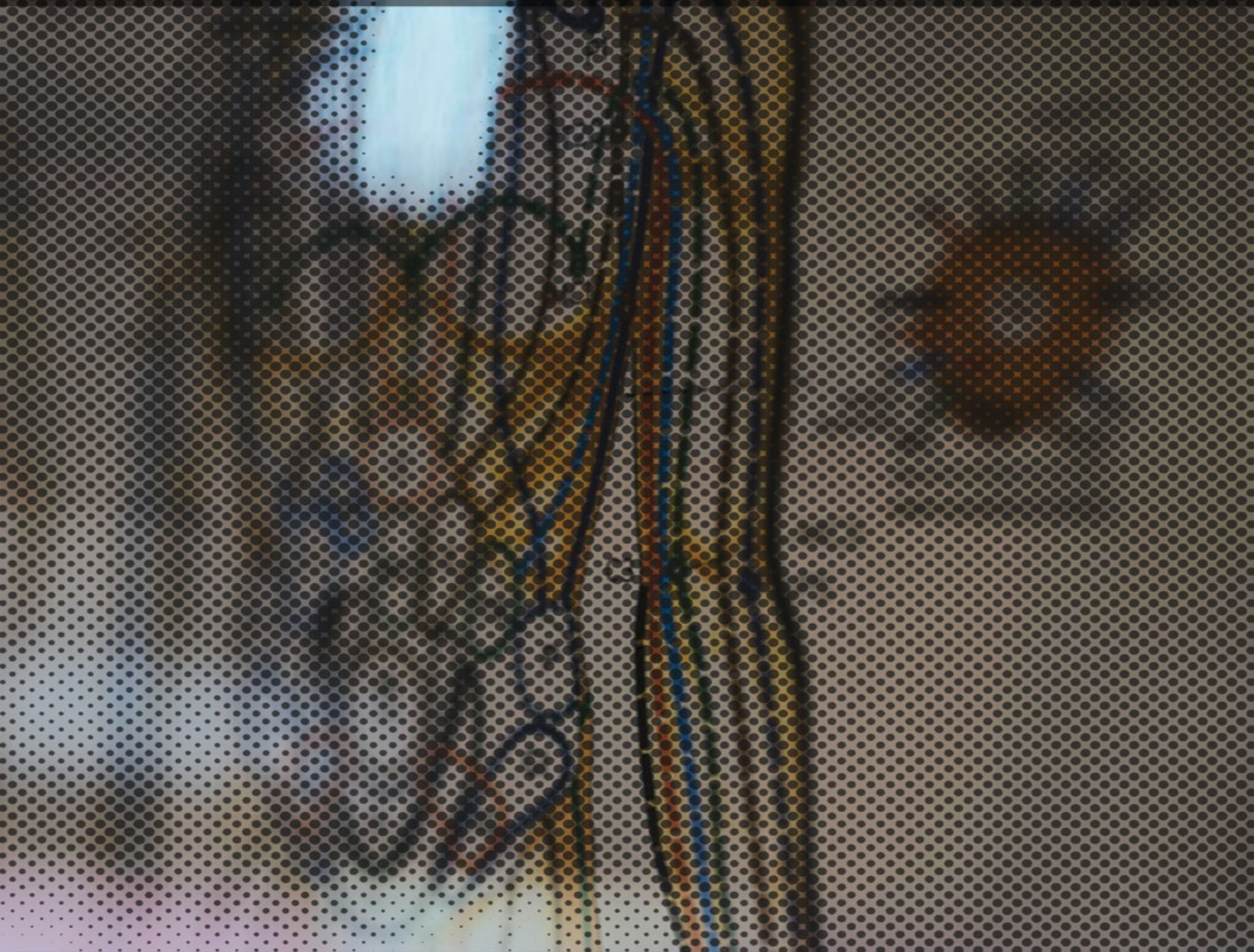


Eugene Sandow



*Sandow on physical
training: a study
in the perfect type
of the human form*

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3. Flexor carpi radialis.
4. Palmaris longus muscle.
5. Pronator teres muscle.
6. Supinator longus muscle.
7. Biceps muscle.
8. Triceps muscle.
9. Coraco-brachialis muscle.
10. Teres major muscle.
11. Deltoid muscle.
12. Pectoralis major muscle.
13. Serratus magnus muscle.
14. Trapezius muscle.
15. Supinator longus muscle.
16. Brachialis anticus muscle.
17. External oblique muscle.
18. Gluteus medius.
19. Gluteus maximus.
20. Tensor vaginæ femoris.
21. Rectus abdominis muscle.
22. Adductor longus.
23. Gracilis muscle.
24. Semi-membranosus muscle.
25. Rectus femoris muscle.

- 26. Vastus internus muscle.
- 27. Sartorius muscle.
- 28. Vastus externus muscle.
- 29. Gastrocnemius muscle.
- 30. Tibialis anticus muscle.
- 31. Soleus muscle.
