

Results of Studying Some Anthropometric Indicators of 10-17-Year-Old Schoolchildren in Karshi

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ABSTRACT

The article presents the results of a study of the main anthropometric indicators of schoolchildren of the 7th comprehensive school in the city of Karshi. According to him, with age, schoolchildren's body weight, chest height and head circumference increase. The Catley index does not deviate from the norm for girls, but for boys aged 16-18, this indicator is significantly lower than for children aged 10-15.

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Height, body weight, chest circumference, etc. are some of the important indicators in assessing the growth, development, and health of children and adolescents. The processes of growth and development in the body depend on its age, gender, lifestyle, genetic characteristics, and other factors. At the same time, the main part of the total energy used in the body is spent on increasing body weight and height. As a result of the influence of the food factor, the growth and development of a young organism can be disrupted, and its physical development can significantly deviate from the norm. In children, body weight is closely related to nutritional factors and height.

Many studies have been conducted to study the anthropometric indicators of school-age children depending on various factors. In particular, Yu. N. Krupenishna (2013) studied the role of physical education classes in increasing the level of physical development and physical fitness of children aged 12-14 in rural areas, V. V. Valetov (2016) studied the dynamics of some sports. anthropometric indicators of schoolchildren aged 6-12, M. V. Khodzhieva (2016) Physical development of children aged 7-10 years and its assessment, V. A. (2016) comparative characteristics of some anthropometric indicators of children aged 7-18 years living in urban and rural areas, K. S. Vardugina (2019) monitoring of anthropometric indicators of schoolchildren aged 7-15 years, V. L. Gritsinskaya (2020) analyzed the main anthropometric indicators of children aged 8-14 years living in the cities of the north of Russia, E. N. Khorolskaya (2020) the impact of physical development of 13-year-old children of city schools on their functional state and cardiovascular system indicators, A.P. Pugovkin, V.O. Erkudov (2021) anthropometric indicators of boys living in ecologically unfavorable conditions, R.T. (2022)) studied the comparative characteristics of the physical development of schoolchildren whose nutrition was organized in different ways. In most of the studies conducted by the authors, it was noted that the indicators of physical development of children do not correspond to existing standards depending on various factors, that is, body weight, height and other indicators are below or above the norm (obesity). In particular, it has been shown that nutritional deficiencies, adverse environmental impacts, low socio-economic status and others lead to students lagging behind in physical development.

In physical development, anthropometric indicators serve mainly to study and assess the health level of the organism. In particular, height, body weight, chest and head circumference, or all other somatometric indicators are of particular importance in ensuring the normal development of children. In addition, these processes are carried out on the basis of the corresponding biological laws. In addition, it must be taken into account that the growth and development of the organism depends on its lifestyle and environment, age, gender, nutritional status, and other factors.

It is recognized that obesity is observed in some groups of children due to low activity, failure to observe the daily routine, eating more food than necessary, and other factors. In this regard, the study of the physical development of school-age children is considered one of the urgent tasks of physiology and medicine.

Taking into account the above, during our observations we set ourselves the task of studying some anthropometric indicators of children aged 10-17 studying at the 7th school in the city of Karshi. The observations were carried out using the generally accepted anthropometric method. The body weight of schoolchildren was determined using medical scales, height was measured with a wooden rodometer, chest and head circumference were determined using a centimeter tape. The number of children included in the observation was 252 people, of which 133 were boys and 119 were girls. The collected materials were summarized and the arithmetic mean values were calculated for the age groups of children.

The obtained results are presented in the table below.

Basic anthropometric indicators of 7th grade school children in Karshi city

Age number	Height , m	Weight , kg	Kettle index, kg/m ²	KQA, sm	Head circumference, sm
Boys					
10 (n=11)	1,32±0,02	26,4±1,11	15,1±0,7	63,8±0,92	50,8±1,02
11 (n=19)	1,42±0,01	36,1±0,84	17,4±1,4	72,8±1,53	54,3±1,71
12 (n=16)	1,52±0,03	45,1±0,99	19,5±1,1	67,2±0,61	55,6±3,11
13 (n=17)	1,60±0,03	45,9±1,17	17,9±0,9	71,4±1,63	54,9±2,06
14 (n=17)	1,63±0,02	46,7±1,93	17,6±0,8	74,8±1,39	52,8±0,58
15 (n=18)	1,66±0,03	55,3±5,7	20,0±1,3	76,0±2,09	52,8±0,51
16 (n=16)	1,77±0,02	52,5±2,6	16,5±0,5	79,8±0,87	54,1±1,16
17 (n=19)	1,78±0,01	59,6±2,8	18,8±0,8	80,5±1,69	56,3±0,49
Girls					
10 (n=13)	1,45±0,09	32,0±3,05	15,2±2,6	70,0±1,15	52,6±0,33
11 (n=12)	1,39±0,01	34,5±2,12	17,8±0,2	72,5±1,63	53,5±0,76
12 (n=12)	1,55±0,03	44,0±1,00	18,3±1,1	66,5±0,50	55,0±4,00
13 (n=17)	1,59±0,02	46,8±1,94	18,5±0,6	71,5±1,70	54,4±0,68
14 (n=14)	1,57±0,03	49,0±1,41	19,8±1,5	78,5±2,21	55,2±0,47
15 (n=17)	1,68±0,02	54,1±6,43	19,1±0,3	84,8±3,43	54,2±1,08
16 (n=17)	1,68±0,01	55,2±2,16	19,5±2,1	84,1±1,63	54,7±0,59
17 (n=17)	1,68±0,01	55,0±5,69	19,4±0,6	83,0±2,48	55,0±0,61

As can be seen from the table above, the anthropometric indicators of children increase depending on age. In particular, the height of 10-year-old boys is 132.8±0.02 cm, body weight is 26.4±1.11 kg, and for 11-year-old boys these indicators are 1.42±0.01 cm and 36, respectively. up to 1±0.84 kg. In particular, we see that in children aged 10-15 years, the height and body weight periodically increased, and in children aged 16-17 years, these indicators were not noticeable in a reduced state, and at the same time, in boys aged 10-17 years, the chest and head circumference indicators increased without deviating from the possible norm.

The results of our research on the Quetelet index show that in boys aged 10-15, this indicator does not deviate from the norm. However, in boys aged 16-17, the Quetelet index is significantly lower than in boys aged 10-15.

The results of the study of anthropometric indicators of girls aged 10-17 show that, like boys, their height, body weight and other indicators increase with age. In addition, there is no significant difference between

the physical development indicators of boys aged 10-17 and the parameters of girls of the same age, but we can see that in girls all anthropometric indicators increase periodically for their age. It is noticeable that these indicators at the age of 10 are significantly higher in girls than in boys. In particular, if in 10-year-old boys the height is 1.32 ± 0.02 cm and the body weight is 26.4 ± 1.11 kg, then in girls of the same age these indicators are 1.45 ± 0.09 cm and 32.0 ± 3.05 kg, respectively. That is, it is noticeable that the height of 10-year-old girls is on average 13.0 cm higher than that of boys of the same age, and the body weight is on average 5.6 kg higher. This situation can be explained by the earlier onset of puberty in girls. After the age of 14, it is observed that the height, body weight and chest circumference indicators are higher than those of girls.

In conclusion, we can say that the height and body weight of children in the school we observed increase with age. The Quetelet index does not deviate from the norm in boys, but in children aged 16-18, this indicator is significantly lower than in children aged 10-15. Systematic study of height, body weight, Quetelet index and other indicators of school-age children serves to maintain and further strengthen their physical development, health, and ensure their comprehensive and harmonious development.

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