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### THE IMPACT OF AEROBICS ON THE PHYSICAL CONDITION OF STUDENTS

*The article reveals the influence of aerobics on the physical condition of students. The physical condition of student youth who regularly attend aerobics classes was analyzed. In the process of numerous studies in the field of physical education and sports, morphological and functional indicators were found that characterize the improvement of the physical condition of students who specialize in aerobics. Use of visual and verbal cues in conjunction with demonstration exercises are most often recommended during initial training. Importantly,*

*for the teacher to control the quality of the students' performance of the exercises and to use various methods of information regarding the results of their actions. It there may be corrective information about the biomechanical characteristics of movements (speed, amplitude, direction, etc.), evaluation information (about efficiency, responsibility to aesthetic standards and other characteristics). The assessment should have a positive, energizing color. Peculiarities of the human constitution attract the close attention of researchers when studying the factors of success in high-achieving sports. Among the large number of constitutional indicators, the most interesting are the morpho-functional features of the athlete's body. They affect the manifestation of strength, flexibility, speed, endurance, work capacity and adaptation of the body to various conditions of the external environment, the speed of recovery after physical and mental stress.*

*Therefore, the analysis of literary sources and numerous studies broadens the understanding of the importance of a comprehensive approach to the selection of the most promising athletes who practice aerobics. Indicators will increase the development of sports skills testify to more perfect mechanisms and regularities of the process of adaptation of athletes to physical exertion, thereby confirming the need to take into account the individual and morphofunctional characteristics of the body.*

**Key words:** aerobics, physical exercises, physical condition, students.

**Чеховська А. Вплив аеробіки на фізичний стан студентів.** В статті розкрито вплив аеробіки на фізичний стан студентів. Проаналізовано фізичний стан студентської молоді, які систематично відвідують заняття аеробіки. В процесі численних досліджень в галузі фізичного виховання та спорту виявлено морфологічні та функціональні показники, що характеризують покращення фізичного стану студентів, які спеціалізуються в аеробіці.

**Ключові слова:** аеробіка, фізичні вправи, фізичний стан, студенти.

**Formulation of the problem.** Aerobics is one of the youngest sports. It attracts the widest audience with its colorfulness, artistry and accessibility, and has become an effective means of promoting a healthy lifestyle. Health aerobics classes increase the functional capabilities of the body (activity of the heart, lungs, metabolism), improve coordination of movements [1].

Aerobics is a synthesis of athletic gymnastics and dance. There are no risky elements, exercises on projectiles, with objects. The compositions are characterized by a fast pace, a sharp change in positions, and movements that are difficult to coordinate. One of the criteria for assessing skill in judging is the athlete's harmonious, athletic physique. Aerobics is available to people of any age and gender [2].

Peculiarities of the human constitution attract the close attention of researchers when studying the factors of success in high-achieving sports. Among the large number of constitutional indicators, the most interesting are the morpho-functional features of the athlete's body. They affect the manifestation of strength, flexibility, speed, endurance, work capacity and adaptation of the body to various conditions of the external environment, the speed of recovery after physical and mental stress.

Each type of sport is characterized by a certain complex of morpho-functional features, which are especially evident at the level of elite athletes.

**Analysis of literary sources.** Morphofunctional features of high-class athletes are widely studied by many authors (Sokolyk I., Dyatlova A., Chernyshova R., Kogan O.). However, in some sports, these indicators have not yet been fully studied, and the morpho-functional criteria for sports selection have not been developed. Such sports include aerobics.

No less urgent is the problem of the speed of training of athletes (Y. M. Kots, E. B. Sologub, A. S. Solodkov).

The choice of sports specialization, taking into account the training and morphofunctional characteristics of athletes, leads to the formation and development of the basic physical qualities, motor skills, purposeful training necessary for this type of sport, better selection of fast-trained athletes and the achievement of higher sportsmanship.

In this regard, the most promising is the study of the morphofunctional features of fast-trained athletes specializing in aerobics.

