

sometimes hard to draw a clear line between sport and play. Fencing, equitation, and canoeing are varieties of sport. Cricket is as much a play for children as an exercise of sport; in short, in the hygienic view, sports are half-way between gymnastics and play, and are therefore more suitable to youth than to children.

Games give the form of gymnastics most congenial to the conditions of social life, for they are at the same time hygienic and recreative, and are as well adapted to the physical requirements of the child as to his moral needs. Physically regarded, they demand neither very intense efforts nor localized muscular contractions. Even the most complicated of them call out nothing more than combinations of simple movements and natural attitudes; while gymnastics necessitates abnormal combinations in the association of the muscles, with movements which the child, having never practised, has to learn laboriously. Play presents no difficulties comparable to those offered by gymnastics. If the child has not yet become adept in the game, he will play badly and lose his part; but he will play, and will at least gain the physical advantages of exercise. But when he is dealing with the abnormal motions or "turns" of gymnastics, if he has not yet learned the way of executing them, or acquired the knack, which it often takes a long time to gain, he only makes a pretence of exercising, and his effort is limited to a fruitless tentative, without any effective activity.

Besides the support of reason and observation, the method of exercise by playing has the sanction of acquired facts. It was the only children's gymnastics at the beginning of the last century, and even now some nations have no other settled method of physical exercise. The English have never taken to gymnastics with apparatus; and the Belgians, after having tried it, are abandoning it and returning to play. No one can question the excellence of the results of the English method; the vigor and endurance of English youth are universally recognized, and their school-games constitute their whole gymnastics.

PHYSICAL CULTURE FOR GIRLS.

BY

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CULTURE of the body is as necessary as culture of the mind, and it is fitting that as precious a jewel as the mind should have a strong and perfect casket.

Health is not simply the absence of disease, but the perfect condition and harmonious action of all parts of the organism, and the object of physical culture is to develop it to the highest degree.

How can that be accomplished? As no chain is stronger than its

weakest link, we naturally look to see where the weakest part of the body is in girls, in order that special attention may be bestowed there. We do not seek long before finding that every part of the body has received its share of attention except that part of the trunk which extends from about the fifth rib downward. The condition of this part, however, outweighs in importance that of almost all the rest.

The soft walls of this part of the body are made up chiefly of muscles, and these are among the most important in the body. Among other things they assist in holding the body upright.

One muscle on the back, that is intended to be large and powerful, has its thickest part at the waist. Its upper end is attached to the arm, and it is used in sweeping and lifting. *Latissimus dorsi* is its name. The muscles in front, called the abdominal muscles, are intended by nature to be exceedingly strong, as their offices are numerous, and of the most vital importance.

All these muscles in girls are found to be almost powerless for two reasons.

First, a little steady pressure on muscle, such as women's waists make, causes it to become thin and flabby.

Second, pressure also interferes with the action of a muscle and it becomes still more flabby from disuse.

That is why so many wobble at the waist, and why the belt line in girls is the weakest point in the entire body.

With a boy no clothing ever presses on these parts, the belt line is so firm and hard, from freedom and use, that it is hard to make an impression on it, while with girls a very deep dent can be made.

It is because these muscles are so strong that the boy can hurl balls, lift heavy weights, walk and play all day and never tire. In fact, he is so strong that often he hardly knows what to do with himself to give vent to his energy. As a man, it is due to the strength of these same muscles that he can lift trunks, move furniture, and do many other feats of strength.

If boys wore close-fitting waists like girls, they would be just as weak as girls, for the muscles are the same in each, and are governed by the same laws. In many uncivilized races, where but little clothing is worn, the girls and women are just as strong as the boys and men, and can lift immense weights and carry them the same as men. This proves that difference in strength of these muscles in men and women in civilized countries is by no means owing to any inherent difference between the two sexes, but comes wholly from violated laws.

The natural shape of the body is a graceful curve inwards, and not a sharp angle at the waist. That angle is made by stretching the muscles inward, and holding them there by the close-fitting bands of the skirts. The effect of this is the same as it would be with a piece of India rubber kept always on the stretch. The elasticity is lost; that is, its power is gone.

This sharp angle inwards at the waist must be classed with the

deformed feet of the Chinese women, and the forehead of the Flat-head Indians. It is much worse, however, as it causes much more weakness and disease. The tide has now turned, however, in China. They have awakened to the fact of the great loss to women, and therefore to the country, by this custom and it is now decried. It would be strange indeed if the Chinese should steal a march over civilized countries, so called, and discard pinched feet before we discard a pinched waist, which means a deformed stomach, liver, spleen, intestines, etc.

If one is pushed in at the waist, one must go somewhere, and usually it is out at the abdomen. All the inside organs are pressed downward as well, and this is the cause of so many diseases in that part of the body.

The problem of giving freedom to this part of the body is not always easy of solution. That beautiful picture of Queen Louise of Prussia descending the steps, arrayed in an empire gown, shows a model of a perfectly healthful dress. All the underclothing should be as far from touching the waist as the dress is. Then all the tender organs in that part of the body would be protected. The soft walls, you understand, make that protection necessary. If instead of these pliable walls there was a covering of bone, as the skull covers the brain, the hanging of clothes there would not be so dangerous.

