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Swedish Gymnastic Association.

PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS.

II.—ON SCHOOL GYMNASTICS.

A Paper read by A. BROMAN, Esq., President, at the Quarterly Meeting of the Association, September 12, 1891.

LAST time I had the pleasure of addressing the Association, we occupied ourselves with a historical retrospect of what has formerly been done for the Physical Education of the Young. We ended by putting some questions on the subject, one of which we left unanswered, and which will form the subject for our paper to-day. The question was:— *Under what form can Physical Education be introduced into the Schools?*

What Form?—There are principally two forms under which Physical Education can be advantageously carried out in the school, and these are Free Games and Sports, and Regulated Gymnastic Exercises.

The first is an excellent means for the healthy development of children for many apparent reasons. But for equally apparent reasons it is not always accessible to the Schools, requiring, as it does, large open fields and playgrounds, which, for the majority of our town schools, are unfortunately out of the question.

School Gymnastics.—These schools are, therefore, necessarily left to the second alternative: Regulated Gymnastic Exercises, *i.e.*, School Gymnastics.

Before considering the question which Gymnastic Exercises should be used in the school, we must try to define to ourselves the purpose for which they should be introduced, and the aim to be reached by their introduction.

Referring to my last paper for a somewhat fuller *exposé* of this, I will here shortly reiterate the main points to be borne in mind.

Physical Disadvantages of School-life.—School-life is an artificial life. The child's body, still growing, and therefore more susceptible to external influences, is put under restraint contrary to natural laws. To a forced muscular inactivity at an age when activity is most essential for a healthy development, is coupled a cramped and uncomfortable position on the school benches. The consequence of this is a tendency in the young and tender body to deformities of various kinds, especially as regards the chest—which is apt to become flat and narrow, the shoulders—which tend to stooping, and the spine—inclined to curvatures of one kind or another.

To secure a natural and harmonious development of the physical powers with a free and erect carriage, such as the Creator meant for human bodies, and thus to combat these ill effects of school-life is the object and aim of School Gymnastics.

Add thereto that as much benefit as possible should be given, even in the Gymnastic lesson, to the school work as a whole, and we have a good ground to stand upon in selecting Exercises for the use of the children.

The question, then, presents two distinct sides for our earnest consideration: the *Hygienic* and the *Educational*.

1.—HYGIENIC VALUE OF SCHOOL GYMNASTICS.

To rightly understand and be able to judge of the Hygienic value of gymnastic movements, we must be guided by the sciences of Anatomy and Physiology, so as to avoid mistakes and make sure of the desired result, *i.e.*, a *Harmonious Physical Development*.

Harmonious Development.—By this we mean a development where all the different parts are fully cultivated, according to their own natural purposes and faculties; and, moreover, where their parts are perfectly co-ordinate between themselves, and subordinate to the will of the individual. Consequently, this development involves the whole body, and by no means only the muscular system. In fact, during the tender age—the Elementary school age—when we have most to do with the children, it is Physiologically, and therefore practically of the greatest importance to pay attention to the development of the trunk, the chest and the spine, in order to lay a strong foundation for the harder work that will be exacted from the individual later in life.

Importance of Circulation and Respiration.—For within the chest-walls are situated the principal organs of circulation and respiration, upon the fitness of which depends the fitness of the man; and if these organs are strong and healthy, then the system will also stand the strain of muscular exertion and development.



It is not necessary to describe in detail these organs—the Circulatory and Respiratory—as I think all of us know enough of Physiology to be acquainted with their functions and consequently impressed by their great importance to our well-being. We know then how essential to the oxygenation of the blood is a healthy pair of lungs; also how powerful an agent in aiding the movements of the blood, thus assisting the heart in its work, are the respiratory movements (negative pressure in the chest); and we understand how interdependent upon each other these organs are, and how in benefiting one we benefit both and consequently the whole system.

Mechanism of Respiration.—But the outer and visible sign of healthy respiratory organs is a well developed chest. To look chiefly to this kind of development involves really more than is perhaps apparent at first sight; in fact it includes the whole bearing and carriage of the body. Let us only remember the mechanism of respiration. In every inhalation the chest is enlarged both in the transverse and in the antero-posterior direction by the elevation of the ribs. This movement of the ribs is performed by certain groups of muscles, the arrangements of which are of great interest, as they give us the clue how to work most advantageously to the proper development of the chest. From the cervical vertebræ and from the base of skull muscles originate viz.—the *scaleni*, and the *sterno-cleido mastoid* muscles which are attached by their other ends to the two upper ribs and the breast-bone and which therefore serve to elevate the ribs and thus to widen the chest. But, of course, this effect depends to a great extent upon the Head and the Neck being in a proper, erect position and is almost entirely lost, if the Head is allowed to drop down. Again, from the shoulderblades muscles go to the ribs (*m. pectoral. min.*) performing the same action of aiding the inspiration. Let the shoulders stoop forwards and we lose the benefit of these muscles. But the ribs are with their posterior ends affixed to the spinal column. Every time we stretch the spine we widen the chest and give more play to the heart and the lungs. Let the back be crooked and round and the space for heart and lungs is proportionately diminished.

