

Losing weight with the help of power gymnastic for middle aged women not engaged in labor activity

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Abstract—The article substantiates the problem of research related to overweight in women. The reasons leading to weight gain and the characteristic of types of a female figure are considered. The characteristic of types of power exercises, its characteristics and application in the classroom. Here is given the phased plan for the use of facilities of gymnastics power with the individual characteristics of women and the results of the pedagogical experiment.

Keywords—overweight, fitness, power gymnastics, power training

I. INTRODUCTION

In the current world, many people do not pay enough attention to their health. Under the influence of stress, increasing the rhythm of life, environmental degradation, reduced motor activity among the population there is a tendency to increase body weight. In economically developed countries, including Russia, on average, every third resident has a body weight exceeding the maximum permissible. According to The Institute of nutrition of RAMS, 18% of our population suffers from fatness and 40 - 50% is overweight. 75% of middle-aged women have the extra weight, and the rate of obesity approaching 50 percent. Half of middle-aged women are overweight.

First of all, this is due to the fact that the main physiological processes, occurring in the body of a middle-aged woman, slow down: reduced secretion of sex hormones, most observed hypo function of the thyroid gland, violated the basic metabolism and mineral metabolism. The body of women is negatively affected by hypodynamia – a sedentary lifestyle that enhances the effect of negative physiological factors. In this regard, the need for physical education and lifestyle changes has increased.

To date, with the satisfaction of these needs successfully cope fitness (in English "be in shape", "fit the wellness"). In the modern sense, fitness was formed not long ago and necessarily includes physical education and Amateur sports, implies special attention to the diet and quality of food, the rejection of bad habits [3].

Fitness is divided into many types: cardio, aerobic training (slow, power and dance classes), stretching and power gymnastics.

Power gymnastics (training in the gym) is the most effective and efficient means for strengthening muscles and burning fat, which contributes to the creation of a harmonious figure.

Studying this problem it is necessary to stop and consider the basic concepts. So power (athletic) gymnastics is a traditional type of gymnastics of health-improving and developing orientation, combining power training with versatile physical training, harmonious development and strengthening of health in general [2].

It was made for a wide variety of people (boys and girls, young and old), but for people who are practically healthy, because the exercises used are associated with significant muscle tension and the corresponding load for those involved. Therefore, referring to this circumstance, equipment (athletic) gymnastics should be regarded primarily as an educational tool, physical education, and second, as a recovery tool.

Power (athletic) gymnastics satisfies the desire of people to have strong and beautiful muscles, relief (and not just huge) muscles. In addition, it expands the motor experience, brings up the habit of systematic exercise, serves as a mean of active recreation, effectively stimulates the desire for self-expression through the beauty of the body.

In practice, there is a large amount of different manuals that use the term "athletic gymnastics" in a broad sense as a set of power exercises, but do not define them as a type of gymnastics. Meanwhile, it turns out, that precisely to athletic gymnastics as one of species recovery they have only indirect attitude. Therefore, there is a need to clarify the meaning of the words: "athleticism", "athletic gymnastics".

"Athleticism" is the way in physical improvement, pursuing the goal of achieving a high level of strength development and high results in power exercises "sports type".

"Athletic gymnastics" is a broader concept that reflects the system of health-improving and developing effects in order to strengthen human health and improve its viability.

The specificity of the goals of different power training and determines the presence of different forms of employment, systems and schools of power improvement. Currently, the most popular are bodybuilding, bodybuilding, powerlifting and arm wrestling [1].

Bodybuilding is a system of power exercises aimed at increasing muscle volume, the formation of muscles relief and building a harmoniously developed figure with proportional but hypertrophied muscles. Competition is one of the main features of bodybuilding; at various competitions and, mainly, Championships of different countries, regions,

world Championships, the best bodybuilders are determined, who are given ringing titles. Competitions are held according to certain rules, but in General "power harmony" is estimated. Accordingly, such training goals are built quite specifically – a system that includes exercises to build muscle, exercises - to build muscle relief. All exercises are performed in accordance with a specially developed technique on special principles (for example, the Joe Weider system or, in other transcription - Vader - has 28 basic principles of power training) and with a fairly clear periodization of preparation for competitions [5-8].

