CHARACTERISTICS OF THE MAIN ANTHROPOMETRIC INDICATORS OF PHYSICAL DEVELOPMENT OF CHILDREN AND ADOLESCENTS

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Abstract: Physical developmentof) children and adolescents is an indicator of the socialand economic well-being of society, as well as the sanitary and ecological state of the region. Developmentduring the growth period determines the main health traits, of the generation, including potential longevity and the transfer of relevant qualities to future generations.

It is known that RF is an integral indicator of the health of a growing organism. Obeying general biological laws, it is determined by heredity. However, numerous studies have shown that RF depends on many environmental factors, including socio-economic, environmental, and others [Kuchma V. R., Efimova A. L., 2006].

Key words: children, anthropametry, development, health.

RF is one of the objective and generalizing parameters of children's health. Assessment of the level of physical development is currently of particular importance, since it is largely determined by the state of socio-economic relations in society and the ecological state of the territory, and, in addition, reflects the standard of living of the population [Gordeeva N. R., 2004].

Adequately implemented dynamic monitoring of the development of a growing person is necessary to identify individual characteristics of growth and maturation, the pace and harmony of development, and is also an important diagnostic criterion, especially in children of the first year of life [Krukovich E. V., 2004].

A complete and objective assessment of the level of physical development of children is possible only if each region has its own local standards of physical development [Matveeva N. A., Popova I. V., 1997; Kamilova R. T., 2015]. In addition, local or regional standards of physical development of children should be periodically updated [Yemelyanova N. N., 2001; Leonov A.V., 2004; Kamilova etal., 2014].

According to Belyakov V. A. etal. [2006] провед]the study made it possible to develop local RF standards for children in the first year of life, whicheallows for a more objective assessment of their physical condition and is the basis for further observations in this direction. It was also found that at present, children of the 1st year of life have a more uniform increase in mass - growth indicators of idein comparison with their peers born 10 years ago. This is due to the changed approaches to the practice of feeding children of the 1st year of life (early application of children to the breast, feeding on demand, introduction of complementary foods from 5-6 months). In addition, the current asthenia in children of the first year of life is primarily associated with a decrease in the chest circumference, which determines the dishormonicity of their development.

According to the above data, PolyakovA. V. K. (2008) revealed the dependence of anthropometric signs of RF in organized children aged 5-7 years on chemical air pollution in residential areas. This dependence had gender differences and was manifested by a decrease in all size-and weightвcharacteristics in boys, body weight and chest circumference in girls, as well as an increase in the variability of signs, mainly due to low, including extreme gradations. The results obtained indicate the need for a system of measures aimed at preventing deviations in the RF in areas with a high level of chemical air pollution.

The established social gradient in the formation of children's health [Starodubov V. I. etal., 2001] actually laysdown, and will determine the health trends and quality of the future population of the country. These data, revealing the fundamental biosocial patterns of health formation, directly indicate the need and urgency of solving social problems related to the life support of children, including these positions in strategic documents for the development of the country and tracking their practical implementation at all levels.

One of the main indicators of RF is height, which is considered one of the most sensitive indicators of children's health [Nagaeva E. V., 2009]. Growth is the result of the interaction of a number of important factors - genetic, hormonal, alimentary, and environmental factors. For adequate growth, the child needs a full-fledged diet, a normal hormonal balance, and the absence of chronic diseases. In addition, thegrowth rate in childhood is significantly influenced by family predisposition and features of the course of pregnancy.

From the point of view of biology and genetics, growth is a hereditarily programmed process of increasing the mass, linear and volumetric dimensions of the body with optimal intake of food ingredients and under favorable environmental conditions. Back in 1948, P. K. Anokhin defined growth from the point of view of systemogenesis as the development of functional systems. The general biological meaning of growth is to achieve a level of RFthat ensures the viability and fulfillment of social functions, i.e. , human reproduction.

It is known thatthrough upbringing and education, a person attains intellectual and social perfection. Inothe process of growth of bemsw, periods of stretching (linear growth) and rounding (evolume growth of the whole body and individual parts) are traced. At the 2nd year of the child'slife, the greatest increase in body length is observed-about 12 cm. After 2 years, the average annual increase in body length состовляетis 4-5 cm, after 6 years more than 5 cm, after 14 years from 2 to 2.5 cm per year. These periods often do not coincide in time. Many children have regular seasonal variations in their growth rate: it increases in the spring and slows down in the fall. Seasonal fluctuations complicate the analysis of the growth curve [....................].

The uneven and asynchronous processes of growth, neuropsychic development, and puberty of childrenejustified the need to develop an age periodization. The foundations of such periodization were first laid by the works of the Russian pediatrician N. P. Gundobin back in 1913. годуSubsequently, it was refined and supplemented by I. A. Arshavsky [1982] and others. The Institute of Age Physiology of the Russian Academy of Medical Sciences, in accordance with WHO recommendations, proposed a moreesimplified version of periodization.

