An Inaugural Dissertation

on

Hygiene

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By

J. A. Upshaw

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To Dr. A. H. Buchanan

As a mark of due respect for his high attainments in the science of medicine, for his many excellent qualities of both head and heart, this feeble effort on the Preservation of health is affectionately inscribed by his sincere and most humble servant.

S. A. Upshaw.
Hygiene.

Impressed, as I am, I have endeavored to give my feeble views on this subject.

The physical organization of man as well as his mental endowments is naturally superior to the rest of animated creatures. This is evinced not only by his anatomical structure, but by his history, where he has not been impaired, by his departures from the laws of nature. But while the lower orders of animal life, in the happiness of health and primitive vigor around him, civilized man alone is the victim of constitutional infirmities and countless diseases, the dreadful penalties of his voluntary departures from the laws of his system, thus making his free will, and his superior
mental endowments the instruments of his own ruin. I design pointing out in a brief manner, the principle—natural means of developing the human system and preserving its health, as far as I am capable, and shall endeavor to enforce the importance of reliance upon them mainly instead of the almost exclusive reliance upon medication, which is so perniciously fashionable, it is folly to neglect the means on which the Creator has made constitutional signs to depend, till the vital flame is almost extinguished, and then attempt to restore it by medication alone, the attempt to resuscitate a dying plant by a drop of water, or to kindle a heap of wet wood with a paper flame would be as national. As man's intellectual or
moral character is determined in a great degree by his education and associations through life, so his bodily vigor is influenced by his habits from earliest childhood to old age. An infant’s diversities of form, structure and predispositions to disease occurring in the family which may be due, in some degree, to natural causes and to that extent may be unavoidable, but the most of these differences are owing to the habits rather than of the individuals themselves or to those from whom they inherit their peculiarities. In the sins of the Father, visits the offspring to the fourth generation in the form of physical infirmities—more certainly perhaps than in any other way. Then what are the natural conditions on which a proper
development and health of the body depend. The first thing, I shall notice, and that which is more frequently neglected, than any other is exercise. If the question were asked, what is the most important rule of health, it might be answered as Demosthenes said of oratory, Action! Action! Action! It might as reasonably be expected that vegetation could spring forth, and grow, and flourish, without light, heat, and moisture, as that the animal frame, could be fully developed and preserved in health, without vigorous action. It is an indispensable means, it is indicated by the human frame its long levers, and numerous muscles attached to them, the arms, the legs, the hands, and the feet, the numerous joints, and their mobility; all
obviously indicate that it is formed for rigorous, complicated, and repeated action. Exercise is an instinctive want in the animal economy, it may be in the simile motions of the infant, in the romping of childhood, and youth, and in restlessnes, under restraint, of more mature age. Where nature points out the rule of action, it cannot be disregarded with impunity, even inanimate things are preserved by motion. The waters are purified by agitations, waves, and tides. The atmosphere, by its ever varying currents, vegetation, is continually waved by the ever varying winds, and is strengthened by their influences. But motion, is more especially a function of animal being on the exercise of which, the perfection of their growth, and their preservation
most directly depend.
This is secured to brutes, in a state of
nature, by the repeated exertion which
the instinct, and necessities lead
them to make in procuring food.
The habits of man are more artificial,
and therefore must be regulated,
by his reasons, but man continually
violates this great law of his physical
frame, and there it is in a low state
of degeneracy. Brutes, approach man, in
non-typical degeneracy, and susceptibility
to disease, in proportion to the degree of
their domestication, and the contraction
of their natural range of activity. The
salutary effects of exercise appears con-
spicious, by a close observation of the
various classes of men, in reference to
their habits, and vocations, and their
consequent bodily peculiarities. Nations
and clasps noted for bodily activity either in the chase, in war, or in the arts of civilized life, have better, better developed frames, and are less liable to constitutional incidental diseases, than those who are more indolent. The strolling Indians of North America possess more muscular and vigorous forms, and are more exempt from constitutional infirmities, than their white brethren, although both races are surrounded by the same natural circumstances. The laborer may be distinguished anywhere by his sanguine complexion, large muscular broad shoulders, full breast, and stoutness of form. The marks are more striking in females, who labor because the muscular exertion, in them and of the inactivity of the others of their sex are more distant, and consequently the contrast is greater. It is not
difficult to judge of the various employments of men by the comparatively larger development of the muscles, and other organs particularly exercised in their vocations. For instance the right arm of the Blacksmith is comparatively larger than the left, which is owing to using the hammer in his right hand. The lower extremities of the Indians are more muscular than the upper, because they are more used in their mode of life than the latter, while the shoulders and upper extremities, of the civilized are larger for the same reason. The negroes of our southern climate, are more muscular, and more durable, than the white which may be ascribed to their constant hard labor. The medical statistics prove contrary to the opinion of some, that there is less mortality, and particularly from
constitutional diseases among the active classes, than among the inactive. This
would be a reasonable conclusion, without fact to support it, for no position—
deems more reasonable, than that just
in proportion to the vigor of the system,
and cabability of bearing exertion, will be
its power of resisting mortific impressions
of every kind. On the other hand the
inactive are characterized by a thin delicate
skin, small limbs, thin soft muscular narrow
chest, and inability to support long continu
ed muscular action, in other words all
their organs and powers are deficient, and
consequently all experience shows them to
doomed subjects of disease and premature
death. The aptitude of this class to conquer
by in advanced life, forms no exception to
but is a confirmation of the general truth
for this condition itself is a disease,
and is always connected with feebleness of the vital power. It may be necessary just here to qualify this exhibition of the dependence of development on exercise, by observing that its full effects cannot be seen in a single individual, but must be traced through many generations. For these effects, are transmitted from the parents, to children. An individual, of vigorous parents, may have a tolerable constitution, although he is bred, in indolence; and one from feeble parents, may have a feeble frame although he be raised to activity, but the one is invigorated, and the other is invigorated, by respected habits. The qualities transmitted from both parents, are dependent on their habits, and therefore the general proposition is true, and must be evident.
But although most persons are convinced, by reflection, of the necessity of exercise, yet they are prone to forget it in practical life. A concise view therefore of some of the most prominent ways in which it is contributes to health may serve to impress its importance, on the mind.

