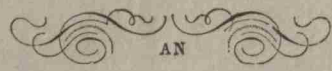


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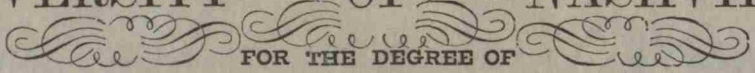
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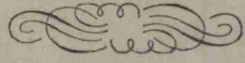
Physical Education

SUBMITTED TO THE PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY OF THE

UNIVERSITY OF NASHVILLE,



FOR THE DEGREE OF



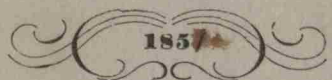
DOCTOR OF MEDICINE.

BY

Walter P. Coleman

OF

Tennessee



1857

W. T. BERRY & CO, BOOKSELLERS AND STATIONERS, NASHVILLE, TENN.

To the Medical Faculty of the
University of Nashville, this paper
is respectfully dedicated: Prorogued,
they grant me a Diploma
Walter Preston Coleman

Physical Education

The term education in its common acceptance, has been limited to the culture of the intellectual and moral faculties.

Without doing violence to the true and strict definition of the word however, we think, it may be so extended, as to include the care and attention requisite to insure the healthful growth and perfect development of the bodily organization; and in this sense we propose to employ it in the following essay. As to the great importance of physical education we might say much; but the limits of this article forbid. We regard it as equally ^{essential} to the happiness and well being of ~~man~~ mankind, mental or moral culture.

Indeed the intellectual and affective powers, are incapable of full and perfect development, except in conjunction with a health

ful performance of the physical functions; in as much as the latter are the media through which the manifestations of the former are made. It follows then, that if the physical organs be weak, or their functions imperfectly performed, to that extent must the mental efforts be feeble and inefficient. If the science of medicine be regarded as any thing more than a mere list of remedies adapted to the cure of a few specific diseases; if it embrace, as we claim for it the more comprehensive purpose of promoting general health, and endowing the frame with vigor for the exercise of all its functions; then is the subject which we have placed at the head of these pages, entitled to the serious consideration of every student of medicine who has any just conception of the dignity and importance of his profession: or any

regard for the comfort and happiness of his
 species. If he can by any efforts on his part,
 succeed in convincing parents of the necessity
 of attending more carefully to the physical
 education of their children; he will accom-
 plish more for his race than the dis-
 coverer of a specific for any disease has
 ever done. However difficult it may be to
 correct the errors of ignorance, prejudice,
 and fashion on this point. yet, it is right
 to teach those who wish to learn, how
 to avoid those errors which sow deeply the
 seeds of disease; consign many to an early
 grave; or entail miseries which render life
 a burden rather than a blessing. In short,
 to point out the way in which that greatest
 earthly good; a sound mind united in
 a sound body can be secured. In our
 own attempts to do this we shall lay down

principles rather than rules: for the latter
 never can be so framed as to admit of
 universal application; and when indiscrimi-
 nately used, they either fail through variable
 use of effect; or the good which they do
 accomplish is sure to be counterbalanced
 by a portion of evil, and thus the rule falls
 into disrepute. To lay down principles
 is the better plan, for although few general
 readers are prepared to comprehend physi-
 ological truths; their defective education
 leaving them totally ignorant of the nature
 and structure of their own bodies; still these
 truths may not be wholly unavailing; but may
 rather serve to excite interest and stimulate
 enquiry in regard to a subject of such
 vital moment: and thus be the means
 of dispelling that ignorance and overcom-
 ing that adherence to folly by which so

much ill health is entailed. These are
 certain laws which govern man in his
 relation to the external world; or in
 other words man sustains to external
 objects, certain definite and fixed relat-
 ions as obligatory as a positive ordinance.
 If these laws be violated; these relat-
 ions disregarded the penalty follows
 with a certainty that cannot be avoided.
 So all are subject to these laws; capa-
 ble of acting in conformity with them, and
 liable to suffer from their infringement;
 either through ignorance or temerity; it is
 proper that some attention should be given
 them, that errors of ignorance at least
 may be avoided. These laws have been
 appropriately codified under the heads of
 Physical, Organic, and moral. Physic-
 al laws apply to bodies possessing vital-
 ity equally as to others. Vitality only con-

for the power of modifying their action to a certain extent; not of nullifying it. The body unsupported falls to the ground as readily as if it were not organic. Physical laws therefore require observance that no injury result from their violation. But animated bodies such as the human frame are subjected to laws peculiar to themselves: and it is with these that we are at present immediately concerned. Of the moral laws to which man is subjected we shall have to take some cognisance; because his moral and intellectual nature however elevated from his spirituality is nevertheless dependent on his physical organism for its manifestations and because his two natures act interchangeably on each other serving an

exceedingly close relation one to the other

The Organic Laws may be subdivided into those which pertain to the preservation of the individual and those which pertain to the preservation of the species. The latter, we pass over as foreign

to our subject, and which are pretty apt to be well attended to without advice from any one. We will confine our remarks therefore to the latter.