**Presenting main material.** The need for radical improvement of the physical and moral health of modern youth, due to the deterioration of physical condition indicators, the decline of spiritual interests of young people in world cultural values, causes serious concern of society. The problematic situation involves the development of the latest modern pedagogical technologies that reflect the specifics of the development of society at this stage, with more effective use of existing and the creation of new forms of mass physical culture that meet the needs of modern youth. The current situation, caused by the transition period, puts forward increased demands for the formation of a psychologically and functionally stable, socially active and tolerant personality

[5].

The formation of a fundamentally new concept of long-term physical training is possible by introducing one of the most popular forms of aerobic exercise into people's everyday life, which opens up new perspectives for their involvement in systematic muscle work. Conversion penetration of elements of sports culture into physical culture creates conditions for intensification of physical training of children and adolescents [6].

Aerobics with its high emotionality, a wide range of various physical exercises, musical accompaniment of a different nature allows you to increase the level of muscle training, improve the state of physiological systems, bring pleasure from classes, which contributes to its rapid popularization and the involvement of numerous groups of the population of children and adolescents in systematic classes, young people

Performance of general development and dance exercises in aerobics helps increase muscle strength, speed, endurance, dexterity, flexibility and other qualitative aspects of motor activity. A special place among coordination abilities is occupied by balance, which determines the economy of motor actions, the formation of a rational posture [6].

In the course of numerous studies in the field of physical education and sports, morphological and functional indicators have been revealed that characterize fast-trained athletes who specialize in aerobics. It was found that the most informative tests of special physical fitness are: bending and extending the arms in a supine position, maintaining a high angle, lifting the legs from a height. It was also established that athletes who switched from gymnastics to aerobics have the same morphological and functional indicators as athletes who initially do aerobics [8].

Practical experience shows that the fast training of athletes who specialize in aerobics depends on a certain type of physique. Therefore, today there is a set of pedagogical and medical-biological criteria that determine the rapid fitness of athletes who do aerobics.

Pedagogical criteria for sports selection make it possible to divide athletes specializing in aerobics into fast and slow trained athletes, who have significant differences in morphofunctional indicators [9].

Morphological indicators that reliably distinguish fast-trained athletes from slow-trained athletes include: body length ( $p < 0.001$ ), hip length ( $p < 0.001$ ), leg length ( $p < 0.001$ ), shoulder circumference ( $p < 0.05$ ), thickness skin and fat folds under the shoulder blade ( $p < 0.05$ ), on the stomach ( $p < 0.05$ ) and on the lower legs ( $p < 0.001$ ); index of muscle and fat mass ( $p < 0.001$ ).

Functional indicators that probably differentiate fast-trained athletes are: heart rate at rest ( $p < 0.05$ ) and after exercise ( $p < 0.01$ ), the index of the Harvard step test ( $p < 0.001$ ), vital capacity of the lungs ( $p < 0.05$ ) and the vital index ( $p < 0.05$ ), as well as by the level of special physical training: flexion and extension of the arms in a supine position ( $p < 0.001$ ), maintaining a high angle ( $p < 0.001$ ), raising the legs with height ( $p < 0.001$ ).

For athletes engaged in sports aerobics, the main morphological criteria for rapid training are shoulder width (0.885), upper limb length (0.855), hip circumference (0.853), shoulder diameter (0.802), lower leg length (0.792), mass-growth index and (0.772). Among the functional indicators, such criteria can be considered the vital index (0.755), and from special physical training - high angle maintenance (0.778) and long jump (0.736).

Athletes who switched to aerobics from gymnastics are practically no different from female athletes who initially engage in aerobics in terms of morphofunctional indicators and special physical training. The exception is the shoulder circumference ( $p < 0.01$ ) and the results of the special physical training test - long jump ( $p < 0.01$ ).

Similarity of the model characteristics of gymnasts who switched to sports aerobics and rapidly trained athletes who initially engage in this sport confirms the importance of morphofunctional indicators for achieving high results in sports [7].