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- 1. Extensor carpi ulnaris.
- 2. Flexor carpi ulnaris.
- 3. Anconeus muscle.
- 4. Biceps muscle.
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- 6. Tendon of Triceps.
- 7. Deltoid muscle.
- 8. Trapezius muscle.
- 9. Latissimus dorsi.
- 10. Serratus magnus muscle.
- 11. External oblique muscle.
- 12. Gluteus medius.
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- 14. Tensor vaginæ femoris.
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- 17. Gracilis muscle.
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i. Tibialis anticus muscle.
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k. Soleus muscle.

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Key

A Date.

B Age.

C Weight.

D Horizontal Measurement of

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F Chest, empty.

G Right Biceps.

H Right Forearm.

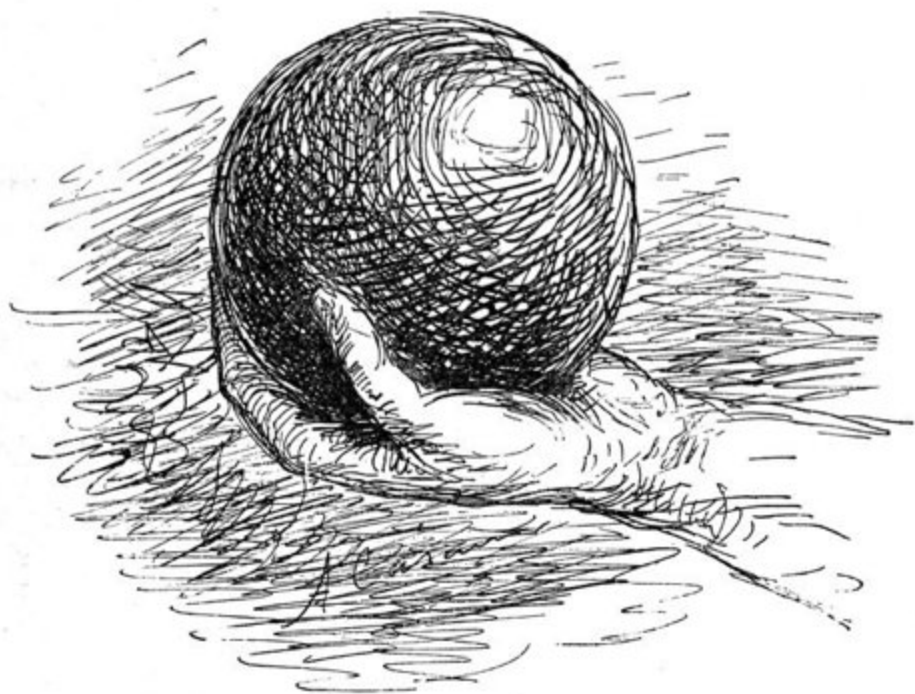
I Right Deltoid.

J Left Biceps.

