HEALTH FROM SCIENTIFIC EXERCISE.

BY WILLIAM HOPE HODGSON.

PLATE 1.—FIRST EXERCISE.

"OF all good things good health is the best." That this is so most of us are beginning to realise, and an article on the subject cannot fail to be of general interest. For, being well, you want to remain so, and consequently should welcome a method—sure, simple, and inexpensive—of preserving good health.

This method may be fitly described as one of "scientific exercise."

That much ill-health is due to want of exercise may be considered indisputable.

"Exercise," says Dr. Henry Hoole, "there is ample evidence to prove, is nature's stimulant for the promotion of the proper nutrition of our frames," and if we do not take advantage of this natural method of assisting nutrition it is not to be wondered at that health and strength decline.

It may be well to explain in what way exercise assists the various functions of the body.

To take one example. By its agency respiration is quickened, and the blood, thus rendered purer and richer, is driven in a fuller stream to every part of the body, carrying with it material to replace waste, and stimulating various organs—notably the skin, kidneys, and liver—to an increased activity, which of necessity helps to free the system from effete matter.

As a further result the appetite improves, food is better assimilated, and there is a general gain in health and strength. The numerous muscles gain tone, a better carriage is acquired, the chest and lungs are enlarged and strengthened, while the limbs increase in size, shapeliness, and power. In short, exercise, properly carried out, develops the whole frame, and imparts new life not to the body only, but to the brain itself.

It may be well here to touch on the difference between "recreative" exercise (such as cricket, football, hockey, etc.) and "scientific" exercise, which is really exercise systematised. In the one it is necessary

PLATE 2.—FIRST EXERCISE.

to go out of doors, have daylight, and spend a considerable amount of time, all of which are not convenient to those living in big

PLATE 3.—SECOND EXERCISE.

cities, where the space of ground required for these games is alone sufficient to prevent them from becoming generally useful.

It is here that "scientific" exercise steps in. "Scientific" exercise may be practised

PLATE 4.—THIRD EXERCISE.

in one's bedroom; it does not take up much time; it may be followed either at night or morning, according to convenience; and lastly, the amount indulged in can be regulated to a nicety, so that even the weakest may take it up in safety.

This is more than may be said for "recreative" exercise, many forms of which are quite unfit for persons of weakly physique.

I would like to point out here that in no sense of the word do I condemn "recreative" exercise, which affords splendid fun and is undoubtedly healthy, but, as I have just said, is scarcely suitable for weaklings, who should get strong through "scientific" exercise before attempting the more violent recreative forms.

I propose now to give a series of carefully

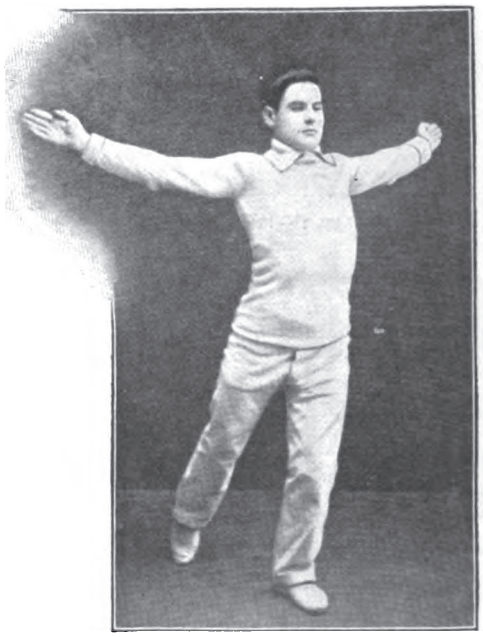

PLATE 5.—THIRD EXERCISE.

tested breathing and trunk-flexing movements, accompanying them by a thorough explanation as to their working, what they accomplish, and in what special way they are likely to be of use.

As perfect freedom of the body is highly necessary during the exercises, ladies will find it convenient to wear something of a quite loose-fitting nature.

In the case of men nothing could be better adapted for exercising in than the ordinary pyjama suit. The more hardy will find greater pleasure if they dispense with the

jacket, and allow the air to have free access to the skin.

No. 1 exercise is splendid as a preparatory movement for warming the body. It strengthens the muscles of the upper arm, and deepens the chest.

In performing it I have found it best to place one foot to the front, and assume a position with the arms bent and the elbows pressed firmly to the sides, as in plate No. 1. Then slowly rise on the toes of the rear foot and straighten the arms backward, breathing *in* (see position of arms and body in Plate No. 2). Having achieved a full inspiration, return the arms and trunk to the "ready" position, breathing *out;* continue until thoroughly warm.

