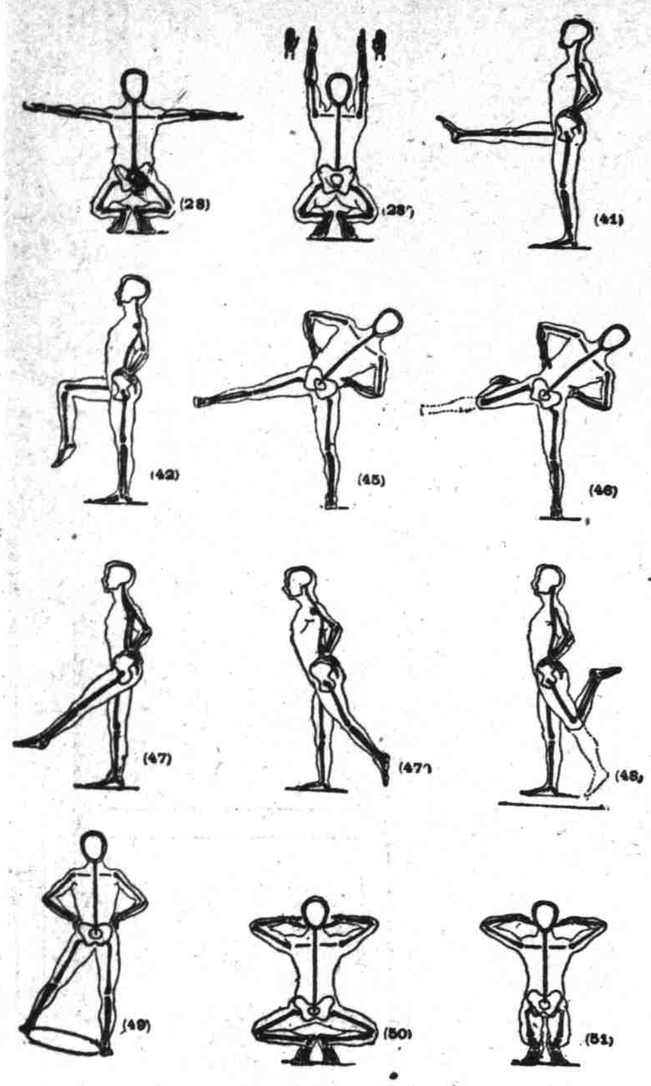
FRENCH DOCTOR EVOLVES NEW PHYSICAL CULTURE SYSTEM

Dr. Francis Heckel Insists That We Should Develop Muscle to Play Games and Not Play Games to Develop Muscle—He Embodies in His System the Remarkable Methods Used in the French Navy by Lieutenant Commander Hebert.



28. Combined arm and leg exercise in Heckel's system. 41. Exercise utilizing all the leg muscles. 42. "Stepper" movement, basis of German army "goose step." 45. Lateral raising of leg, especially difficult for beginners 46. Variation of above, with bending of leg. 47-48. Exercises for developing bending muscles of thigh. 49. Rotary leg exercise. 50-51. Leg exercises, especially fatiguing, for developing all the leg muscles.

NOT long ago Lieutenant Commander Georges Hebert of the French navy decided that if men reverted for a short while every day to the natural modes of exercise of their savage ancestors they would be much better men physically. He worked his ideas into a practical system of physical training, introduced them among the men of the French navy, and obtained such excellent results that soon his ideas were adopted also for training the soldiers of the French army.

And now Hebert has received even more flattering recognition of the value of his work from a high scientific authority, Dr. Francis Heckel, who uses the Hebert methods in an entirely new system of his own, called by him "myotherapy," or cure by muscular action, which, according to him, not only develops the muscles, but acts as a cure in a number of diseases, among them incipient tuberculosis, nervous troubles, gout, asthma, and obesity.

Dr. Heckel, who is already known through a work by him on how to cure obesity, explains "myotherapy," in a volume entitled "Physical Culture and Cures by Exercise," which has just appeared in Paris. After reviewing many theories of physical education, among them those embodied in the Swedish, German, and French systems evolved, respectively, by Ling, John and Amoros, he discards as useless for his purposes all except that of Hebert and two men, Lagrange and Demeny, who paved the way for him.