Preserving and strengthening the health of student youth is one of the most important tasks of modern society, which plays an important role in socio-economic, political and cultural development of Ukraine.

Research conducted in recent years allowed us to state that in Ukraine there is a significant deterioration in the health of young people, a drop in their physical condition preparedness, the general functional state of the body, and, as a result, resistance to various negative effects of the environment. Along with the reasons for social of an economic and ecological nature have a significant negative role in lowering the level physical health, functional state and adaptive capabilities of students such factors as hypodynamia, increased emotional stress, irrational nutrition, decreased interest in systematic activities of various kinds sport.

The complexity of this problem is also increased by the fact that young students are entering universities comes already with a weakened level of general physical condition and state of health in as a whole. However, a high level of health is one of the most important conditions study at a university and the entire process of professional training [2].

In this connection, today they are gaining special relevance and practical significance research that is aimed at development, testing and implementation in practice effective means of optimizing the health of student youth. One of the powerful means improving the health of students, increasing their working capacity, as well as optimization their socio-biological adaptation to new living conditions is a health aerobics class.

Aerobics is the performance of physical exercises performed in a musical manner support for the purpose of strengthening health, harmonious development and physical improvement body qualities (strength, speed, endurance, flexibility of muscles and joints and dexterity). Exercises that are performed for a long time are called aerobic actively breathing. Blood accumulates oxygen and gives it to tissues, and all chemical reactions occur with the participation of oxygen. Thus, the body receives the necessary for vital activities or performance of physical load energy. Health classes aerobics increase a person's functional abilities.

Dynamic exercises are acceptable for women, because they tolerate such exercises more easily, than static ones. Aerobic exercises are achieved not only with the help of movements on the site, but also by changing the degree of muscle load, amplitude of movements, speed, direction and nature of movements.

Health aerobics affects the body in a complex way. Application of various physical exercises is aimed at solving the set

tasks. A feature of aerobics classes there is a repetition of initial and final provisions. The final position should be comfortable for the start of the next exercise, thanks to which the exercises are performed in the right form, in the current way, without stops [1].

Aerobics are long-term exercises of medium intensity, during which the body consumes enough oxygen. Aerobics classes provide, first of all, the fast pace of movements, which is set by the musical rhythm; girlfriend, a large amplitude of movements of arms, legs and body with inclusion in work many muscle groups.

Exciting musical rhythm, ease of movements and wide possibilities of improvisation, depending on individual inclinations and choreographic experience, turn aerobics into an emotional, creative busy work. This allows you to withstand a significant physical load for a sufficiently long time without excessive fatigue. Aerobics is an excellent means of combating "muscle hunger" and prevention related diseases – obesity, early atherosclerosis, ischemia, etc.

The main thing is to gradually increase the pace and duration of classes.

Systematic practice of aerobics not only allows you to increase the level of muscle training and improve the condition of the cardiovascular system, but also bring great pleasure to people doing aerobics.

Today, the effectiveness of aerobics is generally recognized. Aerobics is it a set of endurance exercises that last relatively long and are associated with achieving a balance between the body's need for oxygen and its

delivery The body's response to increased oxygen demand is called

training effect or positive physical changes that

can be characterized as follows:

– the total volume of blood increases so much that the ability to transport oxygen improves, and therefore a person shows greater endurance

during strenuous physical activity;

- lung volume increases, and some studies associate increased lung volume with higher life expectancy;

– the heart muscle is strengthened, it is better supplied with blood;

- the content of high-density lipoproteins increases, the ratio

the total amount of cholesterol to high-density lipoproteins decreases, which reduces the risk of developing atherosclerosis;

- the bone system is strengthened;

– aerobics helps to overcome physical and emotional stress;

- work capacity increases.

Aerobics is a real way to lose weight or maintain body weight

normal This aspect is the most attractive to do aerobics.

However, it must be said that exercise can only contribute to weight loss, and the main factor is diet.