Man is immediately connected with the external world by digestion and respiration. Food and air are necessary so long as life lasts, and the quantity and quality of both are of the first importance. Different animals are adapted by their organization to be sustained by particular kinds of food. Some are carnivorous, some herbivorous and ^{others} gramenivorous. Man is emphatically

Omnia vorans, requiring for his healthy
 sustenance a mixed diet of animal
 and vegetable food as being most accor-
 dant with his organization: and this
 fact should be considered a sufficient
 refutation of the arguments of those who
 contend for an exclusive vegetable diet
 The proportions best suited for preserving
 perfect health, must vary in individ-
 ual cases; according to the constitution,
 climate, habit &c. Enough and only eno-
 ugh should be taken to keep the body
 up to the highest standard of health,
 and appetite is the measure of quantity
 when disease is absent. The general rule
 being, clear good reason should be shown
 whenever it is departed from. Too little
 food or food of an inferior quality, not
 sufficiently nutritious, leads to the pro-

elution of many diseases masked by
 elibility. While on the other hand
 too much food; containing a large propor-
 tion of nutritious matter, begets corpu-
 lence, plethora, and by forcing the stom-
 ach to over exertion, deranges that organ
 and lays the foundation for by far
 the greater number of malacities to
 which human flesh is heir, To regu-
 late the quantity as we have remarked
 we have appetites which when natural
 is a sufficient monitor, if, its promptings
 are heeded yet the appetite may be
 stimulated by tempting viands to such
 a degree as to be a very unsafe criterion
 Pampered by luxuries, and brought to eat rather
 than eating to live: Many become slaves to
 a sensual gratification of the lowest kind,
 But air is more essential to life than food and
 here

Here, it is quality rather than quantity that
 demands attention. The capacity of the lungs
 being definite; no intemperance can be practi-
 sed. Pure air however must be had, and for
 the young especially it is essentially requisite.
 Next to food and air as a means of preserv-
 ing health is exercise. By this we do not
 mean locomotion merely; but all those ac-
 tions of the human frame by which its existence
 is maintained and its functions performed.
 Happily those actions which are immediately
 necessary to life are independent of the ^{will} and
 are thus secured against the effects of the
 caprice or inconstancy of the individual.
 Respiration though not wholly involuntary
 is yet so much so as to be carried on with-
 out effort and even without consciousness,
 through the whole course of life. This being
 the case and its organs being so well

secured by their compact and admirable
 constructive mechanism. It might be sup-
 posed that this function at least might
 escape the effects of heedlessness or error;
 yet there is none with which folly or
 fashion has more fatally interfered;
 of which interference the awful consequen-
 ces would hardly be credible were they
 not attested by daily observation.

Circulation too is independent of the
 will yet man manages to disturb this
 also by excess of nutritive food and the
 use of unnecessary stimulants. Thus though
 the functions upon which life directly de-
 pends are carried on through actions in
 which the will has no share; voluntary
 exertion is still necessary for giving those
 functions the requisite amount of vigor.
 Exercise is essential to digestion, respiration

and circulation. Want of it impairs the assimilating power of the stomach, incapacitating it for its necessary work; and thus deranges the whole process of nutrition.

Want of exercise diminishes the size and power of the chest and lungs, causing a deficient aeration and vitalization of the blood, rendering it unfit for supplying the proper stimulus to the several organs, or for supplying the constantly reacting tissues of the body. It also diminishes the action of the heart and arteries, and deprives them of the power of propelling the blood into the remote parts of the system, thereby suspending the capillary circulation to a very considerable extent, so that the blood which ought to permeate those small vessels, is retained or thrown back upon the larger trunks overloading

and congesting them; thus & generating a most fruitful source of disease
 Life is sustained by a series of motions, perform by a number of organs, requiring for their growth and development adequate exercise. It is a well known fact in Physiology that a vessel which ceases to convey its appropriate fluid soon becomes converted into a fibrous cord, and that an organ totally unemployed approaches gradually the nature of simple membrane; undergoing a complete change of structure. When imperfectly exercised therefore we should expect to find an approach to one or other of these states; and observation and experience confirm our expectations in this particular; deficient size, and defective function being the inevitable results of inadequate

exercise. Passing on from these general prin-
 ciples we propose to consider the subject of
 physical education in its application to the
 respective periods of infancy, childhood and
 puberty. Periods which are sufficiently dis-
 tinctive, without a division into years, which,
 indeed is impossible, as the periods above
 named commence at different ^{times in} ~~times in~~
 annuals. Of the period of maturity we will
 not speak, for the evils of erroneous
 education are then beyond the remedial
 and preventive point. Neither shall
 we dwell at length upon the period of
 infancy, as the management of that
 interesting portion of life is much better
 understood now than formerly.
 We shall confine our remarks upon
 this point, to a few suggestions upon
 clothing; air Food exercise and moral

management. And first - Clothing;

This should be of soft material so as not to irritate the tender skin of the infant,

It should be perfectly loose in its adaptation so as to admit of the free expansion of the chest and unobscured use of the limbs. It should also be so fashioned as to admit of speedy adjustment.

