it may never again recur, unless there should happen to be some strong constitutional predisposition to it. When this is the case, before recovery from one attack is complete, another occurs, and the patient at length sinks into a confirmed pulmonary consumption. This is one of the most frequent terminations of bleeding at the lungs, when that disease has a fatal issue, though it has happened in some rare cases, that the primary disease has been so violent in its attack, that the system has sunk under it.

But though consumption may arise in this way, it is unfortunately far from being the only mode in which it originates. It is the great scourge of our country, and sweeps off annually more victims than any other disease. It delights too in "a shining mark," and selects the young, the blooming and the intellectual. Its attacks are usually so insidious that it has made sure of its victim, before he is aware of the blow. A slight cough, which almost escapes notice, is for a time perhaps the only symptom of a malady that is sapping the constitution; this is followed by slight chills which are succeeded by flushes of heat, recurring daily; a general lassitude and indisposition to action are soon perceived, and before long, night sweats and hectic fever set in as the melancholy precursors of the fatal termination, which will not long be postponed.

The frequency of this disease in the United States may be in part owing to the great and sudden changes of weather, which occur in some parts of the country, and which have a baneful influence in all affections of the pulmonary organs. A change, essential to life, as has been before observed, is effected by the lungs in the properties of the blood, and it is certain that the skin performs to some extent an office of a similar character. When therefore the heat of the body is suddenly reduced, the blood deserts the sur-

face and circulates more through the internal organs, and the skin consequently affords but little aid to the lungs. To persons of vigorous health, this is of no consequence; but the case is altogether different with those of feeble lungs, and a violent hæmorrhage has sometimes been produced merely by a sudden transition from heat to cold, in persons apparently in good health. Every physician is aware of the advantage of a uniform temperature in all cases of pulmonary disease. It is desirable that the lungs should have as little as possible to do, and it is important therefore to invite the blood to the surface by a steady and agreeable warmth. The changes produced in the appearance of patients laboring under consumption, by the changes in the temperature of the air, are very remarkable. While the atmosphere is mild and warm, the countenance and the whole surface of the body are of a natural healthy color; but a sudden reduction of temperature throws an increased volume of blood to the lungs, which are feeble and diseased, they are unable to effect completely the necessary change, dark colored blood is consequently returned to the heart, and thence sent to all parts of the body, giving the countenance a livid hue.

This view of the subject affords perhaps the best explanation of the advantages to be derived from sea-voyages in pulmonary disease. The temperature of the ocean is nearly uniform at all seasons of the year, and the air at sea is of an agreeable warmth and subject to but slight variations. The lungs perform their functions with more ease under such circumstances, than when subjected to great irregularity in the quantity of the blood sent to them, which is the uniform effect of great and sudden vicissitudes of temperature.

Advantages however are not always derived from sea voyages in pulmonary diseases; partly because the voyage was not of sufficient length, or because the climate of the country to which the patient was sent was not adapted to his case, but more because the voyage was not undertaken at an earlier period. But little benefit can be looked for, when there is an organic affection of the lungs.

We can understand too, in this way, of viewing the connexion between the functions of the skin and those of the lungs, the ad-

vantages that may be derived in our own climate by artificial hibernation, as it has been called, of consumptive patients, that is, of confining them during the winter to a room kept at all times at an uniform temperature. There is more reason to believe however, that patients lose nearly as much by the want of exercise, when subjected to this process, as they can possibly gain in any other way.

At a period of life somewhat later than that at which pulmonary affections are most likely to occur in literary men, diseases of another organ, the brain, are not unfrequently met with. Apoplexy and palsy, the two most important, are the only ones that I shall notice. Apoplexy, though its seat is in the brain, may arise from the state of that organ, or that of the stomach, or that of the circulating system. It is a state of mental stupor and bodily inaction, arising from pressure on the cerebral organ. Sometimes the brain is so much weakened by great mental efforts, made without proper attention to bodily exercise, that it is unable to bear the ordinary circulation of blood through it. At others, the stomach is overloaded and cannot digest the food that is conveyed into it. This in some cases is sufficient, if immediate relief be not obtained, to produce such powerful effects on the brain, as will terminate in apoplexy. And finally the exciting cause of the disease seems occasionally to be owing to the state of the circulating system; though it can hardly be supposed that this alone would be sufficient to produce it, if the brain were not already predisposed to it. At all times a large portion of the whole blood of the body circulates in the brain, and sometimes accumulates there in the veins and sinuses, producing directly compression, or leading to an effusion of water. At other times the blood is carried there with such force, that some vessel gives way, blood is poured out, the brain is compressed, and the patient becomes apoplectic.

Palsy usually occurs at a later period of life than apoplexy. It seems to be owing to a deficiency of action in the brain and nervous system; it is sometimes universal and at others partial. Frequently one side of the body only is affected, sometimes the lower half is paralyzed, and at other times it is confined to particular limbs.

