

preponderance of animal matter more elastic and flexible, than it is clear that every means ought to be employed for the purpose of preventing their contortion and curvature. Exercise here as in every other part of our physical frame, is indispensably necessary, to give size and strength to the bones, to deposit those very substances of which they are mainly composed. By a law of our constitution, to which we have already referred when any part of the system is active, it attracts to itself by the simple stimulus of that activity an increased supply of blood and nervous energy. The former repairs the waste of substance which action produces, and the latter gives an increased tone in harmony with the greater call made on its powers. If the exercise is momentary and not repeated, the extraordinary flow of blood soon disappears, and the nervous power falls to the usual standard. But if it is continued for a time, and is recurred to at regular intervals, a more active nutrition is established; a permanently greater supply of blood enters the vessels even during the intervals of inaction; and an increase of development takes place, attended with increased facility and vigour of function. This law of exercise as influencing nutrition and function is universal in its application, and applies to the osseous as much as to any other system. If the bones are duly exercised, their active nutrition goes on, and they acquire increased dimensions, strength and solidity. If they are not exercised, the stimulus required for the supply of food to them becomes insufficient; imperfect nutrition takes place, and debility, softness and unfitnes for duty follow in the train.

But whilst exercise is thus indispensably necessary to impart solidity and strength to the bones, it behoves to be wisely and judiciously adapted to their condition at the different periods of life. How many parents, for example, disregarding the fact that the bones are comparatively soft and pliable in infancy,—and in their haste to see the little objects walk without support,—are continually soliciting attempts at standing or walking, long before the bones have acquired sufficient power of resistance, and the muscles sufficient power of contraction, to cope with this law of gravitation. The natural consequence is a curvature of the bone, which yields just like an elastic stick bending under a weight. The two ends approach nearer each other than they ought to do; and the muscles, to accommodate themselves to the change, become shorter on one side, and perhaps longer on the other each losing part of its efficiency in the unnatural change which it undergoes. But, even after the young are capable of sustaining some pressure, every means should be used and every pains taken to preserve the straightness of the bones of the young. For this purpose they should be made to stand and sit and walk in an erect position. This will enable the vertebral column to accomplish the high and important ends for which its whole construction was evidently intended, and will preserve the bones of the upper and lower extremities in a vigorous and healthful condition.

And now it may be asked, What is the provision required for securing all these objects, in so far as the furniture, seats, desks, &c., of the school-room are concerned? In reply to this question we would say, first of all, that the seats must be nicely proportioned to the age and size of the scholars, that is, they must be thoroughly graded. In a miscellaneous school the height of the seats, so as to allow each child to rest his foot firmly upon the floor, should range from seven to fourteen inches. If this is not attended to, if the seats are so high that the feet of the children cannot reach the floor, not only will they be uncomfortable and restless, but their thigh-bones, from the weight

bearing upon them, will be in danger of becoming curved. But not only should the feet of the children rest gently upon the floor, their backs should be also well supported. For this end the seats should be furnished with properly constructed backs, and of such a height as will afford a pleasant and agreeable support to the small of the back, or the lumbar region, as it is called. If these things are not provided for, if the seats are too high, and the back, besides, unsupported, the most disastrous consequences may ensue. The children will naturally stoop forward in order to balance themselves; and thus the shoulders will become rounded, their chests contracted, their constitutions enfeebled, and not unfrequently the seeds of pulmonary disease deposited.

Every care should also be employed in the construction of the desks, that is, they should be made exactly to correspond with the height of the seats. If they are too low, a stooping posture will be induced. If they are too high the effect will be, the elevation of one shoulder and the depression of the other; and thus a permanent curvature of the vertebral column will be produced. To avoid these evils the desks must be so constructed as that both the arms shall be kept on the same level and rest equally on the table; and their height such as that they shall strike half-way between the elbow and the armpit as the arm hangs by the side.

"The secret of posture," says Mahow, "consists in avoiding all bad positions, and in not continuing any one position too long. The ordinary carriage of the body is an object worthy of the attention of every parent and instructor. The more favourable impression which a man of erect and commanding attitude is sure to make, is not to be overlooked. But there is a greater good than this, for he who *walks erect* enjoys better health, possesses increased powers of usefulness, realizes more that *he is a man*, and has more to call forth gratitude to a beneficent Creator, than he who attempts an *oblique* posture."

INTELLECTUAL EDUCATION.

THE notion that too generally prevails regarding Intellectual Education is, that it consists merely in making the subject, that may happen to be brought under the notice of the young, plain and palpable—thoroughly understood; and, for this purpose, the words in which that subject is presented are analyzed and defined, the clauses or sentences dissected and minutely explained. Now, whilst all this is exceedingly proper, and whilst no one can fail to perceive the vast superiority of this to the old routine mechanical process, which required the mandating of so many words and sentences without the most distant apprehension of their import, still it is nought but instruction after all, and falls far short of real intellectual education. Intellectual education includes instruction, and that conveyed in the most simple and intelligible manner, but it is something far above and beyond, something vastly more lofty and ennobling. It is neither more nor less than the communication of the best instruction or knowledge, in such a way as that all the faculties of the intellect shall be exercised, and thereby drawn out, developed, strengthened. And how is this to be effected? In two ways, first, by presenting the appropriate, congenial food to each faculty, and, secondly, by so administering it that it shall be digested;—or, to speak without a figure, by bringing such subjects before the mind as are best fitted for the employment of its various powers, and by bringing them in such a way as that these several powers shall be actually exercised. As to the first