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CHANGES IN THE PHYSICAL DEVELOPMENT OF YOUNG GYMNASTS UNDER THE INFLUENCE OF TRAINING

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ABSTRACT

This scientific article presents theoretical information and practical recommendations about changes in the physical development of young gymnasts under the influence of training sessions.

KEYWORDS

Physical development, Morphology, Anthropometry, Gymnastics sports clubs, Sports games.

INTRODUCTION

Relevance of the topic: It has been proven that the influence of the existing social system, environment, and social conditions on the physical development of a member of society has been proven. Since time immemorial, people have been puzzled about the development of their body and relied on the existing conditions, environment, and theoretical knowledge of their time. Examination of physical development determines some capabilities of the body about the

shape, size and proportions of body parts. In many cases, the good continuation of physical development is closely related to physical education and sports. Of course, relying on these facts, our government pays great attention to physical education and sports for the growth and development of our population and the young generation. An example of this is the decree of our President No. 5924 dated January 24, 2020 "On the further improvement and popularization of

physical education and sports in the Republic of Uzbekistan". In order to increase the influence of physical education and sports on the physical development of the young generation, many scientific studies have been conducted and are being conducted. Through this study, we tried to determine the effect of gymnastics training on the physical development of young gymnasts. In many cases, there is a strong focus on conducting sports training, but little attention is paid to the growth and development of young athletes. At the same time, we consider it an urgent issue to control the results in sports and the physical development of young athletes.

The purpose of the work is to determine the changes in the physical development of young gymnasts under the influence of training sessions.

The tasks of the work are to study the means that affect the changes in the physical development of young gymnasts under the influence of training sessions.

to study the methods of determining changes in the physical development of young gymnasts under the influence of training.

The methods used in the research were analysis of scientific methodological literature, pedagogical observation, questionnaire, pedagogical testing, anthropometry, pedagogical experience and mathematical statistics).

Research organization and discussion. The process of growth and development is a single dialectic whole, connected with the law of coherence with the transition of quantitative changes to qualitative changes. Growth and development are reflected in body length measurements and weight gain. The growth and development of the human body (including old age) includes the following basic laws. They are: a). Law of endogeneity. Physical growth and development are not related to external influences, but arise through the internal effects and causes of the organism, hidden in the reproductive program, and satisfy the natural demand of the organism to reach adulthood in order to continue the generation.

b) Law of eternity. It is the inability of a person to return to the structure that had the characteristics of childhood or infancy.

d) Law of cyclicity. There are periods of activation and deceleration of growth: the first - the period in the mother's womb before birth and the first months of life after birth; then at 6-7 years old there is a growth spurt (half growth spurt) and at 11-14 years old there is a sharp growth spurt or puberty growth spurt.

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e). German scientists, taking into account the cyclic nature of the growth process, expressed important opinions about the activation of growth and the arrest (slowing down or stopping) of growth due to the

increase in mass of our body. They proved that the non-uniformity of growth is manifested in intermittent acceleration or deceleration of the growth process throughout the year, growth in body height occurs mainly in summer, and mass gain occurs mainly in autumn.

f). Law of gradualness. This law of physical development passes through its developmental stages (stages) gradually and gradually in the development of a person. In the normal development of the organism, one of these periods cannot be "jumped". The bones must grow to a certain size before the skeleton stops growing. In order for all permanent teeth to come out, milk teeth must fall out, etc.

g). Law of synchronicity. The law of harmonious functioning embodies the process of simultaneous growth and development of various organs and structures of our body. As growth and aging accelerate, the rule of synchronicity breaks down. Therefore, the acceleration of growth and aging in many cases causes disturbances, disagreements (disharmony): these processes outpace the tempo and expression of some of our organs and structures and

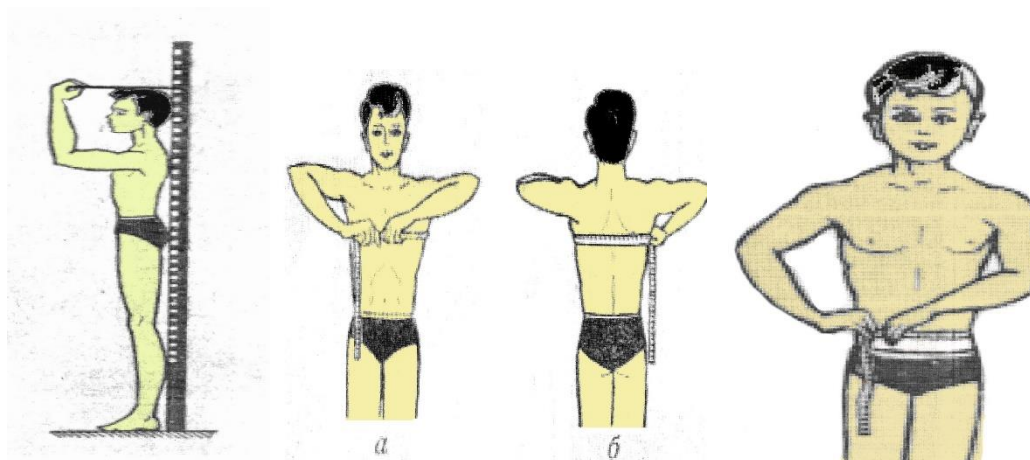
others. The overall size of the body and the proportions of our organs - including its length, weight, and chest width.

The level of physical development is determined by the measurements of our body parts (anthropometry). Theoretical knowledge and practical skills of measuring, its methodology are mainly taught through "Human morphology", "Biomechanics", "Physical culture of treatment", "Sports physiology" and other subjects.

There are three main types of chest circumference:

- 1) when taking a full (maximum) breath;
- 2) after full exhalation;
- 3) after inhaling, before exhaling, it is measured with a measuring tape during a stationary (pause) position.