In the Heckel system the Hebert reversion to the simple exercises of primitive man constitutes the second step of development. Previous to reaching it, Heckel prescribes for the pupil careful and thorough exercises destined to make him acquire the degree of muscular development necessary before the second series of exercises should be attempted. The system of the French naval officer is further amplified by another stage, the third and last, in Dr. Heckel's series, which consists of sports known to all of us—tennis, swimming, rowing, football, etc.

That these should be played only after the first two stages of development have been gone through is insisted upon by the apostle of "myotherapy." In his eyes exercise is a means, not an end. "It cannot be repeated too often," he says, "that one must develop the muscles in order to take part in sports, not take part in sports in order to develop the muscles."

Drastic methods are needed for educating our young people and reeducating your grownups physically, according to Dr. Heckel. He declares that since the days of antiquity, when the Greek athletes attained a degree of physical development which is still the marvel of the world, there has been a woeful degeneration in the quality of the human race.

He contends that the Greeks trained their athletes by no haphazard methods, but by a careful system, unfortunately lost to us, which must have surpassed in efficiency anything since produced. Then came the Middle Ages, when intellectual ideals were set up as the highest to which men could aspire, and all pertaining to the body was treated with contempt. Standards of physical culture were allowed to drop, until a serious deterioration in the human race set in, which continued steadily until within the last 50 years, when a decided reaction came.

A corollary of our physical degeneration, Dr. Heckel points out, is intellectual degeneration. According to him, the very neglect of the physical enjoined by mediaeval pursuers of knowledge brought about the deterioration of those intellectual powers which they were seeking to cultivate.

In describing his system, Dr. Heckel lays particular stress on two things. One is that it is not his intention to produce that kind of athletes in whom certain sets of muscles are developed to the detriment of others and to the well being of the body in general—"false athletes" he calls them. Too many physical trainers seek to develop men of this type, he says, and are responsible for a widespread idea that to endeavor to be like such "freaks" is a worthy object. The Heckel system seeks to develop all the muscles harmoniously and make of a man a perfect physical being.

The second point upon which particular stress is laid is that the neuro-muscular apparatus is what must be developed, not the muscles alone. Every movement in the Heckel system has this double object in view.

Dr. Heckel's definition of physical culture is "a method of development and of equilibrium of all organic functions by the voluntary exercising of one of them, the neuro-muscular function, by means, first, of artificial movements, then of natural movements, and, finally, of sports and games. It is, for the body, the equivalent of intellectual culture for the mind. He defines "myotherapy" thus: "A method for correcting the derangement of functions (functional troubles) by progressive development or recuperation of the neuro-muscular function and a parallel return to morphological and nutritive characteristics."

The essentially medical nature of the Heckel system is one of its most striking features. Every time its exponent advises a muscular exercise, even the simplest, he explains exactly what action this causes, what effects, direct or indirect, it has on other portions of the body, and what the reasons are for its prescription to pupils or patients.

As has been said, the Heckel system includes three stages: Preliminary preparation by muscular development, natural exercises such as are prescribed by Lieutenant Commander Hebert in his system, and sports.

The first step of the first stage is a thorough examination of the pupil, who must submit to it entirely unclothed. To record the results of this examination Dr. Heckel has drawn up a number of charts, which, when filled out, give a complete description of the individual, telling exactly the state of his health, his tendencies, etc. From this the methods to be adopted for his physical education are chosen, for, above all else, the Heckel system is one based on individual requirements. There is no fixed Heckel system, in face, since he ascribes to rigidity of rules the failure of many previous systems to produce beings perfect physically.

After the physical examination comes a long series of movements intended to develop the muscles. Dr. Heckel classifies these under several heads, and gives a total of more than 100, appending to each a thorough explanation, couched in scientific terms. The exercises include arm exercises, such as stretching the arms up over the head and horizontally from the shoulders, rotary arm movements, exercises, with weights, dumbbells, and pulley exercises; leg exercises, such as crouching and forward and backward kicking, and a series of exercises tending to develop the abdominal muscles and those of the neck, back, and other parts of the body.

This preliminary stage is divided into three parts. The first, called by Heckel the period of adaptation, should last one or two weeks, according to the adaptability of the pupil. It consists of exercises tending to create a feeling of fatigue, which is increased progressively as the pupil's capability of enduring fatigue increases. At the same time, it is a period of cleansing the pupil's system from fat and other matter that has been impairing his condition.

