

hold himself as betrothed to May. And so saying, he went.

Lady Elizabeth, when alone, knitted her solemn brows and thought very earnestly, perceptibly indeed, had any one been there to watch her, for she was one of those few women, the muscles of whose foreheads expand and contract in frowning unison to the subtle thought-play of the brain. Then she rose and, after composing her ruffled features before the glass, rang the bell.

"I want the carriage directly," she said, in a voice

that she vainly tried to render calm and steady; "tell them to make haste, James."

"The bay horses, my lady?" said the butler. Lady Elizabeth was methodical, and rarely drove out so early.

"The greys!" answered his mistress, and the butler—who, by the way, was the under-butler; Mr. Diprose, his superior, being yet in undress, and reading the newspaper in his pantry—retired with a conviction that something was amiss, and that Mr. Percy had a finger in the pie.

END OF CHAPTER THE THIRTIETH.

PHYSICAL EDUCATION FOR WOMEN.



PHYSICAL education is a dry term, but when you come to ascertain what it comprises, it is not at all a forbidding subject. Briefly, then, it means a knowledge of the structure and functions of the various organs of the body; of hygiene and sanitary laws necessary for the prevention of disease and preservation of health; and

of the harmony existing between the mind and body. It is not only the advocacy of a system of calisthenics, gymnastics, or drilling, though such training, combined with physical knowledge, promotes the strength, symmetry, and grace of the limbs and muscles. One of the great arguments proving how defective we are in all such knowledge, and that dire results are brought about by this ignorance, is to be found in the facts elicited in a speech of Mr. A. H. Munro-Butler Johnstone before the House of Commons, that out of 1,000 recruits 408 are rejected as unfit on the score of imperfect health and imperfect physical development; and out of 5,500 boys applying for service in the Navy, more than half fail on the same grounds.

Some twenty years ago the Ladies' Sanitary Association was instituted, mainly at the instigation of Dr. Roth, who has had the diffusing of physical knowledge very much at heart throughout a long life. It was commenced under the auspices of a few women of position, who showed no little moral courage in thus lending their names, as the subject was then considered almost unfeminine. It has flourished well, and as there is no doubt there are a number of women truly anxious to aid in any good cause, we shall, we think, be best explaining how they may benefit themselves and others through a knowledge of physical education, by explaining what subjects this association, and other promoters of the spread of such knowledge, take under their cognisance. First and foremost, a few simple rules of health have been diffused among the poor. They have been taught the value of pure air, pure water, and moreover, how to purify it, either by boiling or the simple flower-pot filter. Many lives

have been saved by such teaching, many unhealthy homes made healthy.

The hygiene of dress plays its part. The folly of letting all the weight of skirts and drapery come from the waist, instead of from below the hips; of tight-lacing, and wearing tight shoes with heels which throw the muscles out of gear, tight garters and gloves, making feet and hands cold, and the inappropriateness of tightly-tied bonnet-strings, necessarily throwing the chin forward; and of bonnets which afford neither warmth nor protection, are some of the characteristics of modern dress—so much of it totally opposed both to health and fitness—of which physical science takes account. Due attention to our health is a bounden duty—following Nature's simple rules, and not marring her work. As years go on, we learn the penalty we pay for disregarding hygienic laws; and a general want of tone and power, of which so many complain, may be traced to this source from generation to generation.

The rearing of healthy children is by no means the least important part of the same lore. The infant mortality rate is a national disgrace; forty to forty-five die out of every hundred, owing either to the bad health of mothers, to the confined space in which they live, or to the lack of fresh air, food, and cleanliness, or carelessness which leads to their being suffocated by too close contact with the nurse or mother in bed. It has been proposed that every parish should have special infants' homes for pauper children, and for those for whom a small sum could be paid weekly, the nurses being young girls from the work-house, who would thereby acquire a good training and a mode of earning a living. Prevention is better than cure. Where you can turn one drunkard from the error of his ways, you can deter hundreds from becoming drunkards. To have a healthy population, care should be taken that the girls grow up healthily, and so become strong, healthy mothers.