Body-styling is identified with bodybuilding because it uses the same principles and rules. Perhaps if a review of available literature sources, body-styling was the first stage in the development of bodybuilding, its progenitor. However, they are not equal: body-styling classes are aimed on increasing the volume of the particular muscle groups, do not claim the construction of a harmoniously developed body, so there are competitions in body-styling, in which "the broad back", "the curvy hips, or neck" are assessed. Therefore, as the researchers note, bodybuilding could be called body-styling, but not include in this concept the so-called power pumping of particular muscle groups.

Powerlifting is a kind of physical exercises that develop maximum power capabilities, manifested in three types of movements - "power triathlon": bench press, squat with a barbell on the shoulders and in the "pull" of the bar in the forward position. Accordingly, tasks are special exercises that, unlike bodybuilding and bodybuilding, achieving maximum results in movement and not static voltages.

Arm wrestling is a power combat on hands, is held in a sitting position on a chair, a free hand grip for a special handle. Wrestling is carried out by one and other hand therefore wrestlers have to possess rather symmetric development of force of the left and right-hand muscles. Despite the fact that the main task is to "put the hand" of the opponent, a very large load falls on the muscles of the back, pelvic girdle and legs. Therefore, arm-wrestler must have a sufficiently harmonious development of power, which is achieved by the use of a special system of power exercises.

Specific sports technique and movements are important for these four types of athleticism.

Despite the uniqueness of the above forms of strength training, they are united by the presence of narrow tasks, local focus of power manifestations, limited overall physical and functional impact and potential injury risk.

When power training increases muscle mass (and total weight), but at the same time burned volumetric fat cells, the shape looks slim and fit.

They not only effectively affect the skeletal muscles, but also strengthen the heart muscle and smooth muscles: there is a "muscular corset", which firmly holds all the internal organs. In addition, power training has another advantage: it increases the content of minerals in the bones, stimulates their muscle tension, and improves the strength of the joints and their stability. Power training makes the body not only and not so much slender, but also relief.

Considering power gymnastics and the masculine figure of a woman, it can be noted that it is impossible in principle,

since any lady is genetically protected from the possibility to increase (and "outgrow") muscle mass. First, the high percentage of estrogen in the female body contributes to a smooth and very slow process of muscle mass formation (muscle piles are the result of the influence of the male hormone testosterone, which in women body is very little). Second, any woman has about twice as much fat under her skin as a man, and most of that fat is in the pelvis and thighs. Women have only 30-35% muscle mass of the total body weight, men have about 10-12 % more. The physical features will never make her a man even if she has developed enough muscle.

Power exercises for women are specific. Their goal is not to build up huge muscles, but to correct the shape and work out the problematic areas. It is power gymnastics, not diet or aerobics, is an effective way to form an elastic, strong body.

It is also necessary to emphasize the special importance of physical training and active lifestyle of middle-aged people. A gentle regime of systematic physical activity delays the development of many symptoms of withering of the body, improves the functional state of the main body systems, increases endurance, supports flexibility and mobility of joints, muscle strength, coordination of movement, stabilizes the emotional and mental state of the trainee.

Cardiologists emphasize the particularly important role of physical training in the prevention of coronary insufficiency, atherosclerosis and their complications, since it is hypodynamia that is the most common cause of these diseases. Features of power training of women are connected with physiological features of their organism, objective differences between women and men. Namely, women are on average smaller and lighter than men; the hormonal structure of the female body limits the growth of muscle mass; the proportion of muscles in the total body weight of women is much less and is only 30-35% compared with 40-47% of men; the center of body weight of women is lower than men's due to the peculiarities of the body - women have a longer trunk and shorter legs; women, due to the faster maturation of their body by 2-4 years faster than men reach their physical, including power, conditions; for women, an increase in fat deposits on the hips and buttocks ("pears"), in men - on his stomach ("apples"); women, on average, are more flexible than men; women usually have a higher pain threshold (they are more "patient") than men.