K Left Forearm.

L Left Deltoid.

M Remarks.



PREFACE.

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The following pages have been prepared under Mr. Sandow's direction and personal supervision. In the practical section appended to the narrative account of the great athlete's early amateur and later professional life, Mr. Sandow has furnished detailed instructions for the performance of his dumb-bell and bar-bell exercises and supplied the reader with a text-book which, he would fain hope, will be useful to the would-be athlete and to all who desire to attain perfect health, increased strength, and the full development of their physical frame.

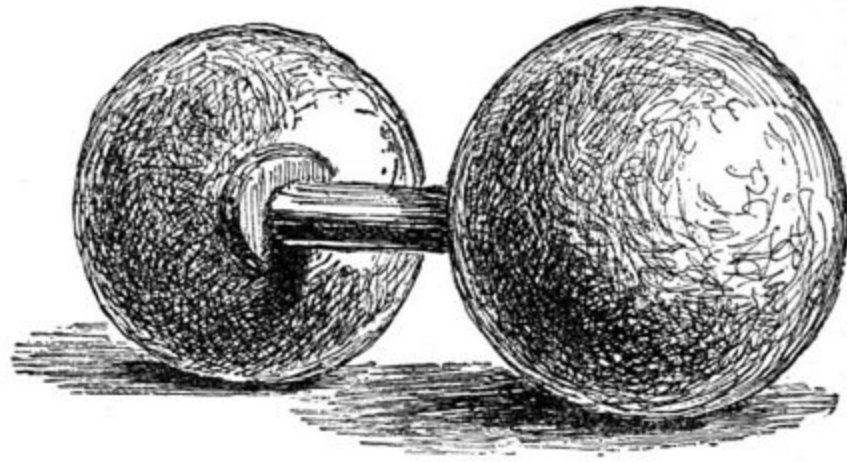
Since the volume was put in type, further testimony, of a gratifying kind, to the value of Mr. Sandow's system of physical training has come to hand, in Captain Greatorex's courteous letter, to be found in the Appendix. It is regretted that the communication was not received in time to insert in the chapter to which it belongs—that on "Physical Culture in Relation to the Army." The letter forms a pleasant pendant, much prized by Mr. Sandow, to the one which appears in the chapter referred to, from Colonel Fox, H. M. Inspector of Military Gymnasia for the British army.

The illustrations to the practical as well as to the narrative portions of the book will, it is believed, add no little to its value. To the courtesy of Messrs. Sarony of New York, Morrison of Chicago, and H. Roland White of Birmingham, England, the publishers are indebted for permission to reproduce the photographs.

The Editor takes advantage of this prefatory note to acknowledge his obligations to Mr. Sandow and his pupil, Mr.

Martinus Sieveking; to Mr. W. T. Lawson, member of the New York Athletic Club; to Dr. D. A. Sargent of the Hemenway Gymnasium, Harvard University; to Dr. Everett M. Culver of New York; to Dr. W. Theophilus Stuart of Toronto, Canada, and to the Publishers, for courtesies received during the preparation of the work.

NEW YORK, February 1, 1894.