About the fourth week of the preliminary treatment comes its second phase—genuine physical training. This is a difficult time, as the fatigue occasioned during the preceding weeks is likely to cause discouragement. To combat this the trainer must "buck up" his pupil constantly. By this time each lesson should last from thirty to forty minutes with exercises calculated to produce copious perspiration. The muscles should become supple at this stage.

Then comes the third subdivision of the preliminary stage, that devoted to developing the pupil's muscles. Weights up to three kilograms are now prescribed by Dr. Heckel. This period should last from six to ten weeks and should bring about a marked increase in muscular power. Trainers should devote special care during this time to the development of each muscle in its entirety, and not merely seek to toughen those parts that are visible and lie directly beneath the skin. According to Dr. Heckel, too many physical educators and re-educators neglect this in their work.

He declares that preliminary training according to his methods will bring about a harmonious muscular development superior to that produced by other systems, in which harmony is sacrificed to development of special portions of the body. After going through the preliminary course the pupil is ready for the second stage of the system, that based on Lieutenant Commander Hebert's methods. Of these Dr. Heckel writes:

Among the systems based on natural methods I shall take up only that of Lieutenant Commander Hebert. It is based on the following principles:

Man in a state of nature, and to satisfy the needs of his struggle for existence, is constantly forced to employ useful forms of exercise, such as walking, running, swimming, climbing, lifting, and certain movements of defense. By means of these exercises primitive man, in all parts of the world, obtains almost automatically a complete organic development and absolute functional harmony.

The morphological and aesthetic results are so perfect that one may say that natural man is the most beautiful as well as the most vigorous of men. Heredity perfects and fixes these results.

Starting from this, Hebert, on the one hand, has his men go through educational movements consisting of walking, with legs held stiff or bent, and of running, combined with respiratory movements and correct holding of the back. This educational part is combined with an entire series of utilitarian exercises which are progressively increased in intensity, number and duration.

These exercises are climbing trees, walls, and obstacles of all kinds, climbing a rope with and without help from the lower limbs, swimming in every form and for all purposes, obstacle races, lifting stones, sacks and men, with the end in view of helping and bringing succor; for, like Amoros, who was haunted by the idea of imparting to gymnastic exercises moral and altruistic features, Hebert bears in mind not only the egoistic side represented by self-defense, but the altruistic, represented by mutual help.

Thus the military side of this education is placed in the foreground, for the man developed by Hebert's methods is an athlete remarkable for strength and endurance. The type thus obtained, of a beauty absolutely different from that evolved by the Swedes and akin to the Hellenic type, seems more perfect and is infinitely better adapted to the tastes and needs of our race.

Hebert attaches small importance to the lifting of weights and, in a general way, to mechanical resistance. His lifting exercises are of an essentially utilitarian character and adapted to military education.

The results obtained by him are most remarkable.

Like Heckel, Lieut. Commander Hebert has worked out a number of charts, by which he records minutely the development of each man under his care. These charts, declares Heckel, are the only ones produced up to now which record minutely the development of each individual and make it possible to tell at a glance his physical condition.

The average lesson given by Lieut. Commander Hebert lasts one hour. This applies—modified, of course, by individual requirements—to the use of the Hebert methods in Dr. Heckel's system. Both of these men lay great stress on the advisability of exercising without garments of any sort and in the open air. Where this is impossible, Dr. Heckel insists on the pupil's wearing as little clothing as possible, as the part played by sunlight and air in muscular development is, according to him, much greater than is generally known.

Pupils going through Lieut. Commander Hebert's course of "natural" exercises are required to rest one day out of seven and never to exert themselves so violently as to reach the limit of their strength.

How French Sailors Train

Here is an average lesson in natural exercising by the Hebert system:

I.—WALKING EXERCISES, (DURATION, FIVE MINUTES.)

1. Walking at an average gait, with the shoulders thrown back.
2. Walking on the tips of the feet.
3. Walking quickly, with legs bent, at a speed of seven to nine kilometers per hour. Take long steps; bend the body forward.
4. Quick walking with legs stiff; minimum speed, nine kilometers per hour. Short and hurried steps. Keep the trunk vertical and the legs straight.
5. Slow walking, with deep breathing.