PLATE 6.—FOURTH EXERCISE.

A hint here. Always, when practising the "breathing" movements, take the breath *in* through the nostrils, letting it *out* through the mouth.

Being now warmed up and ready for work, you will be able to attempt the second exercise, shown in plate No. 3. This calls for no particular breathing, as the chest-walls are not raised; though, of course, be careful not to hold the breath in any way.

This movement is quite easy. All you have to do is to raise the right hand up under the armpit, then lean over to the left, and attempt to touch the outside of the left knee. Having done this, you reverse, drawing the left hand up and putting the right down, at the same time leaning over to the right; keep working until moderately tired.

PLATE 7.—FOURTH EXERCISE.

The effect of this movement is to stimulate the action of the liver and the abdominal organs; it also assists assimilation.

Exercise No. 3 (seen in plates No. 4 and No. 5) is perhaps of all the movements the most needful to the worker at the desk. Its effect on the chest and lungs is extraordinary when performed in conjunction with proper breathing. I have, in my own experience, seen men increase their chest measurement from two to four inches—with corresponding improvement in lung capacity—in the short space of three months, and this result was produced by practising this exercise—with others of like nature—for a few minutes each day.

To prepare for this movement, put one foot forward and extend the arms to the front in a line with the chin, palms touching, as in plate No. 4. In working, throw the weight on to the front foot by bending the front knee and rising on the toes of the hinder foot; at the same time take the arms

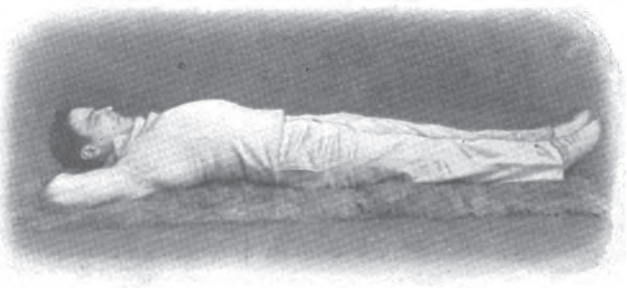

PLATE 8.—FIFTH EXERCISE.

slowly backward, breathing *in* as you do so, until they are fully stretched (see plate No. 5); then return to the first position, breathing *out*. Repeat from ten to twenty times.

The reader will do well to remember that in all the exercises jerking *must* be avoided, as it tends to irritate the heart, and is injurious to the muscular tissue.

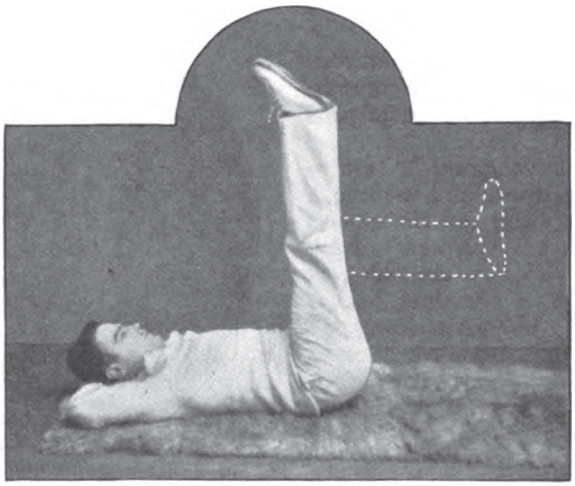

PLATE 9.—FIFTH EXERCISE.

In exercise No. 4 (plates No. 6 and No. 7) we have a movement calculated to strengthen the muscles of the lower back. It has also a decidedly enlivening effect on the excretory organs. First assume the attitude shown in plate No. 6, and breathe *in;* then stoop forward, breathing *out* steadily, and, keeping the knees straight, attempt to touch the floor. Whether or not you succeed in doing so does not matter, but in any case be careful not to bend the knees. Return to the first position, and repeat.

After No. 4, No. 5 will be welcomed as a change, bringing into play, as it does, an entirely different set of muscles. You will see from plate No. 8 that it necessitates a lying position, which may be conveniently taken on the hearthrug, or, failing that, a folded blanket or quilt.

A short study of plates No. 8 and No. 9 will give a clear idea of how the movement is carried out. Having assumed the "ready" position (shown in plate No. 8), you slowly raise the feet and legs until they form a right-angle with the body, keeping the knees rigidly straight (see plate No. 9). Then lower slowly to the "ready," letting the heels rest on the floor. Continue the movement until a sensation of fatigue is experienced in the lower part of the abdomen. Ladies and children must not do this movement with their knees straight, but in all cases bend them as indicated by the dotted lines in plate No. 9. The effect of this exercise is to combat flatulency, while obese persons will find it helpful in reducing the waist.