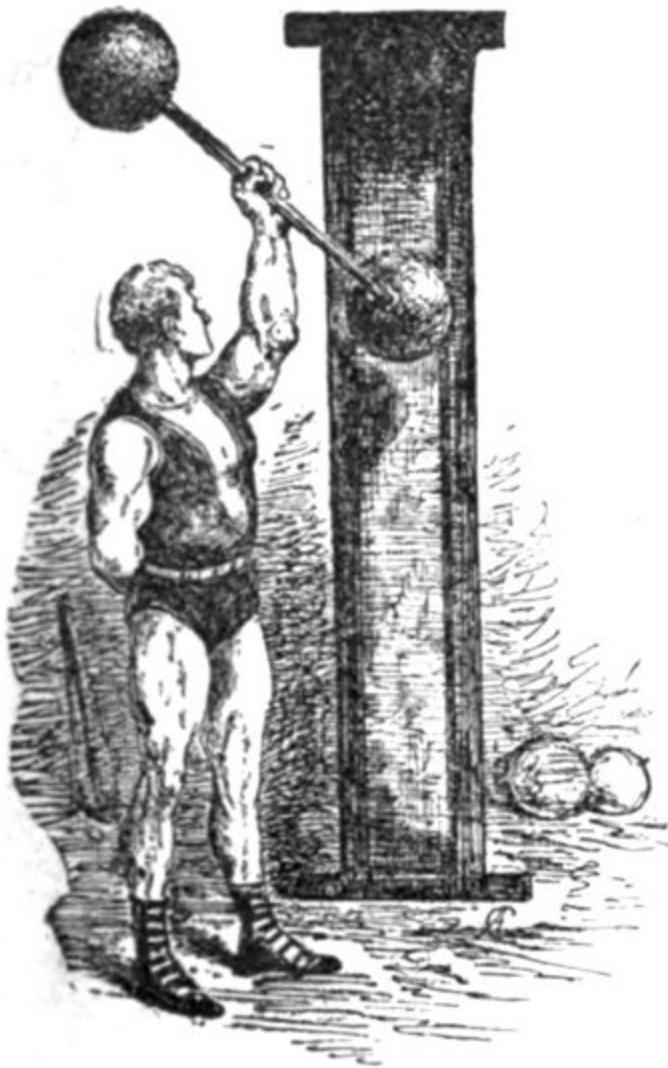
SANDOW ON PHYSICAL TRAINING.



I.

A PLEA FOR PHYSICAL EDUCATION.

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In spite of the increasing value of individual life—the distinctive mark of the civilization of our time—little has as yet been done, on large lines at least, to secure for the masses of the people who do the work of the world that degree and maintenance of physical well-being implied in the phrase, "a sound mind in a sound body." For those even whom we are pleased to call "the flower of our population," we have systematically and intelligently done next to nothing in the way of physical culture. Only in recent years has physiology been put on the curriculum of our public schools and the young have been

enabled to get some inkling into the framework of their bodies and the physical conditions on which organic life is held. Whether this knowledge, in the main, goes beyond an appreciation of the necessity for air, light, food, clothing, and cleanliness, as conditions essential to health, may be greatly doubted. What is remembered of the theoretic laws of health when school-days are over, is, if we except the case of the comparatively small contingent that goes on to the study of medicine as a profession, of little value in the practical government of our bodies. Even what we have picked up about sanitation is generally lost before we have well entered upon manhood, or is effectively and grimly set at naught in our homes by the plumber. Where physiology has been properly taught, we may not all be as heathen in our knowledge of the requisites of health. In a few fortunate instances, the youth may know something of the processes of waste and renovation in the body; but how those processes work to the best advantage and show their most beneficent results under the systematic exercise of the muscular system, is, admittedly, given to but few of us fully to appreciate or wisely to understand. Even the ancient Greeks, noted as they were for their fine physical development, grace and symmetry of form, groped largely in the dark regarding many things which modern physiological science has now made plain. This is well understood; but, with the higher knowledge that modern science has brought us, how indifferent has been our approach to

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for which the Greek—especially the Athenian athlete—was famed. Greek and Roman alike knew, in a high degree, the value of bodily exercise, and in their competitive games, as well as in their training for war, adopted a system of physical education which produced wonderful results. They knew nothing, however, of biology and the marvel of the body's cell-structure, the key which, it may be said, has opened to a modern age the doors of its microscopic vision and revealed almost the secret of life itself, with its ever-recurrent motions of waste and renewal. They did not know, as Mr. Archibald Maclaren, the great English authority on Physical Education, has observed, "that man's material frame is composed of innumerable atoms, and that each separate and individual atom has its birth, life, and death; and that the strength of the body as a whole, and of each part individually, is in relation to the youth or newness of its atoms. Nor did they know that this strength is consequently attained by, and is retained in relation to, the frequency with which these atoms are changed, by shortening their life, by hastening their removal and their replacement by others; and that whenever this is done by natural activity, or by suitable employment, there is ever an advance in size and power, until the ultimate attainable point of development is reached. They simply observed that the increased bulk, strength, and energy of the organ or limb is in relation to the amount of its employment, and they gave it employment accordingly."