Researchers distinguish the main causes of weight gain of women: malnutrition, hormonal disorders, metabolic disorders, CNS disorders, sedentary lifestyle, diseases [3].

When it comes to fine-tuning physical forms with the help of a program of physical activity, it is necessary to determine the physical type. So the researchers determine that it is one of the options of the human Constitution. In this sense, the Constitution (phenotypic) characterizes the human body through the structure and performance of muscle and bone tissue of a particular organism - a set of sustainable biological, structural and functional features. These indicators are entirely due to hereditary predispositions.

The most accurate classification for the female figure is the American 6 types: A-shaped, H-shaped, I-shaped, O-

shaped, T-shaped and X-shaped. Each has certain characteristics.

A-shaped. Shoulders are narrow, the pelvis is slightly wider; the impression of "heavy" lower body - full legs and buttocks; the tendency to Deposit fat below the waist (upper body may even seem thin); low metabolic rate (if not specifically follow the diet, the weight quickly comes).

H-shaped. Wide or medium bones; small breasts; plump legs; visual impression of approximately the same width of the shoulders, waist and pelvis; tendency to form fat deposits in the abdomen and thighs; moderate metabolic rate.

I-shaped. Thin bone; lean; weak muscles; almost no fat deposits; high metabolic rate (no matter how much you eat, do not get fat).

O-shaped. Wide bones; wide pelvis and shoulders; plump hips, chest, arms; apparent excess body fat; low metabolism (weight comes even if you eat a little).

T-shaped. Broad shoulders, a wider pelvis; fat is deposited mainly on the trunk (back, chest, sides); the average rate of metabolism (fat only if you eat too much).

X-shaped. Bones medium; shoulder width approximately equal to the width of the hips; slender waist; plump chest; fat formed on the buttocks and thighs; the average rate of metabolism (fat only if you eat too much) [4].

Expanding on the features of power of gymnastics it is necessary to formulate some conditions that determine the effectiveness of training [1]. This desire for the ultimate fatigue of the muscle apparatus in each lesson has an impact on increasing the intensity of metabolic processes, primarily — protein synthesis, which determines the growth of muscle mass; in the mode of exercise, it is important to consider the optimal combination of work and rest; in complexes of exercises should include exercises on both local muscle load, and the overall impact, involving a significant number of muscle groups; strength-oriented exercises must be combined with exercises to stretch the same muscle groups and be supplemented by exercises for relaxation, movements for accuracy and agility; in the selection of exercises should focus on the main muscle groups: neck, shoulder girdle, arms, front and back surfaces of the body and legs, not being carried away by the local load of any flexor or extensor; to assess the initial level of preparedness of the student, the ratio of weight and height indicators, the evaluation of the topography of the muscles of the body and individual links, testing the degree of development of strength with the help of dynamometry and motor tasks (usually the number of repetitions of control movements) are used; for the correct and effective implementation of the exercise, rationalization of breathing is required; it can be provided by the selection of comfortable poses, as well as special motor tasks, the implementation of which forms the skills of correct - "technical" and economical breathing, which contributes to the effectiveness of the exercise.

Specific instructional techniques are used in the power (athletic) gymnastics: the "limiters" - the execution of movement is limited according to certain parameters (amplitude, speed, duration); "consistent progress" - as the exercise is gradually increased (separately or simultaneously) the number of repetitions, values of the weights;

"concentration and fragmentation" is required, the work is either divided into several classes or concentrated in a short period of time; "posture correction" - a specific exercise is performed with a change in posture in the initial, final or intermediate positions; "illusion of relief" - with repetitions with extreme stress they are overcome, providing some assistance or facilitating conditions; "sweating" - increasing the intensity of exercises through the use of special means and methods of their application; "sinusoid" - a consistent increase and decrease in the magnitude of muscle tension in the transition from exercise to exercise; "priority" - the initial load of weaker muscle groups with the subsequent transition to better developed; "localization" - the desire for isolated muscle contraction and limiting the connection to the work of auxiliary muscle groups.

