DESCRIPTION OF DYNAMICS OF CHANGE OF LOWER LIMB DIMENSIONS IN PUPILS BY AGE

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The relevance of research. Children's physical development is one of the best criteria for early diagnosis; clinical signs reflect the constitutional characteristics of the organism that appeared in the absence of a number of chronic diseases. Anthropometric examination allows to describe the individual development of schoolchildren, identify deviations from the norm, determine their causes, and then carry out rest and treatment measures.

Aim of the research. Study of age and gender-specific features of the size of the bones of the lower leg of schoolchildren

Research methods and materials. Practically healthy children aged 7 to 16 years were involved in the research, and the research was conducted anthropometrically. The obtained data were analyzed in a mathematical-statistical way.

Research results and discussion. The dynamics of changes in the lower limb's length in the examined children undergo uncertain changes with age. In all age and sex groups, the length of the lower leg was measured from three anthropometric points: the upper chest, the anterior superior edge of the iliac crest, and the point of the groin. The dynamics of changes in the length of the lower leg are measured from the point of the upper edge of the front of the point. They are relatively and unambiguously characterized by indicators of the dynamics of changes in the length of the lower leg measured from the point of the big breast. By the age of 16, the growth of the length of the lower leg (big bust point) in boys increased by 28 cm and in girls by 20,5 cm, i.e., by 1,42 and 1,31 times, respectively. In boys, the greatest increase in the length of the lower leg occurs at the ages of 8 (5,7 cm), 9 (3,5 cm), 11 (3,7 cm), 13 (3,6 cm), and 15 (4,7 cm); in girls, it corresponds to 8 (3,8 cm), 9 (4,9 cm), 12 (2,9 cm), and 13 (1 cm) years.

Minimum growth in boys was recorded at 10 and 16 (1.1 cm each); in girls, it was recorded at 10 (1,6 cm), 14 (1,1 cm), and 16 (1,4 cm). The analysis of

anthropometric data showed that the segments of the lower limbs of the examined children undergo uncertain changes with age. During the study period from 7 to 16 years of age, the increase in the length of the s was 10,2 cm in boys and 13,8 cm in girls; on average, it increased by 1,31 and 1,43 times, respectively. Boys are 8 (2,0cm), 11 (1,4 cm), and 15 (2,0 cm); girls are 9 (2,4 cm), 13 (2,7 cm), and 15 (2,8 cm). Growth acceleration can be observed at any age. The smallest growth in boys is 9 (1,0 cm), 10 (0,5 cm), and 16 (0,4 cm); in girls, 12 (0,4 cm), 14 (0,8 cm), and 16 (0,5 cm) correspond to age. In children of school age from 7 to 16 years old, the length of the calf increases 1,42 times in boys and 1.38 times in girls. During this period, the growth of calf length in boys is 12,5 cm, and in girls, it is 11,2 cm. The greatest increase in calf length in boys is observed at the ages of 8 (2,3 cm) and 14 (2,5 cm), and in girls at the ages of 8 (2,5 cm) and 13 (1,9 cm).

Minimum growth corresponds to the age in boys: 10 (0,3 cm), 12 (0,7 cm), and 16 (1,0 cm); in girls, 10 (0,4 cm), 11 (0,6 cm), and 12 (0,9 cm).

In children from 7 to 16 years of age, the growth of leg length during the youth period was 6,4 cm for boys and 5.6 cm for girls; that is, it increased by 1,33 and 1,29 times, respectively. The maximum increase in leg length corresponds to age in boys: 9–10 (1,4 cm each), 12 and 15 (0,9 cm each), and in girls, 9 (1,5 cm), 10 (1,1 cm), and 13 (0,9 cm). The smallest growth in boys is at 8 and 11 (0,3 cm each), 14 (0,4 cm), and 16 (0,2 cm); in girls, it is at 8 and 12 (0,3 cm each), 14 (0,2 cm), and 16 (0,3 cm).

Hip circumference in boys aged 7 to 16 years increased by 17,8 cm and in girls by 16,3 cm, that is, by 1,52 and 1,48 times, respectively. In boys, the greatest increase in leg length was recorded at the ages of 10 (2,2 cm), 11 (3,1 cm), and 14 (3,0 cm); in girls, it was recorded at the ages of 10 (2,5 cm), 13 (3,8 cm), and 15 (2,4 cm) years old. The minimum growth in boys is 9 (1,3 cm), 13 (1,4 cm), and 16 (1,3 cm); in girls, 8 (1,3 cm), 12 (1,1 cm), and 16 (0,5 cm) are observed at age. Calf circumference increased 1,38 times in boys and 1,37 times in girls during the study period. The growth of boys was 9,2 cm, and the growth of girls was 8,8 cm. Maximum growth in boys is at 8 (1,0cm), 11 (1.8 cm), and 13 (1,4cm), girls at 8 (1,3cm), 9 (1,5 cm), and 12 (1,7 cm), and it is observed at the age of 14 (1,4 cm). In boys, the smallest increase was recorded at 10 (0,5 cm), 14 (0,6 cm), and 16 (0,3 cm), and in girls, this was at 11–12 (0,3 cm each) and 16 (0,1 cm) found in young people.

In conclusion. The analysis of anthropometric indicators showed that the most intensive growth in different age periods corresponds to the proportion of lower limbs. The size of the total morphometric parameters is related to the growth of the lower limbs.

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