

It is known that polysaccharides can influence the polarization of lymphocytes through the corresponding activation of antigen-presenting cells. Polysaccharides isolated from many plants and fungi stimulate the synthesis of various cytokines by macrophages, increasing the expression of TLR4, exert anti-inflammatory action, inhibiting the stages of exudation and proliferation, activate macrophages, increasing their ability to pinocytosis, production of nitric oxide, IL-1, IL-6, IL-12.

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### RELATIONSHIP OF PHYSICAL DEVELOPMENT WITH THE RESPECTIVE HEALTH GROUP OF CHILDREN'S POPULATION

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Various diseases, malnutrition, environmental problems, defects in care and upbringing change the processes of growth and development of the child's body, so the violation of physical development is one of the first signs of trouble and serves as an indication for an in-depth examination of the child. At the same time, the greater the deviation in the physical development of a child, the greater the likelihood of functional disorders or chronic diseases.

*Keywords:* physical development, harmoniousness and disharmoniousness of development, groups of health.

Physical development of children of modern society, along with such indicators as fertility, mortality, morbidity is one of the indicators of the level of health of the population, its sanitary and epidemiological well-being. This is due to the fact that the children's organism, in contrast to the adult organism, reacts to a particularly sharp degree to the influence of the external environment, both biological and social [1].

The purpose of our study is to assess the level of physical development and the corresponding group of children's health in the Mogilev region. The collection of the material was carried out in several stages: at the first stage, the biological level of the development of the organism and its correspondence to the calendar (passport) age took place; at the second stage, the morphofunctional state of the body was evaluated according to the parameters of the body mass, the circumference of the chest (in pause), the vital capacity of the lungs and the muscular strength of the hands. At the same time, the distribution of children into groups of health was analyzed.

An analysis of the results of the distribution of children's population by health groups made it possible to identify the following. Thus, the children's population with the first group of health prevails at the age of 3–6 years (30.7%), which can be explained by the fact that during the first childhood, children are usually physically active, not subject to bad habits. During this period, the mobility of the nervous processes increases, the processes of excitation predominate, this determines the characteristic features of the child, such as increased emotional excitability and restlessness, which usually determine the normal, age-appropriate physical and mental development. The predominant percentage (38.19%) of children with a second group of health is observed at the age of 7–11 years. Moreover, the children of this group of health have some morpho-functional disorders, which, possibly, are the result of a slight impact of unfavorable factors. During the study, the vast majority of children with the third and fourth group of health were found at the age of 12–15 years (23.9%), and 7–11 years (17.4%). Perhaps the reason for this was the presence in children of chronic diseases in the stage of remission, on the basis of which children are referred to this group of health.

Analysis of the results of the degree of expression of the harmonious development of children revealed the following distribution. Thus, the disharmonious and sharply disharmonious physical development of children prevails at the age of 12–15 years (22.86%), which is caused not only by the revealed various diseases, including diseases of the cardiovascular and respiratory systems, which are one of the reasons disharmony of growth, but also by hormonal changes, heterochronicity of the growth processes of various systems. In addition, an important

role in this and the balanced diet and motor activity of the child. However, at the present time there is a massive infatuation of children with modern gadgets, which leads to a decrease in their motor activity, followed by a negative phenomenon for the child's organism. In the second place is a group of children aged 7–11 years (22.4%), then 3–6 years (21.3%), 15.8% of children are aged 16–17.

Thus, after analyzing the physical development of the child population and the group of its health, depending on the age period, it can be noted that harmonious physical development and the first, second health groups prevail among children in the age groups 7–11 and 3–6 years old. Disharmonious and highly disharmonious physical development prevails in persons aged 12 to 15 years, with the main percentage of children of this age (prepubertal period) for health reasons belong to the third group.

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### THE CONTENT OF THYROID HORMONES IN THE DYNAMICS OF RADIOIODINE THERAPY IN DIFFUSE TOXIC GOITER

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The study of level changes of thyroid hormones and antibodies in TPO and TG, to assess the effectiveness of the use of radioiodine therapy in the treatment of diffuse toxic goiter.

*Keywords:* thyroid hormones, diffuse toxic goiter, radioiodine therapy.

Three methods are used for the treatment of diffuse toxic goiter: conservative treatment with thyrostatic drugs, radical surgical treatment, therapy with the use of a radioactive iodine isotope  $^{131}\text{I}$ .

Treatment of diffuse toxic goiter with the use of thyreostatics is long, has a certain risk of developing negative effects, requires constant laboratory monitoring. After termination of therapy, relapse occurs on average in 60–75% of patients.

The use of thyroidectomy may be associated with the risk of hypoparathyroidism and damage to the laryngeal nerves, paralysis of the recurrent laryngeal nerve in 2% of cases. The advantage of the method is associated with the rapid elimination of thyrotoxicosis.

Therapy with radioactive iodine (RIT) is based on the ability of thyroid cells to selectively concentrate the isotope  $^{131}\text{I}$ . Radioiodine therapy is recommended for patients with diffuse toxic goiter and endocrine ophthalmopathy (EOP). The method is effective in 80-95%, achievement of euthyroidism in 4-8 weeks, the number of complications is less than 1%. The complications include the development of thyrotoxic crisis and the progression of endocrine ophthalmopathy.

**The purpose** of the study is to determine the content of thyroid hormones in the dynamics of radioiodine therapy in the treatment of diffuse toxic goiter.

**Materials and methods.** The study was based on clinical data of patients with benign autoimmune thyroid diseases ( $n = 21$ ) who received treatment with radioactive iodine. Female subjects under the age of 60 years prevailed, the median age of the examined was 48 years.

The level of hormones and antibodies in the blood was assessed by radioimmunization using standard sets of commercial firms: free T3 and free T4, thyroid stimulating hormone (TSH), antibodies to the TSH receptor (anti-rTTG), antibodies to tyrosine peroxidase (anti-TPO) and antibodies to thyroglobulin anti-TG). To calculate the therapeutic activity of the isotope, the average standard half-life of  $^{131}\text{I}$  was used, which depended on the specific nosological form and functional state of the thyroid gland. The Wilcoxon test (W) was used to compare quantitative traits in dependent samples.

**Results.** After therapy with radioactive iodine, positive clinical dynamics was observed. After RIT, a statistically significant increase in TSH level was observed ( $W = 21$ ;  $P = 0.001$ ). Changes in the level of CT4 and CT3 after treatment were also statistically significant ( $W = 10$ ;  $P < 0.001$  and  $W = 55$ ;  $P = 0.037$ ).

The effectiveness of treatment with the use of RIT in Graves' disease was observed in 15 patients (76%), while in 14 of them (67%) hypothyroidism was diagnosed. It should be noted that 4 months after treatment, only the level of anti-TPO was noted, as well as the positive dynamics of ophthalmopathy.