This, in the main, was the sum of knowledge possessed by the ancients in relation to physical training; yet unscientific—as we now understand the term—as it was, its results were wonderful in promoting strength and activity. Of course, in giving themselves so ardently to physical education, the Greeks and Romans must have observed much else, as the results of muscular exercise, that was beneficial to the youth in training. Though they had little knowledge of the why and wherefore in physiological law, they saw its gratifying effects and so betook themselves, with increasing national enthusiasm, to the exercises of the gymnasium and the campus. The physiological action on the lungs and the blood produced by quickened respiration, incident to regular periods of muscular exercise, they might not know; but they saw clearly its health-giving results, on the mind as well as on the body, though no doubt, with them as with us, it was the few only who were qualifying themselves for the service of war who had the benefit of this experience in training. Interest in the physical well-being of any beyond those who were designed to bear arms, there was none in either Athens or Rome. Outside of that favoured class there was no public provision for physical education; though there were always patriotic and high-spirited youth whom the thirst for distinction drew into the competitive arena to take part in wrestling contests, swimming matches, chariot racing, and other national sports and games. With us, of recent years at least, physical training has gone beyond the parade-ground or barrack-room of the soldier. It has happily found its way into our schools and colleges, and, in a few of them, at any rate, it

takes a place on the curriculum hardly inferior to that assigned to intellectual studies. Of late years, also, provision has specially been made for it by athletic clubs and other organizations for recreation, of a private or corporate character, with results that have gone far to neutralize the physical deterioration that in our over-competitive age is incident to

THE JAR AND FRET OF BUSINESS LIFE.

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Theoretically, at least, we all pay tribute to the value and importance of physical education. We admire physical strength and beauty, and recognize, though only faintly as yet, the inter-relation of mind and matter. We know, moreover, that a healthy, active brain is sadly handicapped by an ill-developed, sickly body. We see around us every day of our lives masses of our race of imperfect growth and unsound constitution, and almost daily the lesson comes home to us of the break-down of some friend or acquaintance, whose weakness of body could not withstand the mental and bodily strain in the struggle of life. Yet it is not strength, so much as health, that is the crying want of the time. It is stamina, and the power, in each of us, to do our daily work with the least friction and the greatest amount of comfort and ease. Only the few are called upon, like the great traveller or the soldier in a campaign, to endure protracted fatigue and encounter serious obstacles in nature or severities of climate, from which most of us shrink, and for the undertaking of which few of us have either the will-power or the courage. "A small portion only of

our youth are in uniform," observes the authority we have already quoted; "but other occupations, other demands upon mind and body, advance claims as urgent as ever were pressed upon the soldier in ancient or modern times. From the nursery to the school, from the school to the college, or to the world beyond, the brain and nerve strain goes on—continuous, augmenting, intensifying. Scholarships, competitive examinations, speculations, promotions, excitements, stimulations, long hours of work, late hours of rest, jaded frames, weary brains, jarring nerves—all intensified and intensifying—seek in modern times for the antidote to be found alone in physical action. These are the exigencies of the campaign of life for the great bulk of our youth, to be encountered in the schoolroom, in the study, in the court of law, in the hospital, and in the day and night visitations to court and alley and lane; and the hardships encountered in these fields of warfare hit as hard and as suddenly, sap as insidiously, destroy as mercilessly, as the night-march, the scanty ration, the toil, the struggle, or the weapon of a warlike enemy.

