

BASICS OF ASSESSMENT OF CHILDREN'S PHYSICAL DEVELOPMENT IN THE MEDICAL PREVENTIVE SYSTEM

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Abstract:When assessing the physical development of children and adolescents, a unified approach is currently needed, which will make it possible to timely solve the problems of therapeutic and preventive work, as well as labor and sports orientation in children's organized groups. Purpose of the study. Determine the most relevant methods for studying and assessing the growth and development of children and adolescents to determine the direction of the secular trend at the present stage of social development.

Keywords:Physical development, assessment methods, secular trend, children and adolescents.

INTRODUCTION:A secular trend is changes occurring in human biology, indicating the direction of the processes of growth and development of a population in an epochal aspect. The secular trend is not just changes in anthropometric and physiological indicators, but also certain social and hygienic problems. Knowing the direction of changes in the human body allows us to manage the health of the population at present, as well as predict further options for its development and timely develop the necessary health-saving technologies.

MATERIALS AND METHODS:Children and adolescents are a unique social group, by studying the state of whose body it is possible to determine the vector of the secular trend at any stage of the development of society, since they are the most sensitive to changes in the socio-economic and environmental situation [2].

The need to study the problem of the direction of the secular trend is confirmed by a large number of works by domestic and foreign scientists. The following manifestations of the secular trend are generally recognized: acceleration of growth and development from the 60s to the mid-70s, individual manifestations of deceleration from the late 80s. last century until the beginning of the 2000s, "gracilization of physique" [2].

RESULTS AND DISCUSSION:Determining the direction of the secular trend is possible through a longitudinal examination of a large number of children of all age and sex groups, which implies certain difficulties in the work of researchers. But, despite this, in most countries of the world such work is carried out constantly, since the problem of changes in human nature is always relevant.

Such studies begin with the study of physical development (PD) as a fundamental component of the health status of the younger generation.

Physical development is a complex of morphological and functional properties and qualities of the body, its harmony, as well as the level of biological development. Each period of development is characterized by its own growth rates, age-related physiological and behavioral characteristics [1].

FD serves as an indicator of changes in the body of schoolchildren that arise under the influence of various factors. The long-term effect of negative factors, such as unfavorable living conditions, education and upbringing, lifestyle is accompanied by adaptation stress, which can lead to a decrease in the reproductive potential of boys and girls, an increase in early disability, problems in social adaptation in society, restrictions in the choice of professions, and so on. [4].

Adequate assessment of the risk factors of children and adolescents at the individual level contributes to solving problems of therapeutic and preventive medicine, labor and sports orientation. A comparative analysis of groups in the system of social and hygienic monitoring at the population level allows us to identify trends in the direction of changes in the body of the younger generation.

These standards served as the basis for the WHO Anthro software, which allows you to calculate simultaneously the Z-score and centiles for some anthropometric indicators. The software allows you to analyze indicators of a child's neuropsychological development in relation to his anthropometric data and level of motor skills, regardless of his place of residence [3].

WHO experts believe that children everywhere are born with the same prerequisites for further development, the changes that occur are due to the influence of the environment, and significant differences associated with genetic and ethnic characteristics begin to appear only during puberty.

Assessment of the risk factors of children over 5 years of age is possible using the WHO AnthroPlus software, which contains standards for children from 5 to 19 [3].

A study of children under 5 years of age in Poland showed the possibility of using WHO reference standards, reflecting the optimal model of their development *53+, to assess growth. When assessing the PD of Polish schoolchildren using 4 regional and 2 international methods (WHO standards, 2017 and CDC, 2020), statistically significant differences were identified, which was recommended to be taken into account when using reference growth curves.

CONCLUSION:The next problem is the age of the subjects. Some authors evaluate only newborns at the time of birth and do not track their growth and development in the future, others study children only during sensitive periods of development, etc. However, to obtain reliable information, it is necessary to study all age and gender groups of children, taking into account natural, climatic and socio-economic factors.

When studying biological development, most authors use only the age of menarche, without even touching on the degree of development of secondary sexual characteristics. There are even fewer works devoted to the study of dental maturity, and even more so bone age.

Thus, it is necessary to unify the conditions for studying the growth and development of children and adolescents in order to obtain real information about the direction of the secular trend. The introduction of computer technologies for clinical examinations of children will make it possible to use standardized assessments of children's health both in an individual case and on an entire sample, which is important when planning preventive and rehabilitation measures.

Epochal shifts in human biology are a response to changing environmental conditions, an adaptation option to changing natural, climatic and socio-economic conditions. The study of the secular trend vector currently solves current social and hygienic problems, but a promising direction in this topic is the forecast of the state of the human body.

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