The tape passes through the lower corners of the ribs - when pre-measured, it passes through the middle of the chest for men and in front of the nipples for women. The person being measured should hold both arms up (Figure 1).



Dimensions of physical development

The theoretical knowledge of physical development is now given a wide place according to the scope of knowledge about the morphology of the organism. In their study, we come across the following concepts used in medicine. These are as special knowledge in the teaching of "Physical Culture of Treatment", "Sports Physiology", "Physical Culture of Healthy Living", "Valeology", they are: in the study of the skull - craniometry; in the study of the service activity of the heart - cardiogram, in calculating the frequency of heart contractions - pulsometry, lung - fluorography, kidney - urography, various morphological systems - morphometry; goniometry to determine the level of mobility and sizes of joints; muscle strength is called dynamometry and retrography, and through them, measurements are made in treatment and ongoing research.

As his height grows, or after he reaches a certain height, his weight increases accordingly.

Another indicator of physical development is its weight, body mass, and its density.

A high body mass index is considered a good quality of our physical development. You have read that the body and its organs are considered to be so physically developed if it is visible to the extent that it is strong, toned, and full of strength. The size of the mass is not an indicator of physical development. The total weight of the body is the weight of the skeleton, which consists of components such as muscles, fat tissue, internal organs, and skin. The relative amount (%) of each of them is constantly changing with age.

When measuring physical development, we come across a measure called the proportion of its parts. As a rule, the proportion of our body is defined as the

large or small section of the upper part (head and neck), the classification of individual parts (segments) of the body, supporting and supporting organs in relation to the total length of the body or the total size of the body or the percentage of the size of some segments.

One of the most common methods of assessing the development of our body in practice is the indexing method. In this case, the simplest calculations allow us to classify the parts of our body according to their ratio. The magnitude of the smaller dimension is expressed as a percentage of the larger dimension.

Based on the combination of different indexes, the proportion of the human body is divided into three main groups:

- I. long legs, short and thin body
- II. those with short legs, long and wide bodies.
- III. body size is average.

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The knowledge of the specified body proportions is useful to the future sports specialist in order not to make mistakes in the selection of physical exercises for training, to prevent mistakes in the selection of sports for the purpose of health or to reduce sports skills.

Currently, measurements are made by touching the part being measured with the hand and by measuring

without touching the hand. Handstand physical development measurements are evaluated in three ways: lengthwise, crosswise, and body circumference. These dimensions are the most necessary indicators of development. Observations have shown that a person's physical development slows down by the age of 25, and some, for example, stop growing in height. This does not mean that organs and tissues have stopped changing, it just means that they are already formed by the age of 25.

Further physical development of the organism continues in two directions:

- 1). through the influence of physical activity - if engaging in physical exercises (physical work) becomes a habit during the lifestyle, if muscle training is not stopped, if active movement is continued, changes in the body lead to the improvement of muscles and structures, i.e. to the improvement of appearance, appearance will be;
- 2). If there is little movement, limited physical activity, and a habit of overeating, the development of the body is disturbed, the muscles wither, its fibers become thinner, and fat deposits in the subcutaneous and internal organs occur quickly.

Body fat, fullness, relaxation of abdominal muscles (rectus, abdominal and oblique), increase in size, size and thickness of digestive organs and other organs cause them to "leave" their place in the body. For

example, an increase in the size of the brain due to satiety and a lot of food changes the location of other digestive organs (the abdomen hangs down) and as a result changes the appearance of the body. It is up to the individual to be the owner of the perfect all-round body shape.

Depending on the indicators of physical development, various competitions and related events are held to acquire various professions and trades. The importance of the indicators of physical development and the size of the body parts for acquiring professions, especially in the contests held to engage in a certain type of sports, the attention to the indicators of physical development is strong. For

example, the length of the height - basketball player, volleyball player, hand It is useful in the training of ball players, tennis and other sports.

Effectiveness of the research work We conducted this research with 10 boys who started doing "Gymnastics" from September of this year in Sports School No. 1 of Namangan City, Namangan Region, and 10 boys of the same age from General Education School No. 1 of Norin District as a research group. We presented the final results in table 1 below in the process of studying the influence of gymnastics training on the physical development of young gymnasts during the 6-month period of research.1-jadval

The final results of the process of studying the influence of gymnastics training on the physical development of young gymnasts

No	Anthropometric parameters	Sex	N	Experience $x \pm m$	Control $x \pm m$	T	P
1	Height	O*	10	166.7 \pm 4.9	153.4 \pm 2.4	7.8	>0.01
2	Weight	O*	10	52.5 \pm 4.5	43.7 \pm 1.4	4.44	>0.01
3	Body length in a sitting position	O*	10	85 \pm 2.8	76.1 \pm 1.4	8.9	>0.01
4	Chest circumference	O*	10	84.8 \pm 4.2	73.8 \pm 1.7	7.8	>0.01

CONCLUSION

In this research, we tried to determine the physical development of young handball players who started participating in gymnastics by comparing the initial indicators and the results after 6 months. According to it, the overall result of the members of the experimental group increased by 13.3 cm, weight by 8.8 kg, and chest circumference by 11 cm.

In conducting this research, among sports training and the tasks solved through them, it is noticed that there is a lack of constant control of the physical development of young gymnasts, and many experts in the field are ignoring it. causing it to happen. As a result, the growth and development of young people

is somewhat slowed down. In order to solve such problems, after involving young people in sports, there is a need to correct training microcycles or make some changes in order to constantly monitor the indicators of physical development that belong to them. Only then will we be able to improve the physical development of young athletes. In other words, we develop quantity and quality indicators proportionally.

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