

## DESCRIPTION OF THE SITUATION OF PHYSICAL DEVELOPMENT INDICATORS OF SECONDARY SCHOOL STUDENTS

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Importance: Physical education and physical training and development of students in the leading educational institutions of the world in the field of physical education and physical development, age-specific features of development, development of boys' musculoskeletal skills, as well as physical education in primary school. , research is being conducted to develop tools and methods for the development of endurance and resilience. There is a need to improve the methods of using the tools and methods used in the development of physical qualities, taking into account the age characteristics of students in grades 5-9 in general secondary schools. AA Guzhalovsky [1979.-p. 23], distinguished subcritical periods, low, moderate and high critical periods. In the pubertal period, individual differences, in particular, are most pronounced; these differences are related to the level of production of sex hormones and the genetic characteristics of the rate of sexual maturation. It is also believed that unfavorable conditions are created for the development of motor skills during periods of active growth. These periods begin at different ages, depending on the structure of the body and the degree of physical growth, LV Volkov, [2002.-290 p.].

According to the analysis of pedagogical research, AA Guzhalovsky [1979.-23 p.], VP Filin, [1987.-129 p.] . The stage of sexual maturity allows to classify the level of readiness of children and adolescents, but the importance of knowledge about the stratified development of physical abilities of students of small and large school age is not insignificant. 1996.-130 p].

The process of legitimate changes in the morpho-functional state of the human body in its natural state and the physical qualities and abilities based on it is called physical development.

M.Ya. Nabatnikova identified 5 stress zones of the heartbeat:

1. Small intensity zone. 130 in children.
2. Medium intensity zone. 131-155 in children.
3. Large intensity zone. 156-175 in children.
4. Larger intensity zone. There are more than 176 children.
5. Maximum intensity zone.

In physical education classes, the teacher should pay special attention to the loading of physical exercises, taking into account the physical condition and condition of students.

One of the indicators of the effectiveness of physical training in physical education classes is the importance of physical development. Anthropometric indicators are necessary for the development of physical qualities. At the age of schoolchildren, the whole organism and its parts are characterized by maximum development. In our study, we identified the main anthropometric indicators of students.

There is no doubt that physical education classes and sports clubs give good results if teachers take into account the most favorable age for the development of physical abilities. The development of certain tasks, qualities and characteristics with a specific purpose is effective only in certain years of life; these years should coincide with the critical periods of the natural, age-old development of those traits. In addition, critical periods in childhood are more important than in adults.

The world's leading educational institutions, mainly in the process of physical education in general secondary schools, are studying a set of measures to ensure a learning environment aimed at the physical development of students.

However, if we do not take into account some methodological recommendations on the subject of this study, a separate monograph devoted to solving the problem of improving the health of students will not be conducted.

**Table 1**  
**Indicators of physical development of 11-year-old schoolchildren**

T/p	Indicators	BSY		ESY		Differen ce	%	<i>t</i>	<i>P</i>
		$X \pm \sigma$	V%	$X \pm \sigma$	V%				
1.	Height ( cm)	140,4±5,8	4,1	143,2±4,7	3,2	2,8	1,21	1,5	>0,05
2.	Weight (kg)	34,1±2,4	7,0	35,4±1,8	5,0	1,3	0,84	0,95	>0,05
3.	Chest circumference (cm)	66,9±4,7	7,0	69,2±3,2	4,6	2,3	0,49	2,95	<0,05

The dynamics of specific physical development indicators of students with different developmental needs were studied. At the beginning of the school year, the results of the measurements of the height of the 5th grade students in terms of physical development were  $140.4 \pm 5.8$  cm. At the end of the year, the physical growth rate increased by  $143.2 \pm 4.7$  cm. The results showed a difference of 2.8 cm during the year. The above results do not show the reliability of the differences between the indicators of physical development ( $p > 0.05$ ). Physical development indicators also change with age. According to the developmental weight of 11-year-old students, the average body weight at the beginning of the school year was  $34.1 \pm 2.4$  kg. At the end of the school year, this figure increased by  $35.4 \pm 1.8$  kg. The annual growth rate of body weight gain of students at this age differed by 1.3 kg (0.84%).