II.—RUNNING EXERCISES, (FIVE MINUTES.)

1. Running, medium speed, legs bent.
2. Running on tips of feet.
3. Running with long leaps from one foot to the other.
4. Quick starts in short sprints.
5. Slow run, with deep breathing.

III.—CLIMBING EXERCISES, (EIGHT MINUTES).

1. Lifting of legs, stretched forward, as high as possible.
2. Getting upon a straight bar by means of the arms alone.
3. Supporting one's self on the hands and the tips of the feet. Falling forward in two movements and in one. Bending the arms. Walking and running on all fours.
4. Climbing slack rope, or the under side of a ladder.
5. Climbing walls, trees, etc. Going over places where vertigo is to be feared.

IV—JUMPING EXERCISES, (TEN MINUTES).

1. Skipping of all sorts; skipping rope.
2. High jump without a start.
3. High jump with a start.
4. Broad jump without a start.
5. Broad jump with a start.
6. Jumping a barrier by the aid of the hands.
7. Downward jumping.

V.—LIFTING EXERCISES, (FIVE MINUTES).

1. Exercises with one and both hands and light weights.
2. Regular forms of lifting exercises.
3. Loading and carrying weighted sacks.

VI.—THROWING EXERCISES, (SEVEN MINUTES).

1. Vertical raising of weight, (7.257 kilograms,) with bending and straightening of the trunk.
2. Raising same weight sideways and passing it from one hand to the other while bending the trunk from right to left and left to right.
3. Throwing the same weight, each arm alternately.

VII.—DEFENSIVE EXERCISES. (TEN MINUTES.)

Natural defensive exercises include boxing and wrestling. In individual work, wrestling may be replaced by elementary exercises with a bar or any similar object; for instance, a weighted sack, which should be thrown about in all directions.

VIII.—PROGRESSIVE WALKING AND RUNNING EXERCISES. (TEN MINUTES.)

Walking with legs bent: 500 to 1000 meters. With legs straight: 100 to 500 meters.

Running, average gait: 500 to 1500 meters.

Running, quick gait: 30 to 100 meters.

These walks and runs are to be executed in additon to the various walking and running exercises already indicated, which are made without regard to distance.

The order in which the various exercises are given is not obligatory. It should be so arranged as to make them as continuous as possible. As a general thing, violent forms of exercise should be made to alternate with moderate ones.

If for any reason, such as lack of time, space, material, &c., it is impossible to go through all the forms of exercised prescribed, running, jumping and climbing should at all events be done during each lesson.

The Last Stage

When the follower of Heckel's methods has passed through their first stage, that of muscular development, and the second stage, consisting of the natural forms of exercise prescribed by Lieutenant Commander Hebert, he is ready for the third and final stage—games and sports. On the subject of these Dr. Heckel has many interesting things to say, some of them providing food for thought for the Anglo-Saxon peoples. He writes:

As a rule, the Frenchman, being nervous, impatient, combative and courageous, is little fitted for slow and strategically complicated games, and especially for those necessitating disciplined teamwork. He is essentially an individualist, and it will take a long time to adapt him gradually to the coordination of common effort needed in football, rowing races, &c.

Among all the foreign sports introduced among us of late years, it seems to me that there are only two, tennis and boxing, in which Frenchmen can be sure of excelling. In tennis the coupling of effort is limited to two partners. In boxing the need of combativeness, courage and initiative is self-evident.

French professional boxers, trained by English and Americans, are unquestionably better than the English already. They will master their teachers in this sport just as soon as they have received the required preliminary physical education.

Dr. Heckel divides the games and sports which he recommends for use in the third stage of his physical culture system into two classes, viz.:

1. Those which he calls "sports of complementary education," irrespective of whether they are of practical use. Among these he places bicycling, tennis, swimming and rowing.

2. Sports of practical value for defense or attack. Among these he cites boxing, wrestling, jiu-jitsu and athletic games like football.

He has little or no use for what he terms "pseudo-sports," in which category he places yachting, automobiling, riding as practiced in cities, hunting, winter sports and sports whose utility has practically vanished, such as fencing.

