



Anatomical and Physiological Features of Development

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Abstract: The results of physical development and the determination of the harmonious development of 253 children of school age are presented. The main morphological and functional indicators of physical development were determined: height, body weight, chest circumference. A comprehensive assessment of physical development depending on gender and age was carried out. The results of the study of physical development, the determination of the harmony in the development of children, showed that at present, with the main patterns of growth and development remaining, we can talk about the process of retardation.

Keywords: children, anthropometric indicators, physical development, harmonious development, preschool age.

Relevance:

Anatomy physiological development reflects the processes of growth and development of the organism at the stages of postnatal ontogenesis, when, under the influence of external factors, the transformation of hereditary manifestations into phenotypic ones occurs. The physiological development of children, along with morbidity and mortality, is one of the leading criteria for the health of the country's population.[1,2]

Anatomist physiological development of a child is associated with biological processes continuously occurring in the body and to a large extent depends on the socio-economic and hygienic conditions of life. Any negative influence of various factors in the preschool age period can cause a whole cascade of reversible or irreversible changes in the functional systems of the homeostatic and behavioral levels, thereby determining the entire further course of growth, development, and health level [3, 8]. In recent years, a significant number of overweight and underweight children have been registered, there is a tendency to disharmonious development of children, an increase in the frequency of various deviations from regulatory developmental parameters.[3,4] The genetic program determines the rate of growth and development, the order of maturation of individual organs and systems, their biological reliability. So, body length is 90% dependent on endogenous factors. But the genetic program is not rigid, it can change under the influence of environmental factors. Environmental factors affect the level of metabolism in the body, which leads to changes in indicators of physical development, such as body weight. Body weight, to a lesser extent than height, is associated with heredity, and is more amenable to regulation. Muscle strength, vital capacity of the lungs, and chest circumference are also subject to regulation. Exogenous factors that stimulate metabolism and thereby promote the growth and development of the body include: sufficient physical activity, rational nutrition, outdoor exposure, ultraviolet radiation, etc. There are two ways to collect in the determination and comparative analysis of the main indicators of the physical development of preschool children age.[5]

Purpose of the study

Determining the harmonious development of school-age children as the initial basis for individual planning of the formation of a healthy lifestyle. The results obtained allow us to substantiate the need to create regional standards for the physical development of children.

Materials and methods of research

The determination of the harmony of development was carried out on the basis of the same results of centile assessments. If the difference between the numbers of regions or "corridors" between any of the 3 indicators does not exceed 1, we can talk about harmonious development. If this difference is 2, then the development of the child is considered disharmonious, and if the difference is 3 or more, the development is sharply disharmonious.[6,7]

The material of the study was the regulatory and analytical documents in the field of prevention of non-communicable diseases, the procedure for the activities of medical organizations and the medical provision of children in educational institutions. The studies were carried out by a cross-sectional method. To assess the physical development of children, a unified methodology [1,2] of anthropometric measurements was used. The assignment of a child to one of these somatotypes was made according to the sum of the numbers of regions or "corridors" of the centile scale obtained for length, body weight, and chest circumference. If the sum of points (numbers) was up to 10, the child was referred to the microsomatic type, if the sum was from 11 to 15 - to the meso-somatic type, if the sum was from 16 to 21 - to the macrosomatic type.[8]

Results and discussion

The total body dimensions of the children corresponded to age-related ontogenetic patterns of development against the background of insignificant sex differences both in body length (BW) and body weight (WB).

Most of the values of each parameter (body weight, body length, chest circumference) fell into the range of average values (from 15 to 65 centiles). Among the surveyed age groups, this range included body length values of 45.5 - 52.5% of boys and 39.0-68.8% of girls; body weight values 45.5-64.0% of boys and 32.3-56.8% of girls; chest circumference values 50.0-68.2% of boys and 43.3-66.7% of girls - 87th centile) and very high values (above 97th centile). These ranges included indicators of 2.8-33.3% of boys and 7.1-31.3% of girls. In the zones of values below the average (10-25th centiles) indicators are 5.6-11.1% of boys and 3.8-8.1% of girls; in the zones of low values (3rd - 10th centiles) - indicators of 2.0% of boys and 2.4-6.5% of girls; very low values (up to 3 centiles) - indicators of 4.2% of boys and 2.5% of girls.

When assessing the body weight parameters, the indicators, respectively, of 3.7-19.4% and 4.2-18.2% of boys, as well as 8.1-31.3% and 12.9 - 28.6% girls. The zones of high and low values include, respectively, the indicators of 3.8-6.0% and 5.6-11.5% of boys, 2.4-12.5% and 2.4-7.1% of girls. The extreme zones of very high and very low values include 2.0-9.1% and 3.8-18.2% of boys, 2.4-9.7% and 2.4-6.5% of girls.

When assessing the parameters of the chest circumference, a significant proportion of boys and girls were classified in the ranges of values below the average (13.0 and 14.7%), low (17.1 and 10.9%) and very low values (6.5 and 13.2%) [9,10].