With the help of pedagogical observations, we measured the physical development of 5th grade students with different body structures. , Equal to 7 cm. The annual growth rate of physical development of students of this age was found to be 2.3 cm (0.49%). There is no reliability of statistical differences between the indicators ( $p > 0.05$ ).

**Table 2**  
**Indicators of physical development of 12-year-old schoolchildren**

T/p	I Indicators	BSY		ESY		Differen ce	%	<i>t</i>	<i>P</i>
		$X \pm \sigma$	V%	$X \pm \sigma$	V%				
1.	Height ( cm)	143,1±6,1	4,2	146,4±4,2	2,8	3,3	2,3	1,11	>0,05
2.	Weight ( kg)	36,7±2,1	5,7	39,2±1,8	4,5	2,5	6,8	0,73	>0,05
3.	Chest circumference ( cm)	65,4±5,4	8,2	67,9±3,5	5,1	2,5	3,8	3,12	<0,05

The study of 12-year-old schoolchildren revealed the laws of age-related changes in morphofunctional development of students.

Body length is steadily increasing with age. At the beginning of the school year, this figure was  $143.1 \pm 6.1$  cm, while at the end of the year it was  $146.4 \pm 2.8$  cm.

In 7th grade students, body weight increases with age. Developmental processes were studied according to the body weight of students. According to him, the average weight of students at the beginning of the school year was  $36.7 \pm 2.1$  kg. At the end of the school year, this figure increased by  $39.2 \pm 1.8$  kg. Annual differences in body weight gain of students at this age differed by 2.5 kg (6.8%). There is no reliability of statistical differences between the indicators ( $p > 0.05$ ).

When measuring the physical development of 12-year-olds in schools, the length of the chest at the beginning of the school year was  $65.4 \pm 5.4$  cm, and at the end of the school year the average was  $67.9 \pm 3.5$  cm. It was found that the difference in the annual growth rate of physical development of students of this age is 2.5 cm (3.8%). There is no reliability of statistical differences between the indicators ( $P > 0.05$ ).

**Table 3**  
**Indicators of physical development of 13-year-old schoolchildren**

T/p	Indicators	BSY		ESY		Difference	%	t	P
		$X \pm \sigma$	V%	$X \pm \sigma$	V%				
1.	Height(cm)	$148,8 \pm 5,8$	3,8	$152,7 \pm 4,1$	2,7	3,9	1,3	1,9	$>0,05$
2.	Weight (kg)	$40,5 \pm 2,9$	7,1	$42,9 \pm 3,7$	8,6	2,4	5,9	0,58	$>0,05$
3.	Chest circumference (cm)	$65,9 \pm 4,9$	7,4	$68,7 \pm 2,8$	4,0	2,8	4,2	0,89	$>0,05$

When measuring the physical development of 7th grade students in secondary schools, at the beginning of the school year, the height of students was  $148.8 \pm 5.8$  cm, and at the end of the school year this indicator averaged  $152.7 \pm 4.1$  cm. The annual growth rate of physical development of students of this age was found to be 3.9 cm (1.3%). There is no reliability of statistical differences between the indicators ( $P > 0.05$ ).

The developmental processes of body weight of 14-year-old schoolchildren were studied. According to him, the average weight of students at the beginning of the school year is  $40.5 \pm 2.9$  kg. At the end of the school year, this figure increased by  $42.9 \pm 3.7$  kg. The annual weight gain of students of this age differed by 2.4 kg (5.9%). There is no reliability of statistical differences between the indicators ( $P > 0.05$ ).

At the beginning of the school year, the average chest circumference of students was  $65.9 \pm 4.9$  cm. At the end of the year, the process of physical development increased by 2.8 cm and amounted to  $68.7 \pm 2.8$  cm. The above results do not show the reliability of the differences between the indicators of physical development ( $P > 0.05$ ).

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