He has little to say in favor of tennis, which, he thinks, does not give enough exercise to be suitable for most seekers after physical perfection.

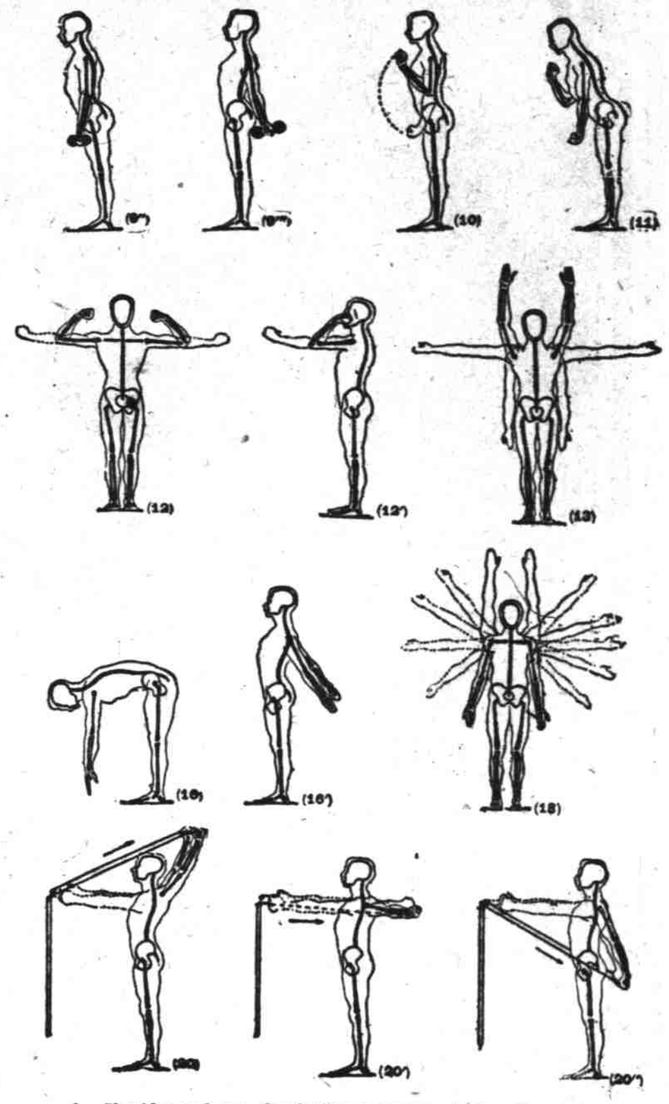
"The best part of the game, which is picking up the ball, is done, not by the players, but by others," he disparagingly observes.

On the other hand, his enthusiasm for swimming is unbounded. Rowing he calls a good sport, but very much inferior to swimming. Of football he writes:

