

According to the data for 2016 in comparison with 2015 in the v. Chist, the number of male deaths from diseases of the cardiovascular system decreased by one case, in disabled age decreased from 7 cases to 4 (for 3 cases), at working age increased from 1 to 3 (for 2 cases). The number of deaths from diseases of the female population in the disabled age increased from 7 to 10 (for 3 cases), in the working age the figures of deaths from the diseases of the cardiovascular system were not recorded [2, 3].

Analysis of the data showed that the number of male deaths from cardiovascular diseases decreased by one case. In the disabled age decreased from 7 cases to 4. In working age increased from 1 to 3 [2, 3].

The death toll of the cardiovascular system of the female in the disabled age increased from 7 to 10. At the working age, mortality from cardiovascular diseases was not recorded [2, 3].

In the first place, the structure of the causes of death is the diseases of the cardiovascular system, mainly diseases of the circulatory system. An overview of the mortality data of the population of the village of Chist, from diseases of the cardiovascular system is the main cause of death of the population, significantly affecting the labor and vital potential of society, and the demographic security of the state.

The diseases of the cardiovascular system are basically distributed to women and of disabled age.

BIBLIOGRAPHY

1. Global Atlas on Cardiovascular Disease Prevention and Control / Shanthi Mendis [et al.] // World Health Organization in collaboration with the World Heart Federation and the World Stroke Organization, 2011. – 164 p.

2. Смертность лиц трудоспособного возраста по полу Чистинского врачебного участка за 2015, 2016 года: утв. Чистинской участковой больницей 31.09.2016. – Чисть. – 8 с.

3. Структура смертности по возрасту и полу Чистинского врачебного участка за 2015, 2016 года: утв. Чистинской участковой больницей 31.09.2016. – Чисть. – 15 с.

CHARACTERISTIC AND POSSIBLE TARGETS OF ACTIVITY OF IMMUNOMODULATORS OF PLANT AND FUNGICAL ORIGIN

T. Yerchinskaya, N. Ikonnikova

Belarusian State University, ISEI BSU,

Minsk, Republic of Belarus

sofnat@mail.ru

tanya.erchinskaya@mail.ru

On the basis of the literature data, an idea is formed of compounds capable of influencing the effectiveness of the immune response. Among them - it was shown that polysaccharides of plants and fungi turned out to be substances with high biological activity. Other therapeutic effects of natural immunomodulators-fungal and plant metabolites, such as anti-inflammatory, antibacterial and antiviral properties, anti-hypoglycaemic and antitumor activity, are known.

Keywords: immunomodulating properties, biologically active substances, fungal polysaccharides.

Possible mechanism of modulating effect of fungal and plant-derived polysaccharides with respect to the organs of the immune system is the ability to influence the production of cytokines, the expression of adhesion molecules. Preparations based on polysaccharides of vegetable and fungal origin have no side effects and are characterized by low toxicity, in comparison with other chemotherapeutic agents, which gives them significant advantages in the development of immunomodulating, antitumor and wound healing agents.

The main active substances with immunostimulating activity are polysaccharides of plants and fungi.

The mechanism of action of plant immunomodulators is the ability to activate the phagocytic activity of neutrophilic granulocytes and macrophages, stimulate the production of IL. Echinacea promotes the transformation of B-lymphocytes into plasma cells, improves the function of T-helpers [1].

Also immunomodulating properties are *eleutherococcus spiny* (*Eleutherococcus senticosus* Maxim. Or *Acanthopanax senticosus*). *Eleutherosides B and D* cause an increase in T-killer activity. In vitro, the liquid extract of *Eleutherococcus* induces production and enhances the effect of IL-1 and IL-6 in laboratory and clinical studies.

Studies conducted in the late 90s of the twentieth century confirmed that fungi such as *Lentinus edodes*, *Pleurotus ostreatus*, *Ganoderma lucidum*, *Schizophyllum commune*, *Flammulina velutipes*, *Tremella faciformis* etc. influence the activity of macrophages and stimulate the immune system [2].

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.

BIBLIOGRAPHY

1. Degtyareva, M. V. Features of cytokine production, subpopulation composition of lymphocytes and functional composition of neutrophils in neonatal pneumonia and immunocorrection methods / M. V. Degtyareva // *Medical Immunology*. – 2000. – Vol. 2, № 1. – P. 69–76.
2. Karaulov, A. V. Immunotropnye preparaty: printsipy primeneniya i klinicheskaya effektivnost' [Immunotropic drugs: principles of application and clinical efficacy] / A. V. Karaulov, O. V. Kalyuzhin. – Moscow, MTsFER, 2007. – 144 p.

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

V. Yukhnevich, O. Ablekovskaya

*Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
vikayuhnevich@mail.ru*

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