There is in this disease the same loss of muscular power to a certain extent, as in apoplexy, but without the same disposition to sleep and mental torpor. It does not appear to be owing to congestion in the brain or compression of that organ, but rather to a want of energy. Though the patient is not torpid, yet if the affection be at all severe, the mind is usually affected in a greater or less degree, and if there should be partial recovery by the efforts of art or the powers of nature, there is always reason to apprehend another attack. This remark, however, does not apply to that species of paralysis which affects a single nerve only. It is not uncommon to see this affection in the nerve which supplies the muscles of the face; it appears to have no connexion with the brain, it is in all respects a local disease, and though the power of motion is not always recovered, no other inconvenience remains.

The circulating system is not exempt from disease. The heart and large arteries, not unfrequently towards the close of life are so much distended as to impede and for a time interrupt their functions. These diseases however are by no means peculiar to literary men, though I am inclined to believe that they are more subject to them than those individuals who lead a less sedentary life, and who labor or takes more active exercise in the open air. At any rate it is certain, that there is an intimate connexion between this class of diseases and the passions of the mind. They become invariably more frequent, it is said, in periods of great public interest and excitement, and numerous cases of the kind occurred among the distinguished actors in the French Revolution.

I have thus noticed in a very brief and imperfect manner some of the principal diseases of literary men. This is not the place to say anything of the remedies, but I must ask your indulgence a little longer, while I offer a few words on the subject of prevention. Everything on this point may be summed up in two words, temperance and exercise. By temperance I do not mean abstinence from distilled spirit. The good sense of our community has already decided, that ardent spirits are never required by any individual in health, and that they should be administered in disease, like other powerful remediate agents only by skilful hands. To the correctness

of this decision I cordially add my testimony; daily experience teaches me that the use of alcohol not only swells our bills of mortality to a frightful size, but renders complicated and unmanageable diseases which would otherwise be under the control of art.

By temperance, when addressing a body of literary and professional men, I mean moderation as to the time allotted to sleep and study, moderation in exercise, regimen and diet, particularly in the quantity of food. The accommodating power of the digestive organs is such, that they can adapt themselves to almost any kind of nutritive substance and assimilate it to the body, without any violent effort. The quality of the food, if it be not actually deleterious, does not produce much inconvenience, so great is the solvent power of the secretion of the stomach. But when the quantity is daily more than the wants of the system require, a powerful effort is necessary for digestion; during this process, the other functions of the body are less perfectly performed than usual; the whole surface becomes cold, there is a general lassitude and indisposition to action, with a strong tendency to sleep. Nature thus by a powerful effort and concentration of her energies on one point, at length succeeds, and the system resumes its wonted activity. But if this is to be daily repeated, disease must inevitably ensue. The stomach may be excited to action a little longer by artificial means; condiments of various kinds, alcohol and wine are often resorted to, but they only increase the debility which is sure to follow. At length the stomach loses its action entirely, or a sudden stroke of apoplexy follows a hearty meal, or the liver becomes incurably diseased, with dropsy and its attendant evils, or perhaps the heart and great vessels become so enlarged as to cut off all hope of relief.

I said that the quality of the food was of less consequence than the quantity, but I did not mean that it was of no consequence. It is desirable that it should be simple and nutritious; such as is easily digested, and every individual's own experience is the best guide on this point. In fine, it is important that the food taken should be in such quantity and of such a quality that it can be digested without disturbing the other functions of the body; without rendering the mind torpid and the body inactive.

Exercise, to be of the greatest possible use, should be taken daily and in the open air. Passive exercise, such as sailing or riding in easy carriages, is best adapted to invalids, who are unable to take a more active kind. To them it is valuable, and the importance of remaining long in the open air seems not yet to be generally appreciated. Active exercise, such as walking and riding on horseback, is what is required to preserve the health of those who lead a literary and sedentary life, while passive exercise is adapted to those who are in pursuit of it. Walking is perhaps on the whole best calculated for students, for what is lost by the length of time necessary to obtain sufficient exercise, is more than compensated for by the advantage derived from remaining so long in the open air. Many are willing to take exercise while the weather is pleasant; but it should be taken daily without regard to weather; and there can be no better proof of the benefit resulting from this, than the almost uniform good health of the members of the medical profession, who are exposed not only to all vicissitudes of weather, and at all seasons of the year, but who are compelled to expose themselves frequently to the night air.

Much has of late been said in favor of gymnastic exercises, and strong efforts were for a time made, and with some degree of success, to introduce them into our public seminaries. To the young they cannot be injurious; in many cases they are no doubt useful, but it may well be doubted whether they can ever be made to take the place of the youthful games and sports that have been transmitted for ages, and if they could, whether the exchange would on the whole be advantageous. But if they are not undertaken at an early period of life, they may prove mischievous, by bringing into action muscles unaccustomed to be thus exercised, and in this way lay the foundation for some severe affection.

With attention to diet and exercise, modified to the peculiar circumstances of each individual as his own experience may dictate, almost every student may promise himself good health with a fair prospect of attaining the age which is the usual period for man, and what is of infinitely more consequence, he will have every reason to believe that the light of intellect will remain unclouded to the last.