First, it quickens and exhilarates the nervous system, that source and generator of motion, which ramifications minutely every part of the body, and by which all the tissues, and organs, perform their functions. Second, it quickens the actions of the heart, and arteries, and accelerates the circulation of the blood, that great fountain of life, by which all the solids are formed, and by which they are constantly renewed, and—
preserved. Thirdly, it increases respiration, by which a greater quantity of the vital principle of the air, is consumed and combined with the blood, and thus vivifying that life sustaining fluid. Fourthly, it increases animal heat, an agent powerfully efficient in all the functions of the system. Fifthly, it increases the action of the skin particularly, and thus prevents any noxious matter from combining with the blood. And lastly, it assists digestion, and in short, it inhales us and perfects the action of all the organs of the body to the proper performance of the functions which constitute health. Now if these views be correct, it becomes necessary to apply them as they are of the greatest importance. And there is no time in life, of which
exercise is so essential, as that of childhood, this is the time at which the harvest should be reaped. Nursery, is the workshop in which human beings are shaped, and fashioned. The foundation of many infirmities are laid in nursery. All extremes should be avoided, and children should have free access and motion of their limbs; they should be reasonably exposed to the air, and to all natural influences that surround them. Nature gave the limbs for motion, the air, for respiration, but in how many instances are they restrained by misguided parental tenderness, or parental vanity, which is left pardonable. So error is more common, than that of cramping the children, by inconvenient modes of dressing, or
by having them carried in the arms of the nurse, continually, and thus preventing them from exercising their own limbs. I can see nothing in it but natural consequences of error, according to the laws of nature. No fact seems better established than that of raising children, tenderly, are delicate and feeble, and unhealthy, and subject to premature decay, while those raised handily, are robust, and healthy, and have better prospects for a longer life. And in addition to this, it may be observed that children needed in care, always become more healthy when led by natural impulses, they break the fetters of clothing care, and indulge their natural disposition to romp, and roam at large. Although exercise is most important during the
years of life before puberty, while
the body is forming, yet it is essential
to health during all subsequent years.
This may be exemplified by observing
all classes of society whose vocations
whether mechanical, or literary, do not
afford a sufficient amount of muscular
exertion. These as a general rule may
be observed to be pale and sometimes
dyspeptic and incapable of bearing
much fatigue, all of which indicate
that the vital power are deficient.
The body a mere mushroom, instead of
solid growth. Hence as already intimated,
the average term of life in this
class is far below that of the active.
Indigestion, liver complaint, and consump-
tion are their peculiar scourges.
Even the man who has employed the
most of his life, in some active vocatio
in the position of good health after quitting business, finds himself on the list of valetudinarians, seeking restoration at some fashionable mineral watering place, perhaps with consumption with all its fatality, indigestion with its torments or with thousand other diseases to torture him to mention a good potion of which may be ascribed to his indolence or want of exercise.