Erect Carriage.—If we therefore intend to pay special attention to the respiratory organs of the children, we shall have to consider in the first place the proper carriage of their bodies with the head erect and free, the shoulders well drawn back and the spine straight and choose the gymnastic exercises which secure these results. In fact, we find that what is most beautiful from an æsthetic point of view is also most beneficial to the body.



Fig. a.

about the mechanism of respiration. Fig. *a* shows the proper bearing of the head and subsequent full expansion of the chest. In figs. *b* and *c* is represented a gradual deterioration of this position in *c* amounting to a so-called poking chin. For the sake of comparison I have also added a figure of a Monkey, in order to exhibit the natural difference between this animal and man. Fig. *d*.

Respiratory Movements.—Those of you, who have studied practically the Swedish system of Gymnastics, know a class of movements, always represented in a daily set of exercises, which we call “respiratory.” These are,

*From Professor L. G. BRANTING'S posthumous works, Ed. by HJ. LING, Jun.

The importance and far-reaching influences of a development directed towards the chest and the spine are made still more apparent, when we consider the tender ages of those under our care. For influences both for good and for evil are strongest in the young on account of their softer tissue; and a lasting benefit to them may therefore reasonably be expected, through judiciously selected Physical Exercises practised in early years. And results prove this to be the case.

Diagrams.—I wish here to draw your attention to the adjoined diagrams.* They are intended to show how the position of the head influences the chest, which will be easily understood after what we have just heard

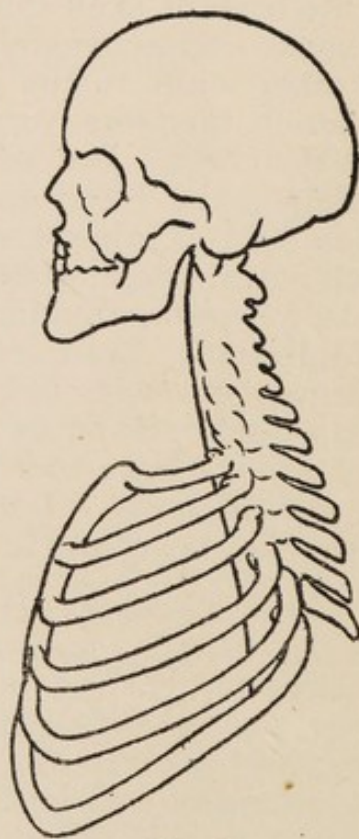


Fig. b.

as the name shows, specially meant to influence the organs of respiration. But the system goes further still. It maintains that every movement should be a respiratory movement, that is to say, should give the fullest opportunity to the heart and the lungs to act freely : and that every movement which does not fulfil these conditions must be excluded as bad and unsuitable. Accepting this truth it is easy to understand how unfavorable the practice of singing or whistling during the exercises must be to the necessary freedom of respiration. "Breathe freely" is an admonition that cannot be used too often in the Gymnastic lesson.

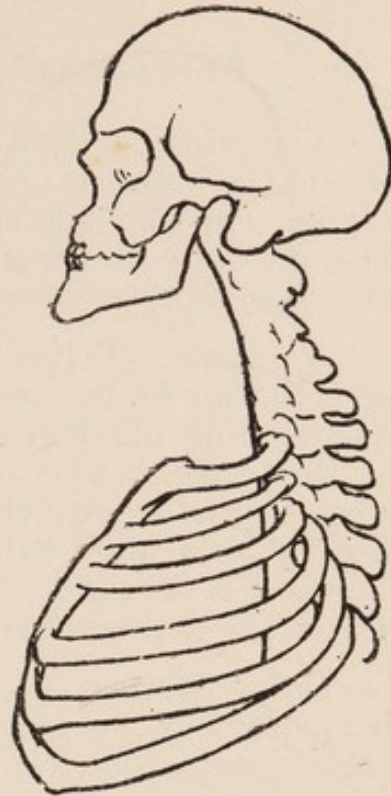


Fig. c.

Sequence of Movements.—A lesson in Gymnastics is naturally composed of a good many different exercises. In fact every part of the body should have its fair share before the lesson is over. But it is not enough to take care that this is done ; attention must also be paid to the sequence in the movements. For we must not forget that although we have several limbs or parts of the body to be exercised, still we possess, but one heart and one pair of

lungs, which have to perform the respiratory and circulatory work for the whole of the body. Therefore the effect upon these organs of the several movements must be studied ; and when we find that the heart beats too fast or the breath is drawn too quickly and superficially, then the movements must be altered so as to restore regularity in the working of these organs.