The process of being dressed is tedious to most infants and the foundation of an irritable temper might often be traced to the time consumed in dressing, which is often unnecessarily long.

Food: This when nothing on the part of the Mother forbids should undoubtedly be the milk of her breast. Every consideration both physical and moral pleads for this exercise of Maternal affection. If however the Mother is in-

incapacitated for this duty the best substitute is a healthy wet nurse, and if this cannot be procured, then food approaching human milk as nearly as possible in its composition should be given. The milk of the cow or goat will answer, or milk and water with a little sugar will be sufficient for the first few months. Anything more gross than this taxes too severely the digestive powers and leads to gastric derangement, which, by being attempted to be corrected by medicinal agents, rather than by attention to diet, is only aggravated and permanent injury perhaps inflicted on the child.

The bowels of children are naturally free and should be kept so by food of the proper quality rather than by purgative medicine. They will however be

occasionally get deranged & require the
 assistance of medicine for the removal
 of the offending matter, and in such
 cases the medicine should be discon-
 tinued so soon as this object is accom-
 plished. We should be careful in ad-
 ministering purgatives to very young
 children, not to be misled by the
 character of the discharges. Mucus may
 be secreted by the bowels laboring un-
 der the presence of offending matter
 or it may be the result of the giv-
 ing of purgatives. But there is a mark-
 ed difference in the appearance of mu-
 cus produced by these two agencies. In the
 first case it is dense, opaque, andropy;
 in the latter it is thin limpid and
 fluid. Purgatives when the first condition
 they aggravate the latter

Next in this connexion, ^{we} will notice air. This the infant requires equally with the adult and its purity is an object of even greater importance to it, than to the full grown individual. No groundless fears of taking cold should prevent the child from having free access to fresh air both by day and by night. All covering of the head and face during the hours of sleep cannot but be injurious. Neither should the child be confined to the house, in good weather; but should be carried much in the open air, that its lungs may receive the full benefit of an atmosphere well oxygenated; for without oxygen we have shown that it is impossible to sustain health for any length of time. We next notice exercise. This the infant cannot take to.

any degree for the first few months of its existence, because it sleeps the greater part of its time during that period.

It may be exercised passively however even at this time, by being carried in the nurses arms, and this should be done. When it begins to manifest any desire to use its limbs it should be allowed to do so to its hearts content.

Not in efforts to walk too early however for this may produce deformity.

The young of all animals appear to derive pleasure from the use of their limbs and the delight which children manifest in this exercise evinces how grateful it is to their animal feelings. In regard to the moral management of the period under consideration we will now make a few remarks. The infant

from the time of its birth is a moral being and as such is accountable to moral laws; and it is the duty of those who are responsible for its training to see that those laws are not infringed; Several passions and propensities belong to infants in a marked degree; and as the counteracting sentiments, and intellectual powers, by which they are to be controlled in after life, are not at this age equally developed, it behoves those who have the management of them to look well to the government of their own temper and conduct; lest through want of judgement or sagacity of passion they fail to accomplish the ends proposed by discipline. Children very soon discover whether whether reproof proceeds from an

ebullition of feeling or is prompted by
 solicitude for their welfare and endeavor
 solely for their correction and improve-
 ment. Imperturbable calmness on
 the part of parents is necessary if they
 would succeed in overcoming natural
 irascibility of temper; and discrim-
 inating judgment if they would not
 convert a good disposition into a mor-
 rose and surly one. They should as
 soon as practicable endeavor to bring
 into play those intellectual powers
 which may suspend the workings of
 infantile passion. All causes of im-
 itation should be sedulously avoided.
 Jealousy should be regarded rather
 in the light of a disease to be reme-
 died than as a fault to be punished.
 But we must close this discussion.

on the management of the babies

We have already occupied as much space as we intended for this essay and have only treated very briefly of one division of our subject.

All that we have said of infancy may with equal propriety be applied to the period of childhood.

But we had thought to dwell more at length upon this division and still more upon puberty. Especially since we intend to point out the evils of, and enter our solemn protest against the regimen pursued at this time in regard to the female sex. We intended to show how it is that we have so many pale faces, curved spines, and deformed chests. To show how these proceed thoracic and abdominal lesions.

~~and~~
 and how, to these lesions might be traced those diseases which make such horrid ravages amongst this portion of our race. We intended to expose the impropriety and cruelty of fashion in converting a modest and delicate girl into a model artist at our evening balls and midnight routes. We also intended to offer some remarks upon intellectual culture as a means of health, and to announce next upon the present injudicious system of recreation. We intended to do all this, but we have written enough so far as length is concerned and shall stop right here and submit this affair, the fruit of Sabbath breaking to the learned Faculty.