Conclusions

Thus, among the surveyed preschool children, when assessing body length, the average parameters were recorded in 46.1% of boys and 39.8% of girls, above and below the average - in 12.7 and 8.1% of boys, respectively, and in 17.1 and 6.3% of girls, high and low - in 9.8 and 0.6% of boys and in 10.2 and 4.4% of girls, very high and very low - in 11.0 and 1.7% of boys and in 10.7 and 1.5% of girls. When assessing body weight, the average parameters were registered in 49.2% of boys and in 38.0% of girls, above and below the average - in 13.2 and 8.6% of boys and in 15.2 and 17.6% of girls, high and low - in 4.6 and 6.9% of boys and in 6.9 and 3.9% of girls, very high and very low - in 4.6 and 2.9% of boys and in 4.4 and 3.9% girls. Based on the above, the physical development of

children is an integral indicator and one of the main criteria for health, and, consequently, the social well-being of society, which determines the main features of the health of a given generation at an older age, including potential longevity and the transfer of relevant qualities to future generations. It should be noted that at present there is an alarming situation with the health of children and adolescents. According to a number of researchers, the individual health potential at birth approaches zero, that is, a person born today immediately begins to lose health [11,12,13]. Therefore, the task of strengthening the health of children is a necessary condition for their comprehensive development and ensuring the normal functioning of a growing organism.

It was established that compared with the weather, the number of children with harmonious development in boys decreased by 5, and in girls in 4 out of 5 surveyed age and sex groups. Along with this, a tendency was established to increase the number of children with disharmonious development in comparison with their peers.[14,15]

In addition, it was found that the features of the physical development of children aged 7 to 12 years are:

- a significant increase in body weight in boys and girls, from the age of six and a maximum increase in body length, chest circumference in the same age period

The results of the study of physical development and the determination of the harmony in the development of children showed that at present, with the main patterns of growth and development remaining unchanged, we can talk about the process of retardation. This is evidenced by the shift of the second growth shift to a later age period.

Bibliography:

1. Manasova I. S., Doktor Axborotnomasi. Analysis of features Opinions on the Basic Components of Healthy Lifestyle 2021, No. 1 (98) ISSN 2181-466X.[1]
2. Manasova I.s., Mansurova M.kh., Youth's Look For a Healthy Lifestyle // Central Asian Journal of Medical and Natural Sciences. Volume: 02 ISSUE: 02 March -april 2021 ISSN; 2660-4159.p.149-153. [2]
3. manasova i.s., Academician International Multidisciplinary Research Journal. Features of Labor of Workers in Agro-Industrial Labor 10.5958 \ 2249-7137.2020.01622.5 .c.958-962.[3]
4. Manasova I.S. The Level of Healthy Lifestyle of Students// European Journals of Psychology. ISSN:1841-0413. page 149-155[4]
5. N. Education of a preschool child: development of an organized, independent, initiative, not sick, communicative, accurate. Growing up healthy: program method. manual for preschool teachers. M.: Academy, 2003. 198 p.[5]
6. Kuznetsova M. N., Zmanovsky Yu. F., Alymkulov R D. Prevention of acute respiratory diseases in preschool institutions // Healthy preschooler. Social and health technology of the 21st century. M., Arkti, 2000. S. 66-70.3 [6]
7. Baranov A.A., Kuchma V.R., Snoblina N.A. - physical development of children and adolescents at the turn of the millennium, M.NTsZD RAMS 2008. 216 pages [7]
8. Baranov A.A., Kuchma V.R., Sukhareva L.M. Universal assessment of the physical development of younger schoolchildren: manuals for medical workers M.NTsZD RAM, 210 pp. [8]
9. Valina S.L., Ustinova O.Yu., Ivasheva Yu.A. Comparative assessment of the level of physical development of children attending preschool educational institutions with different occupancy. Perim 2006.[9]
10. Kuchma V.R. – strategy for the development of population and personal hygiene of children and adolescents (public health and habitat 2017 number 8. C 7-10)[10]
11. WHO Anthropometrics for personal computers manual software for assessing growth of the words children and adolescents. Geneva: WHO 2009[11]

12. Manasova I.S., KosimovKh.O., Hygienic aspects of the possibility of using the new insecticide Seller in agriculture// International Journal of Psychosocial Rehabilitation. - 2020.-R. 336-342.[12]
13. MANASOVA I.S., MANSUROVA M.X., Youth's Look for a Healthy Lifestyle // Central Asian Journal of medical and natural sciences. – 2021. – P.149-153[13]
14. MANASOVA I.S., YADGAROVA SH.S Analysis if Indicators of Physical Development of Preschool children // Central Asian Journal of medical and natural sciences. – 2021. –P.154-157[14]
15. Manasova I.S., KosimovKh.O., Hygienic aspects of the possibility of using the new insecticide Seller in agriculture//International Journal of Psychosocial Rehabilitation. - 2020.-R. 336-342.[15]