The women of Norway have very beautiful, symmetrical forms. Instead of a sharp angle at the waist, there is a graceful curve inwards, with a small abdomen. They do not wear corsets, and their strength and artistic forms are attributed to that fact.

Physical culture is important. While special exercises are taught for this purpose, and they are both pleasant and profitable, they are by no means a necessity, for those who engage in active household duties, as all the exercises taught for bodily development are gone through without knowing it, by those engaged in this way. There is also the added advantage of the mind being directed not on oneself, but on the work being done. It is well indeed that this is a fact, as the majority of girls do not belong to the leisure class, and have neither money nor time to spare.

So healthful is housework, that a method was devised called the "Chambermaid Cure" for some royal personages in Europe, who had nervous exhaustion simply from the conventionalities and tiresome nothings of the royal life. It was reported as successful.

The object of physical culture is health of body and mind. For special training remove every obstacle first. The chief obstacle is the pressure of the clothing at the waist and the hips. Remove this, use appropriate exercises, and health, strength, and beauty are in sight.

This pressure has been endured for hundreds of years, in varying degrees, from the vise in which Queen Elizabeth is pictured, and also others of her times, to the degree of the present day. Woman having endured this pressure for so many generations, the daughter is not

born as strong as she would have been otherwise. She is now handicapped from infancy.

Heredity, like mother like child, is a great fact. To undo the effect of the past, and attain to a perfect physical development or culture, the motto for this part of the body should be

TOUCH ME NOT.

Come as near it as you can.

PHYSICAL TRAINING FOR GIRLS AND WOMEN.

BY

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IN considering the value of physical training for girls and young women, it is well at first to understand exactly what the term "physical training" means; next, to see how necessary it may be as a factor in education generally; and finally to decide whether it has any special significance for girls.

Popularly "physical training" is synonymous with exercise under supervision, usually in a gymnasium. This is of course a very narrow use of the term. Technically it includes training along all lines of hygiene—exercise, sleep, rest, diet, bathing, clothing. It is in the ability to give common-sense advice on all these matters and to follow up the advice with tactful and painstaking supervision, that the intelligent physical trainer may be distinguished from the drill-master.

Taken in this larger sense, the place which physical training should occupy in any educational system, whether in the home or in the school, is unquestionably one of great importance. It must be considered as fundamental. That there have been exceptionally brilliant minds in shattered bodies, does not alter the fact that the average person gets on far better in the world, and what is of more importance, is in a far better position to render service in the world, if he has a good digestion and sleeps well at night. Whatever evolution may have in store for us, we are at present burdened with bodies, and the expression of the intellect, even to a considerable extent of the spirit, is dependent on the proper functioning of these bodies.

Since this is the case, physical training should be not only the basis for all training, but should continue into the superstructure. It should begin with the cradle and end with the grave.

A recognition of this fact on a large scale is found in the increased stress which is constantly being laid on providing the public with pure food supplies, parks for breathing spaces, playgrounds, baths, and gymnasias. That this is in the long run an economy to the state

is probably true, but it is also true that as public sentiment becomes more humanitarian the weak members of the community are preserved at great expense to the state; this imposes on each the duty of keeping himself in so good a physical condition that he may share the burden rather than himself become a burden.

If control of conditions influencing public health has become a legitimate function of the state, no less has control of conditions influencing what we may call individual health become a function of the home, the school, and the college. It is perhaps in this connection that we should seek the chief value of physical training for girls and young women, as it is in one or the other of these spheres that the majority of them are destined to do most of their work and exercise their greatest influence. If a woman marries, it is essential that she be in good physical condition, in order to bear strong children, rear the children properly, conduct with efficiency the manifold duties of the household, and with it all be cheerful without effort, and normal and well-balanced in her attitude toward life. The teacher, as in a sense the mother of many, has a great responsibility with regard to her charges, and needs above all things a good physique to bear the strain of her position.

Of the various elements of hygiene which constitute physical training it is in the matters of clothing and exercise that girls are on the whole less favored than boys. Hampered by their dress and by social traditions as to their conduct, after maturity they do not enjoy the same opportunities for free and active play. Now although in the matter of sufficient and suitable exercise girls are more usually found deficient, exercise is the department of physical training that is most easily controlled, and when once under control serves as an excellent basis for instruction in all the other departments. The school, college, and Y. W. C. A. gymnasias may perhaps be considered the most active means that we have for promoting the health of girls. These gymnasias when properly directed provide girls with systematic exercise adapted to their needs, and extend general supervision over their habits of life. Through them much useful corrective work is done in discovering and checking cases of postural spinal curvature, flat-foot, pronated-foot, etc., that would not have come to light otherwise until associated with painful symptoms; and on the hygienic side they are no less active in encouraging interest in all healthful forms of games and sports.

In brief, physical training is fundamental training because it contributes directly to the welfare of the community, the family, and the individual. It is of special significance to girls because without some definite stimulus of the sort, proper emphasis is seldom laid on several of its more important features.