

THEORETICAL MEDICINE: BASIC DEVELOPMENT TRENDS

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COMPARATIVE ANTHROPOMETRY. CHANGES IN THE LONGITUDINAL DIMENSIONS OF THE UPPER LIMBS OF YOUNG PEOPLE, RURAL AND URBAN RESIDENTS, DURING THE ACADEMIC YEAR

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Relevance: Changing socio-economic living conditions, the impact of ecology, high educational and psycho-emotional load during university studies, hypodynamics, ignoring the basics of a healthy lifestyle leads to changes in physical health [1, p. 4]. The nature of personal physical development is considered to be a marker of the impact on the human body of natural and climatic, environmental, social, household, individual and typological factors [2, p. 1]. The need for anthropometric research is due to the large variability of the human body size [3, p. 2214]. The limits of fluctuations in the size of people in one group, as a rule, go beyond the fluctuations in the size of people in another group. This is a transgressive variability, which necessitates quantitative definitions [4, Art. 2]. The results of anthropometric measurements are compared according to specially developed rules, which are based on the principles of variation statistics [5, p. 107].

Objective: To identify and compare changes in the longitudinal dimensions of the upper limb of young people living in urban and rural areas, while studying at university.

Materials and methods: longitudinal research was conducted on the basis of the Higher Vocational School of Civil Defense of Lviv State University of

Life Safety (Vinnytsia) (worked with cadets and students) in the research work "Influence of exogenous factors (socio-economic, environmental, geological, territorial) on anthropometric parameters and physiological parameters of adolescents ". Statistical processing of the obtained results was performed in the package "STATISTICA 6.1".

Results: Mathematical expectation of shoulder length in young men from the village in the first year was 32.34 ± 2.09 cm, in young men from the city this figure was lower in the first year and was equal to 32.90 ± 2.57 cm. In the second year shoulder length in rural youth increased to 32.44 ± 2.09 cm, in urban – to 31.98 ± 2.52 cm. However, in the third year, this figure in young men from rural areas increased again and amounted to 32.46 ± 2.11 cm, while urban residents remained unchanged.

The average change in the shoulder length of rural youth in the first year of study was 0.10 ± 0.02 cm, the maximum was equal to 1.00 cm. In urban residents it was 0.07 ± 0.02 cm, the maximum was 1.00 cm. In the second year, the average value of the change in shoulder length in young men from the village was 0.02 ± 0.01 cm with a maximum of 1.00 cm.

Thus, the length of the villagers` shoulder during the study increased by 0.12 cm, and the townspeople increased by 0.07 cm.

The change in shoulder length in the first year of study in rural areas was 0.03 cm higher than in urban areas. In the second year of study – by 0.02 cm, as the increase in city residents was not detected. The change in shoulder length in the first and second year of study did not make a significant difference when comparing groups of young men.

The mathematical expectation of the forearm length of rural young men in the first year was 25.96 ± 1.38 cm, in young men from the city this figure in the first year was less and equal to 25.75 ± 1.36 cm. In the second year the forearm length of rural residents increased up to 26.12 ± 1.42 cm, for young townspeople – up to 25.93 ± 1.29 cm. In the third year of study, this figure for young men from rural areas increased again and amounted to 26.17 ± 1.42 cm. the forearm length of urban residents also increased to 25.96 ± 1.28 cm.

Changes in the length of the forearms of rural youth in the first year of study were 0.16 ± 0.03 cm, the maximum was equal to 1.00 cm in urban residents was equal to 0.18 ± 0.03 cm, the highest rate reached 1.00 cm.

In the second year, changes in the length of the forearm in young men from the village were 0.05 ± 0.02 cm, in city residents was only 0.03 ± 0.01 cm, the maximum was the same and was 1.00 cm.

Thus, the length of the forearms of the villagers and the city during training increased by 0.21 cm.

The annual change in the length of the forearm in the first year of study of rural residents was less by 0.02 cm compared to citizens, and in the second year of study, on the contrary, this figure was less by 0.02 cm. It should be noted that such an annual change in the significant difference not small.

Mathematical expectation of the length of the brush of rural young men in the first year was 19.64 ± 0.96 cm, in young men from the city this figure in the first year was less and equal to 19.50 ± 1.08 cm. In the second year the length of the brush in rural residents increased up to 19.79 ± 0.90 cm, in the townspeople – up to 19.66 ± 1.04 cm. residents remained unchanged.

The average change in the length of the hand of rural young men in the first year of study was 0.15 ± 0.02 cm, the maximum was 1.00 cm. In urban residents it was 0.17 ± 0.02 cm, the maximum was 1.00 cm. In the second year, the average value of the change in the length of the brush in young men from the village was 0.02 ± 0.01 cm with a maximum of 1.00 cm.

Thus, the length of the brush of the inhabitants of the village and the city during the study increased by 0.17 cm, and the increase, in the latter, occurred only in the first year of study.

The annual change in the length of the brush in the first year of training of rural residents was 0.02 cm smaller than in the city, and in the second year of training, on the contrary, 0.02 cm larger, because the increase in this parameter was not found in city residents. It should be noted that the annual change in the length of the brush in the first and second year of study when comparing groups of young men is a significant difference.

Conclusions: Thus, based on the results of our observation, the following conclusions can be drawn:

- at the beginning of the study, a significant difference in the longitudinal dimensions of the upper extremities of young men from the village and the city were not found, although the initial data were greater in rural residents;

- intergroup indicators of shoulder length in the first year of study of villagers were higher compared to city residents, indicators of annual change in the length of forearms, hands – on the contrary were higher among city residents. The annual changes in the longitudinal parameters in the first year of study when comparing groups of young men had no significant difference;

- in the second year of study, the intergroup annual change in the length of the shoulder, forearm and hand was greater among the villagers. The annual changes in the longitudinal parameters in the second year of study, as in the first, when comparing groups of young men had no significant difference.

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