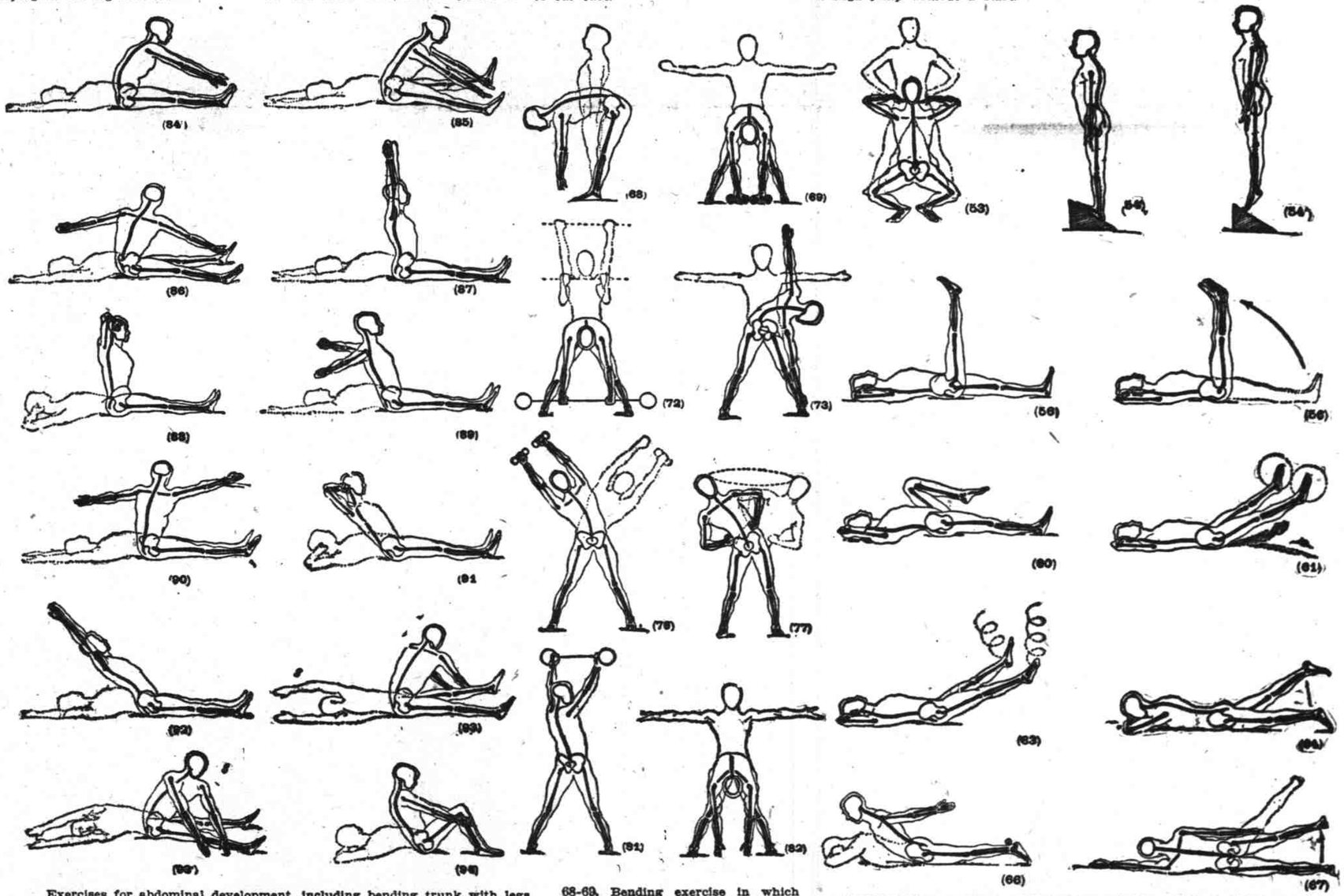
This game, imported from England, is the first and the most complete of all sports. It combines the advantages of running and wrestling, and makes those playing it quick, adroit and strong. The pursuit of the ball necessitates springs, the scrimmage sustained and vigorous effort, the kicking of the ball skill and power, falling without getting hurt sangfroid, and the game in general decision, judgment, courage and discipline.

These qualities are those of athletes, and football is par excellence an athletic sport. Therefore, it requires of those playing it physical prowess of the highest order, as well as perfect condition and training. To have a chance of becoming a good football player, one must begin playing the game early.

Dr. Heckel attaches the greatest importance to the kind of teachers who should impart his system to pupils. They should have a thorough knowledge, not only of medicine, but of physical culture and sports, he declares, and should insist that every one of the prescribed movements be executed with the minutest care and exactly as set forth.



9. Shoulder and arm developing exercises. 10-11. Exercises for developing biceps and triceps. 12-13. For developing dorsal and pectoral muscles. 16-18. Respiratory exercises. 20. "Fan" movements, peculiar to Heckel's sysem.



Exercises for abdominal development, including bending trunk with legs together and apart, bending trunk and touching left foot with right hand and vice versa, bending trunk with arms in various positions, &c.

Advanced leg exercises, producing remarkable results in thigh and leg. A preliminary to jumping exercise in stage II. of Heckel system. 54. Foot-developing exercise. 56. Simultaneous raising of legs from recumbent posture. 60. "Bicycle" movement. 61-63. Rotary and spiral movements. 64. For developing muscles at back of legs. 66. Raising of head and trunk for back and sacro-lumbar muscles. 67. Exercise for thigh muscles.

68-69. Bending exercise in which spinal muscles actively participate. 72-73. For developing dorsal muscles. 76. Exercise beneficial to spinal muscles. 77. Rotary trunk movement. 81-82. Trunk exercises combined with deep breathing.