Current (continuous) and serial-current (with minimal breaks) methods of conducting exercises are characteristic of each step aerobics class. Their use makes it possible to ensure a complex effect on the body

those who are engaged. It should also be noted that the need to implement

training without reducing the intensity of their performance causes increased

requirements for the professional training of a physical education teacher.

In practical activities, each teacher uses a special one

terminology, techniques of visual information regarding contact with students in order to convey information about exercises to them without interrupting

classes, to correct mistakes and encourage them.

All means used to communicate with students are possible

divide depending on their purpose into the following techniques (groups):

– training exercises and their implementation;

– error correction;

– load regulation;

- organization of students.

It is not recommended to completely exclude verbal explanation during step aerobics exercises. Instruction words, word commands should accompany a continuous demonstration aimed at the correct execution of exercises. Content and volume of information during the event

the class depends on the stage of study and the level of preparedness of the students.

Use of visual and verbal cues in conjunction with demonstration exercises are most often recommended during initial training. Importantly,

for the teacher to control the quality of the students' performance of the exercises and to use various methods of information regarding the results of their actions. It there may be corrective information about the biomechanical characteristics of movements (speed, amplitude, direction, etc.), evaluation information (about efficiency, responsibility to aesthetic standards and other characteristics). The assessment should have a positive, energizing color.

**Conclusions.** Therefore, the analysis of literary sources and numerous studies broadens the understanding of the importance of a comprehensive approach to the selection of the most promising athletes who practice aerobics. Indicators will increase the development of sports skills testify to more perfect mechanisms and regularities of the process of adaptation of athletes to physical exertion, thereby confirming the need to take into account the individual and morphofunctional characteristics of the body.

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#### IMPLEMENTATION OF HEALTH-SAVING TECHNOLOGIES IN SWIMMING LESSONS

*The article defines the peculiarities of the implementation of health-saving technologies in swimming lessons in higher education institutions. Modern health-saving technologies used in the field of physical education of student youth are disclosed. The current state of health and physical fitness of student swimmers was analyzed, a set of problems related to the development of sports and mass swimming in Ukraine was identified, in particular, regarding the training of the country's population and its conscript contingents in the ability to swim. The role and place of swimming in the system of physical fitness of student youth and ensuring their adherence to the basics of a healthy lifestyle in the context of the implementation of health-saving technologies are determined.*

*Swimming training is carried out in the form of practical classes, which take up one training pair (2 academic hours).*

*Methodical planning and structuring of the training process, which includes the logical and systematic ordering of several training variables (intensity, volume, frequency, recovery period and exercises) in an integrative way aimed at optimizing specific performance results at predetermined points in time.*

*The main characteristics of such approaches are systematic variations in the content of the intensity of classes and the amount of workload throughout the entire program.*

*However, this should not be seen as a simple strategy of training variation, but as an appropriate sequence and integration of different training variables, including not only volume and intensity, but also frequency, recovery periods, density and selection of exercises.*

*The duration of each session may increase. The total training contribution of strength work on land is a product of intensity, frequency and duration of training. The general goal is the uniform development of all muscle groups.*

*Land exercises are used to train muscular strength and endurance, and they complement the improvements in muscular endurance that result from swimming training. The exercise program should be simple (that is, two exercises for each of the main muscle groups) so that it corresponds to the total training time for one session.*

**Keywords:** *health-saving technologies, physical qualities, students of higher education.*

**Голубєва В., Мартинов Ю., Назимок В. Реалізація здоров'язбережувальних технологій на заняттях з плавання.** *В статті визначено особливості реалізації здоров'язбережувальних технологій на заняттях з плавання у закладах вищої освіти. Розкрито сучасні здоров'язбережувальні технології, які використовують у галузі фізичного виховання студентської молоді. Проаналізовано сучасний стан здоров'я та фізичної підготовленості студентів плавців, виявлено комплекс проблем стосовно розвитку спортивного і масового плавання в Україні, зокрема щодо навченості населення країни та призовних його контингентів вмінно плавати. Визначені роль та місце занять*