ПроведеThe correlation analysis performed revealed (Derevtsova S. N., 2009) the presence of medium, strong and close relationships in boys and girls between the longitudinal and transverse body sizes. Sex differences in correlations reflect the norm of reaction in the formation of somatometric signs. Young men are tall, with disproportionately short arms and legs relative to body length, with broad shoulders and a narrow pelvis. Their body is in the form of a trapezoid, with a wide base facing up. Girls are short with a narrow pelvis and shoulders and have relatively short arms and legs. Their body, like that of young men, is in the form of a trapezoid, but with a wide base facing down.

When analyzing an individual's physical capabilities, the diameters and обоverall dimensions of the trunk, height, and the ratio of longitudinal values are highly informative. The study of proportionality and physical size of the human body is the basis for identifying various body shapes and their classifications [Deryabin V. E., 1993; Hughes V..A., 2002].

A comprehensive assessment of the health status of adolescents showed [Voronina N. V., 2000], that in generalI, 37.5% of young men were assigned to the I health group%. Persons with some functional and morphological abnormalities, made up 25.0%, 1/3 of the students, due to the presence of chronic diseases in the state of compensation, were assigned to the III health group. Persons with chronic diseases in the stage of decompensation accounted for 3.1%. The above materials indicate the need for health-improving activities among young students.

Analysis of the obtained materials on the survey of 1856 students in Termez showed [Kamilova R. T., 2001], that the standing height of 7-year-old boys and girls was 120.2,2±0.44,and 117.5,5±0.48,cm, and in 17 -year-old adolescents, respectively, 169.7,7±0.70,and 161.1,1±0.81,cm, while the absolute increase in body length over the period of from 7 to 17 years of age, there was an increase of 49.5,cm in boys and 43.6,cm in girls. The weight of children for all school years increased by 36.2 kg for boys and 31.4 kg for girls. Chest circumference increased by 24.9 cm in boys and 24.4 cm in girls during the school years. The author proved that in most age-and gender groups of schoolchildren, the average value of total RF sizes in children of Termez is significantly lower, than in their Tashkent peers, with the exception of the breast circumference index. A significant difference was found in the depth of physiological curves of the spine.

According to the results of research conducted by Kamilovaой R. T. [2001], it was found that 70.1% of Termez schoolchildren had an "average" level, 10.4% "above average", 13.8% "below average", and 3.7% "low" level of RF. A general delay in RF was detected in 3.7% of children. The author connects these comparative deviations with the peculiarities условийof the life conditions of the examined children, the nature of their nutrition, and socio-economic conditions.

According to G. A. Dobrovolsky. [2009], the macca of the body increases statistically significantly at the age of 17 and after 17 years, while the long-distance parameters (body length-standing and sitting, shoulder length, forearm length, hand length, arm length in general, hips, lower legs, foot height, legs in general) are statistically significant they don't change. Shoulder width and intertrochanteric width of the pelvis are stable at 17 years of age, the intercostal and intercostal dimensions of the pelvis, chest width, and epigastric angle continue to increase statistically significantly. In addition,most girths (chest and limb girths) are also reduced. The thickness of skin-fat folds after 17 years does not change, or decreases. Pulse rate and blood pressure are stable at rest at 17 years of age, and more variable during exercise than in other age groups. Muscle strength continues to increase after the age of 17. The parameters of the cerebral part of the head (head circumference, diameters, heights) are stable at the age of 17. In the facial region, after 17 years of age, the morphological height of the face, the length of the nose, the masking, zygomatic and maxillary width of the face continue to grow. The values of the parameters of the gnatic part of the head are stable at 17 years, which indicates a state of rest in the dentoalveolar system.

По According to Surzhikovaa A.V., Syutkina E. V. [2009], the value of the most pronounced period of daily body weight gain makesea definite contribution to the regression model only in cases where there are children with parotrophy in the study sample. It is obvious that the values of the periods of the most pronounced rhythms of weight gain and the mesors of these rhythms are significant prognostic signs of further physiological development of children. The data obtained indicate the potential of neonatal biorhythmology for predicting the risk of obesity in children and adolescents, which requires further in-depth research.

In accordance with the WHO criteria [Vershubskaya G. G., Kozlov A. I., 2010] ФР новорожде, the health status of newborns of the indigenous (aboriginal) population of Chukotka in the early 2000s should be assessed as satisfactory. However, compared to the late 1960s, children's birth weight and head and chest girths have significantly decreased. The proportion of children with a body weight of less than 2500 g is higher than the average for the Russian Federation and exceeds similar indices in the indigenous groups of Alaska and Canada. Probably, the decrease in anthropometric indicators is associated with the deterioration of the quality of life of the indigenous population of Chukotka, which was observed in the late 1990s. Changes in the reproductive behavior of indigenous women in Chukotka are manifested in a decrease in the age of sexual debut: over the past decade, it has decreased by 17 monthsяцев. The average age of women at the birth of their first child does not differ from the traditional late age (18-19 years), but the variance of the indicator increases. As a result, among Chukchan women, the share of women in labor aged 17 and younger, is 2-4 times higher (depending on the place of residence).

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