II. METHODS

After analyzing the problem of the study, namely the causes of extra weight and its impact on the health of middle-aged women, we determined the purpose of our study - to achieve weight loss, using the means of power gymnastics and the conditions of their use.

To achieve the goal, we have identified the objectives of the study. First, based on the study means the power of gymnastics was selected exercises taking into account individual characteristics of women. A pedagogical experiment was conducted to test their effectiveness, which was attended by non - working women (Housewives).

The training process with women was divided into four stages in accordance with the basic principles of training: cyclicity, unity of gradualness and limits in the build-up of loads, waviness, continuity of the training process, increasing the adequacy of physical activity.

III. RESULTS

On the first stage, we pursued the following goals: to increase the level of general physical training through the use of exercises for all muscle groups, in order to prepare the body of those engaged in the upcoming loads and adapt to the gym and fitness classes; mastering the technique of exercises with free weights and simulators, where special attention was paid to the correctness of performance, adjustment was introduced in time and the show was used; motivation to change the lifestyle in order to achieve the desired result in the shortest possible time. For this purpose, discussions were held by experts on nutrition, healthy lifestyle, the benefits of fitness, repeatedly noted the achievements and successes of participants in the classroom.

On the second stage, the problem areas were corrected — they worked on the gluteal muscles and thigh muscles, in addition to training the body as a whole, because the leg muscles are the largest and, working on them, the female body expends a large amount of energy (calories), which contributes to fat burning. As well as the buttocks and thighs were in the test problem areas and this required more careful study, because when losing weight, the body loses weight unevenly, namely, the hips decrease more slowly due to the greatest localization of fat in the lower body. From the point of view of female physiology during puberty with the activation of female sex hormones is the accumulation of cellulite in many women in the lower body – the buttocks

and thighs, mainly the back and inner surface, which is very difficult to deal with, especially in adulthood.

On the third stage, we continued the correction of the muscles of the thighs and buttocks, pursuing the main goals, included super series (simultaneous execution of two exercises in a row without rest on one or different muscle groups) and giant-sets (simultaneous execution of three or more exercises without rest on one and different muscle groups) in order to increase the intensity of the training load; added a load on the muscles of the chest, back, included in the work of hand training, because the strength abilities of the subjects have grown significantly and the body involved has adapted to the nature of training loads, it took more careful work on the forms of the upper body. At this stage, it was also noted that the volume of the girth sizes of women of the upper body relative to the lower, namely, the girth sizes of the lower body decreased more slowly.

On the final fourth stage, we continued working on the muscle groups of interest to us, but changed the nature of the loads, namely, we included work in the power mode (10-12 repetitions), in the volume – power mode (15-20 repetitions), in the multi-repeat mode (from 20 repetitions and more). Changing the nature of loads, intensity, goals of a particular workout in the overall training cycle is necessary first of all in order to avoid during training a dead point, which in turn will interfere with the achievement of the result. Cycling loads is also necessary for the qualitative study of the body, namely, allows you to use not only the surface muscle fibers, but also deeper, which gives a better result in terms of forms. Thanks to this work, the bodies of women not only lose weight, but also there is a change in body shape as a whole, which is not less important.

IV. DISCUSSION

At the end of the pedagogical experiment, we noted that there were changes in the circumference of the upper and lower body: chest girths decreased by 3%, shoulders – 10%, waist – 6%, pelvis – 4%, right thigh – 5%, left thigh – 8%, right Shin - 5%, left Shin – 4%. Body weight decreased by about 7% .

Thus, the results of the pedagogical experiment showed that with systematic training in the gym (strength gymnastics), women achieve weight loss, reduce the circumference of the problem parts of the body, there is a change in proportions and, thus, the figure of women is corrected.

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