"Yes, it is health rather than strength that is the great requirement of modern men at modern occupations; it is not the power to travel great distances, carry great burdens, lift great weights, or overcome great material obstructions; it is simply that condition of body, and that amount of vital capacity, which shall enable each man in his place to pursue his calling, and work on in his working life, with the greatest amount of comfort to himself and usefulness to his fellow-men. How many men, earnest, eager, uncomplaining, are pursuing their avocations with the imminency of a certain

breakdown ever before them—or with pain and weariness, languor and depression, when fair health and full power might have been secured, and the labour that is of love, now performed incompletely and in pain, might have been performed with completeness and in comfort."

Nor is the remedy hard to apply or likely to be at all doubtful in its results. It is Nature's own panacea—the remedy, as we have seen, which the nations of antiquity, intelligent and highly civilized as they were, found effective in war as well as conducive to the health and vigour of youth. But physical strength was not only "the veritable God of antiquity;" it was also the pride and idol of the Middle Ages. At the latter era, the tilting-field and tourney-ground took the place of the Campus Martius and the gymnasium. There the chivalry of the time disported itself in jousts and feats of horsemanship, while the village-green gave encouragement to wrestling matches and the varied sports which are noted among England's manly national games. We in the New World are inheritors of many of these playful incitements to bodily vigour, to which we have added others, characteristic of our climate and people, but all helpful in their way in the up-building of a lusty frame. Valuable, however, as are these

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they are only recreative exercises and, for the most part, fitfully indulged in. Moreover, they are confined, as a rule, to the school-age, and are too often dropped when the youth

passes into the first stage of manhood. It is well known, also, that they develop only the lower limbs, or the lower limbs and the right arm, leaving without its meed of exercise the left arm and upper portions of the trunk. This incomplete and imperfect unfolding of the human body it should be the design of intelligent methods of physical training to correct and to supply with the needed exercises, so as to bring about a uniform and harmonious development. Lacking this, there is seen faulty growth and weak or distorted conformation in an otherwise healthy and well-constructed frame.

In the following pages, the narrative of the career of an enthusiast in athletic pursuits, it is the design of Mr. Sandow, as well as the modest purpose of the writer, to show how effective can be even simple methods of muscular training, when scientifically imparted, in raising the human body to a high plane of physical perfection, and in making it better fitted for the all-round, every-day work of both the manual and the intellectual toiler. In physical education, as in every other laudable ambition, there are few royal roads to the signal and satisfactory attainment of one's ends. Here the sciolist, or the ill-equipped instructor, can of course make a show of juggling, and hump the muscles in indiscriminate ridges, without much reference to their practical uses, and with little benefit to the health, vigour or permanent well-being of the deluded pupil whom he affects to train. This, of course, is folly. In all our aims after physical education the great thing to bear in mind is to avoid ambitious and elaborate efforts at bodily training. The ancient Greeks and Romans would have laughed at our

extensive array of apparatus,—the appurtenances of our modern gymnasia—on which we foolishly lavish large sums of money, often only to be looked at, or used for harm rather than for good. Another point is this: see that your training be not only simple but effective. In its scope let it be thorough. Physical education, as we have already hinted, is too often and incompletely directed to the accomplishment of one or two feats—notably those wrought by the exterior muscles by the use of the apparatus ordinarily in vogue in our gymnasia—without reference to the vast net-work of interior muscles, which have so much to do with bearing the strain of arduous gymnastic exercise, and have their important, set functions in the vital seat of the system. As these interior muscles are brought into harmonious play with the connected exterior folds of tissue, the athlete may pursue his exercises safely; if they are not so brought into play, as too often happens, then a breakdown may be expected, and dire, often, is the result. To obviate this, Mr. Sandow's stringent caution cannot be too strongly impressed, on the young gymnast particularly, viz., that