PLATE 10.—SIXTH EXERCISE.

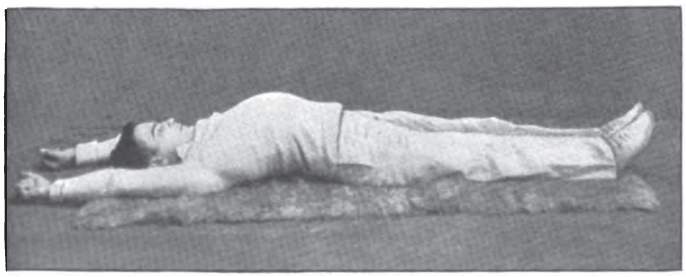

PLATE 11.—SIXTH EXERCISE.

Exercise No. 6 (plates No. 10 and No. 11) is a breathing movement designed to deepen the chest. This it does effectually, improving the mobility of the chest-walls and bringing the lungs fully into play, thus assisting to counteract any tendency to lung-weakness. Flat-chested people would do well to practise both this and No. 3 assiduously. The exercise is extremely simple. Lying flat on the back with the arms by the

PLATE 12.—SEVENTH EXERCISE.

sides (as in plate No. 10), slowly take them back behind the head, breathing *in*, the elbows being kept perfectly straight and the knuckles allowed to touch the floor (see plate No. 11); then return the arms to the first position, breathing *out*. Repeat from ten to twenty times.

Exercise No. 7 (plates No. 11 and No. 12), besides telling beneficially upon the chest, has a still more important effect upon the abdomen, strengthening the large muscle that sheathes it, and thus affording protection and support to the viscera. Apart from these results, the movement stimulates the stomach to carry on its functions, and, in addition, promotes peristaltic action. In performing the exercise, rise from the "ready" (plate No. 11) to the sitting position shown in plate No. 12, at the same time breathing *out*; then return to the "ready," breathing *in*. Repeat until reasonably tired.

Exercise No. 8, the last one of the series (plates No. 13 and No. 14), is intended for the sterner sex, as it is rather too severe for ladies. It acts strongly on the chest and all the anterior muscles of the body. Lower the body from the first position (plate No. 13), breathing *in* slowly the while, until the chest touches the floor lightly, and the elbows the sides of the body (see plate No. 14); then, while breathing *out*, press up steadily to the first position.

The head must be kept well back during the exercise. Continue until tired.

All these exercises—the last excepted—may be followed with advantage by those suffering from weak hearts, care, of course, being taken in such cases not to over-do matters.

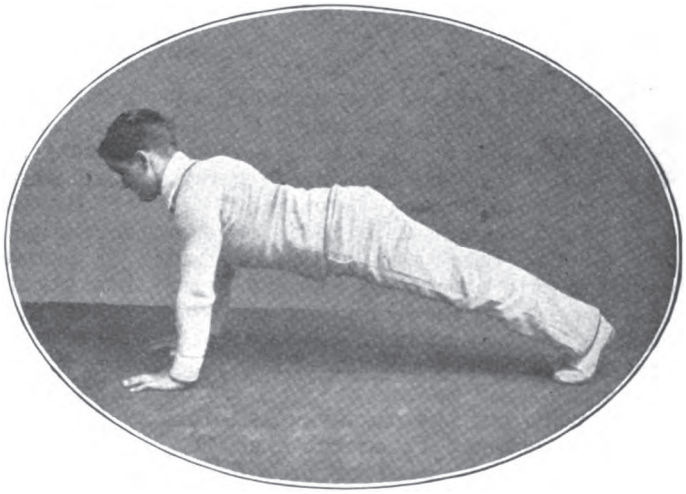

PLATE 13.—EIGHTH EXERCISE.

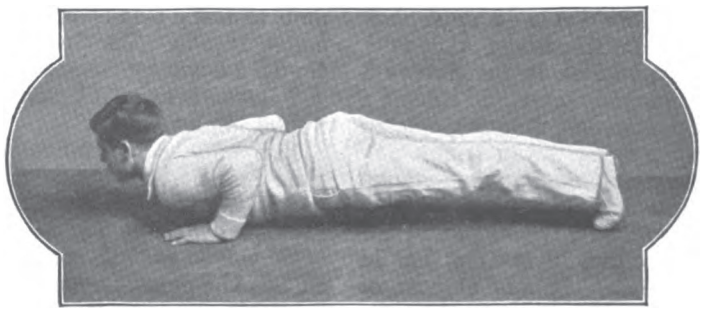

PLATE 14.—EIGHTH EXERCISE.