The fashionable modes of drooping among the females, which by compressing the chest, not only prevents the development and action of the muscles, of that delicate and interesting part of the female, but impedes the growth and action of the lungs. Hence those whose lungs are not allowed free and full access are always pale, feeble, and nervous. So however much our gallantry
and false taste may admire, our better judgement must condemn, and deplore. Considering the two parts comparatively for instance the Chinese women, in compressing their feet, and the fashion of compressing the chest, the former being infinitely less absurd of the two, one being the instruments of locomotion, and the other of life itself.

Pure air is another indispensable condition to health. And the importance of it appears more evident when it is considered that an adult, consumes about 9 gallon of air in a minute, and that which is once respired, is totally unfit to sustain life afterwards. The common sources of impurities in the atmosphere, are animal, and vegetable, decompositions; the most dreadful diseases have almost desolated some of the cities on account of the animal and vegetable
decomposition and of the malarial poisons surrounding them. When the fishes shall forsake the limpid stream, to inhabit the muddy pools, and stagnated ponds, then let man forsake or corrupt the pure element, which nature made and tempered for his use. So great is the dread of the atmosphere as nature gave it, that the physician finds the greatest difficulty in forcing the patient, and attending to allow the doors, and windows of the sick room to be opened, although their very salvation may depend on it. Consumption patients especially, have an unaccountable dread of exposure to the open air. I do have not a doubt in my own mind, but thousands have shorten their lives by close confinement to their rooms, where few have by exposure. The next thing which I shall mention is Aliment.
The body formed and perpetually renewed from the various articles of nutriment, their nature, quantity and the perfection of their digestion, must necessarily influence health. Simplicity in quality, moderation in quantity are the general rules on the subject. The quantity and quality of food should bear a direct proportion to the amount of exercise. Food is the steam of life; and he that eats and drinks much and does not keep up his machinery, his paddles and his wheels, at work, must finally burst his boilers. Few persons in civilized life have proper digestion either from diet improperly prepared or in quantity out of proportion to their activity or exercise. The last is the most frequent cause of dyspepsia. The complaint of head-ache, and other indisposition on Sunday
is owing to the indulgent of the appetite, to the usual extent or perhaps greater into the richest kinds of food, without the usual amount of exercise. And what is this practice by all occasionally, is practice by some continually; hence the literary and the sedentary are almost sure to suffer from indigestion and must continue to suffer from it, until they learn to accommodate their appetites to their habits.

Dyspepsia is another disease in the treatment of which, too much reliance is placed on medicine. Nine cases out of ten are caused by gulping down improper quantities and preparations of food. I know of nothing that ought to provoke the physician so much, than after having explained to him -- in
dyseptic patient, the cause of his disorder, and the only remedy for it, to find him taking some patent pill, or bitter that perhaps may know nothing about, or gulping down like the Taveena, every everything in the way of food, that may suit his fancy. Therefore the only rational way of attempting to cure this disease is by removing the cause that produce it. He who imagines that an effect can cease while the cause of it, continues must be a poor philosopher.

A great many persons look upon medicine as a perfect fountain of absolution, in which they can bathe and be absolved from all the disease which their violation to the laws of health, can produce. No one should imagine he can violate laws of health at any time with—
impunity. So he that violates the laws of health must find, that at some critical time disease, each violation will claim its penalty, and each one like the creditors of a breaking debtor, will rush in to have its claim satisfied, when he is least prepared to meet it.