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where nature intended the human animal to find his habitat, and there to stand erect. He also wisely enjoins the use of dumb-bells of only 5 lbs. in weight, for the earnest and systematic manipulation of these, he affirms, is sufficient for the due development of all the muscles and

groups of muscles appertaining, at least, to the upper part of the body; while by confining the would-be athlete to these medium-sized bells no risk of injury is run, and the average man can be kept in the perfection of health. This result will be the more assured, if the pupil-in-training will make himself intelligently acquainted with the anatomical arrangement and disposition of his muscles, and acquire some practical knowledge of physiological science. For the development of the lower limbs, Mr. Sandow has constructed and patented a simple apparatus which, he claims, is, with the light-weight dumb-bell, all that the athletic devotee needs for the vigorous up-building of his body. The mechanical contrivance referred to will be found admirable for exercising the adductor muscles of the leg. Its usefulness need hardly be pointed out, to those, at any rate, who have seen Mr. Sandow in what is familiarly called the Roman Column feat, and have observed what muscular strength he possesses in his lower limbs (though in the performance of this feat other muscles than those of the lower limbs are called more into play), which are kept in training partly by the use of this ingenious invention.

Of course, the mass of humanity, even of those who do the heaviest part of the world's work, are not likely, whatever time they can give to physical culture, to become Titans in strength. Nature is wont to be churlish when she is expected to make prodigies of us all in either physical or intellectual vigour. Yet nature is no niggard in placing at the disposal of the race, at least, the raw material out of which it may fashion both vigorous minds and healthy bodies. The trouble is that our modern methods of education, for the

most part, do not lead to mutual and concerted action in the training of these dual parts of our being. The mistake is the more serious when we realize how great is the influence on the mind of a physically well-developed body. Equally important is the realization of the truth, that a strongman, well-trained, can put his strength to an incalculably greater advantage than a man of like vigour whose physical powers have not been cultivated. Even a superficial perusal of the following pages can hardly fail to attest, and, it may be, impress this lesson.

But the prime lesson for all, is to seek to raise the individual physical strength, which, unquestionably, is much lower for the race than it ought to be. By raising the physical standard in the unit, time and training will accomplish like results for the race. Nor are we without encouragement in seeking, in either unit or race, an improvement in physique; for Mr. Sandow, who is what he has made himself by following his own simple system of muscular training, is a striking illustration of the power of expansion latent in the human frame, and which in the most of us is capable of development. Physically, Mr. Sandow is, of course, of more than normal girth, as well as of exceptional strength of chest, loin and limb; but under favouring conditions of exercise and training many might attain to the same measure of physical development, while none need despair of making some gratifying approach to it. We repeat, however, that health, rather than muscular strength, should be the chief object of physical training. To most of us, engrossed in the ordinary avocations of life, and necessarily confined by the conditions of our occupations to

sedentary habits, the main consideration must be the degree in which we can best perform our work, with the utmost attainable freedom from friction or bodily ailment. In Mr. Sandow's scheme of training he properly gives much

ATTENTION TO CHEST DEVELOPMENT,

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since, unless the heart and lungs have room for their natural and active play, it will matter little either how large or how strong may be the legs or arms. A narrow or weak chest is not only in itself a serious bodily defect, but it invariably conduces to an inferior physique. This has been well illustrated by facts recently gathered by Dr. G. W. Hambleton, President of the Polytechnic Physical Development Society, of London, who has made many years' researches into the vocations which induce weak lungs and contracted chests. To the neglect of a proper chest development, says this authority, is due the large reduction from the numerical strength of the British army, a reduction which is not only a national weakness, but the occasion of much financial loss, in the annual invaliding and death of so many otherwise effective men from the ranks. Benefit societies and life assurance companies, Dr. Hambleton also computes, lose an enormous sum yearly from the same inciting cause, which might be largely removed, were the tendency of the habits and the surroundings of the insured such as to secure increased breathing capacity. Indifferent breathing power, and the lack of fresh air and proper muscular exercise, are but too certainly the prolific causes of disease and physical