Few women seem to realise that the training of children's minds and bodies begins in earliest infancy, that the very activity of childhood is apt to distort the lissome limbs. A child standing to say its lessons with its arms behind it, not having the arms straight or the thumbs uppermost, rounds the shoulder and de-

presses the chest, or by holding one elbow with the opposite hand throws the spine and scapula out of place. Children should not be allowed to keep persistently one foot forward in coming up or down stairs, or to sit to read with elbows on knees and the book close to the face. Whether reading, writing, or drawing, the greatest care should be taken what position is assumed. It is only by a series of diagrams, such as was issued by a learned physician some time since, that we realise how many spinal curvatures are due to these causes; indeed, the diseases and deformities caused by the ignorance of mothers and teachers are incalculable. They are also, in a great measure, answerable for the low physique of the population. So much depends on women, that physical education is as necessary as mental, seeing how the sum-total of the happiness and well-being of the community and of future generations would be augmented if disease, mortality, and deformity were diminished, and a healthy mind in a healthy body insured to the million.

School hygiene—viz., that the building used should be appropriate—is another important item; warmth, light, a good building on a good site, on sand, gravel, or chalk where practicable, surrounded by a playground, being the most desirable points, and sadly lacking, as experience shows, in nine schools of ten. The bad air breathed by the pupils in many schools has been a fruitful source of numberless diseases, though now in schools under the jurisdiction of the School Board it is required that there should be so many cubic feet of air for each child.

Gymnasiums for ladies, where the muscles and frame can be fully developed, are scattered all over the kingdom, and have greatly promoted the physical training of the sex. Many people, however, have an objection to such violent exercise for women, and prefer calisthenics, which should form an essential portion of the education of the young, and aims at bringing about the same results by gentler means. These exercises should commence whenever study begins, very gently at first and for a very short time, but lengthened and increased as the pupil grows. A good course of "free exercises," as they are called, can be gone through without any paraphernalia. Dumb-bells, rings, wands, and chest-expanders are all useful aids. Ling, the famous Swede, who devoted his attention specially to the physical development of his nation, is the author of one of the best and most scientifically devised systems, founded on anatomical principles, and this has been translated and applied to English use in a small volume by Dr. Roth.

Such courses counteract in the most satisfactory manner the ill-effects of the sedentary life led by many.

The sooner we understand that our bodies are priceless gifts about which we have much to learn, and with regard to which much care is required, the better. Physical education should be as essential a part of education in national, elementary, and other schools as writing and arithmetic. The movements of the body

are in harmony with the dictates of the brain, and the why and wherefore are worth studying, the body forming as valuable a portion of our lives as the mind. The Greeks realised this as much as any nation, deeming health and beauty as identical. Our present civilisation does not appear to have reached that point, and whenever the necessity of physical education is mooted in high places, the question of efficient drill is the only branch of the subject of which any cognisance is taken. There are, however, many earnest workers bent on spreading this useful knowledge. In numerous educational establishments there are specially trained instructors who owe their knowledge to Dr. Roth, who gratuitously instructed many such female teachers sent to him by the Educational Union and by other societies.

The adulteration of milk, and of food generally, is a potent cause of mortality, both in children and adults, and an important portion of physical education is that which teaches how to detect adulteration, counteract its effects, and secure wholesome food, and cleanliness with regard to food, the house, and the person.

We have now said enough to explain what physical education means, and have, we trust, shown how much good may be done by self-instruction on such points, and the diffusion among the poor of the all-important though simple rules of health. Each class is given to copy the one immediately above it; therefore it behoves all to set a good example. The higher the rank, the greater the responsibility—a responsibility, by-the-by, not to be shirked. A few women of position starting some definite plan for helping their poorer neighbours by example and teaching could effect incalculable good. High and low, rich and poor, follow fashion blindly after their particular manner, and much that is evil may be traced to its sometimes baneful influence. Only make any wise innovation fashionable, and its success would be more than half-way assured. This certainly holds good in dress, as well as in other things. If small waists, for example, ceased to be admired, they would erewhile disappear. At the present day there are many women who have never been permitted to breathe in a thoroughly healthy and efficient manner, and many of the numerous instances of spinal curvature and diseases of the heart may be traced to the want of knowledge and care which characterises so large a number of teachers and guardians of the young.

Sempstresses, and others engaged in sedentary pursuits, would do well to make it a rule to stretch the arms and expand the chest thoroughly before going to bed. The graceful vases of Etruria display women with finely-developed forms bearing their well-shaped pitchers on their heads. Mountaineers and Cornish miners alike discover breadth of chest. Nothing can be done without labour—the rule applies alike to the faculties and to the body; and the necessity of working for a livelihood—digging that we may eat—develops the mental and physical being.