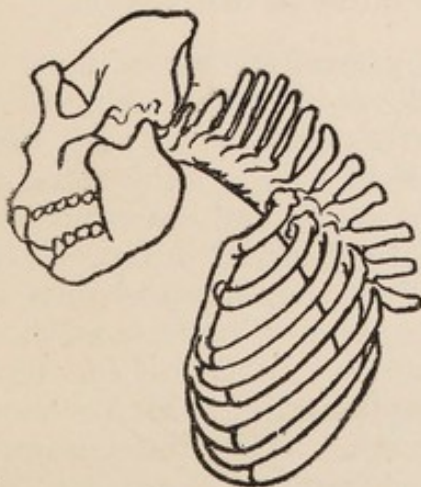


Fig. d.

Much more could be said upon the Hygienic value of School-gymnastics, but we have to consider the question from yet another point of view upon which we must say a few words.

II.— EDUCATIONAL VALUE OF SCHOOL GYMNASTICS.

The principal Educational value of Gymnastics lies—I think—in the lesson it necessarily gives in order and discipline. Discipline must be enforced in order to benefit the many in the short time and with the usually small means at disposal. The children are therefore exercised in squads and under command.

Apparatus.—When apparatus is used it must be so constructed as to be simple, not dangerous, and capable of accommodating many at a time or quickly after each other, all under the teacher's eye and command. Instant obedience to commands produces quickness of perception and execution, and is therefore of distinct value to the nervous system. Discipline in the work saves time. When the children fall in they should do so quickly without further ordering.

Order Movements—Then come the order movements such as dressings, turnings and marchings, first with a limited number of steps, afterwards continuing. The Hygienic value of these movements is small, but the Educational much greater; and the more attention and care bestowed upon these movements when beginning with a fresh lot of children, the easier, smoother and quicker will be the progress when coming to exercises of greater importance to their physical development.

From this it must be clear that it depends entirely upon the teacher to turn the Gymnastic lesson to good account for the whole school-work. A lesson in discipline is never time wasted. Accustomed to obey quickly and unconditionally in the gymnastic squad, the child will do the same in other lessons, to the great advantage of the whole course of instruction.

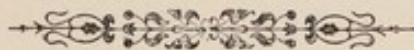
Time.—Speaking of School Gymnastics we cannot omit one thing—the time that should be devoted to the subject. If the reasons we have given for its introduction are at all valid, then it is also clear that the time given to the subject is well spent. It is true that the time-tables are already overburdened with a variety of subjects; but if Physical Exercises are necessary for the health of the children, then a place must also be found for this subject on the time-table. The lessons should be of daily occurrence, since the anomalies of school-life which they are designed to combat are always at hand, and they should be of not less than half-an-hour's duration. It is better however to give a shorter time, even if only ten minutes every day, than a longer lesson say of thirty or forty minutes once a week. Perhaps it would be easier to get the desired time for Gymnastic work if it were generally understood that it is *work* and not *play*.

Work NOT Play.—Joyous and genial work certainly—and it depends upon the teacher's individuality to instil life into the lesson—but good, earnest and important work all the same.

Interposals.—When, in school hours, the children begin to get fidgety, or dull and sleepy, then it is time to have a break in the work. A school lesson should never last for more than three-quarters of an hour at a stretch, and should be followed by ten minutes of rest, if possible, in the open. Where this cannot be done, a teacher, who knows his Physical Exercises well by heart, and takes an interest in the subject, has, in them a splendid means of awakening and refreshing the children; and, perhaps, himself as well. Four or five minutes of Gymnastics in the room, on the forms, the windows opened to let in the fresh air, and the teacher himself setting the example in front, both giving commands and executing the movements, will work wonders. Teacher and children alike will be able to recommence their studies as though refreshed by a much longer interval of recreation.

Free Games.—A few words ought to be said in this connection about the relation of free games and sports to regulated school gymnastics. So far from advocating the exclusion of the former in favour of the latter, we must always consider them as an excellent means to the same ends. Gymnastics are meant to educate the bodily faculties, and consequently also those that are most needed in free games and sports. These, again, may be called applied gymnastics, as the individual in them has full opportunity of exercising the qualities which he should have acquired by the more regular gymnastic work. Where possible, both should run concurrently, as they supplement each other in many ways. The gymnastic lesson may sometimes advantageously be exchanged for free games in the open.

We find, then, that great care must be exercised in order to obtain good results in this branch of Education. But efforts in the right direction are crowned by such obvious success, that the teacher soon finds himself fully repaid for the work spent upon the subject. As yet the time allotted is entirely insufficient; and teachers interested in their work often meet with difficulties on that account. That these difficulties are far from insurmountable, many of you have already practically demonstrated in your own classes; and we may hope that in the near future the subject will receive such recognition from Educationists, as will further facilitate the work, and give the greatest satisfaction to everybody.





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