ANALYSIS AND ASSESSMENT OF THE UKRAINIAN POPULATION OBESITY PROBLEM.

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Introduction. Obesity is one of the most common chronic diseases in the world. It is reaching the proportions of a non-contagious epidemic. The WHO estimates that about 1.8 billion people are overweight and 590 million are obese worldwide, largely due to urbanization, reduced physical activity. All social strata of society and age groups are susceptible to obesity. An increasing incidence of obesity in children and adolescents has been observed everywhere. Currently, up to 24% of adolescents are overweight, and 14.5% are obese in the developed countries of the world. Obesity becomes a direct threat to health, as it entails serious illness. In 75% of cases, it is the cause of type 2 diabetes (type 2 diabetes) and in 33% of cardiovascular pathologies. Life expectancy is significantly reduced, by 9 years for women and 12 for men.

Aim. The purpose of our work is to analyze and assess the prevalence of obesity in Ukraine.

Materials and methods. In our work, we relied on the materials of the State Statistics Service of Ukraine for 2020r, data and statistics of the World Health Organization, materials of the World Obesity Organization.

Results and discussion. 39.8% of Ukrainians are overweight and 15.4% are obese. Thus, more than half of Ukrainians weigh more than the norm. Ukrainian women over the age of 18 weigh an average of 71 kg and are 164 cm tall. 35% of women in Ukraine are overweight and 18.3% are obese. Ukrainians over the age of 18 weigh an average of 80 kg and grow 175 cm tall. It is noteworthy that among men a larger proportion is overweight (45.4%), but slightly less - obesity (14.3%) compared to women. It was also found that among urban residents, every eighth man and every fifth woman are obese. The annual detection of obesity among children in Ukraine is 15.5 thousand cases. For the diagnosis of obesity in Ukraine, the body mass index is used. This indicator is calculated by dividing the body weight (in kilograms) by the square of the height (in square meters). For example, the body mass index for a person weighing 65 kg and a height of 170 cm is $65 / 1.7 \times 1.7 = 22.5$. If your body mass index is above 30, it could indicate obesity.

Conclusions. It is necessary to take active measures to actualize the problem of obesity and deal with it in our country. A potential way out of this situation may be the creation of national recommendations for the correction of obesity, taking into account the affect international standards.

MECHANISMS AND METHODS OF ALLERGEN-SPECIFIC IMMUNOTHERAPY

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Introduction. Allergen-specific immunotherapy (ASIT) is also referred to as allergy injections. It is prescribed for patients with allergic rhinitis, allergic asthma, or life threatening reactions to insect venom. It is the only medical treatment that could potentially modify allergic

disease and would be considered for patients with moderate or severe symptoms that are not controlled by environmental control measures and/or medications.

Aim. The aim of this review is to provide an overview of the current knowledge on the mechanisms and new methods of allergen immunotherapy based on the recent publications.

Materials and methods. Data analysis of literature and Internet sources.

Results and discussion. A direct action on the cause of the allergy is based on the same principle as vaccination. It consissts of gradually and regularly administering the allergen causing the symptoms to patients in order to induce tolerance to the allergen. Studies of the mechanisms of action of ASIT, carried out in recent years, have shown the important role of regulatory T cells (Treg) in the suppression of the allergic response. Tregs are represented by two main subtypes: the constant subtype of CD4+CD25+cells and the inducible Treg1 subtype. The constant subtype is characterized by the expression of the transcription factor FoxP3, which is induced by the secretion of IL-10 and tumor growth factor-β (ORF-β). Tregs control the allergic response through certain mechanisms, including T-cell tolerance, when T cells do not respond to antigen or self-organ and tissue determinants. T-cell tolerance can be directly caused by the action of IL-10 and ORF-β. IL-10, a suppressor of IgE production, both general and allergen-specific, leads to an increase in IgG4 synthesis, while ODF-β promotes an increase in IgA production The main method of ASIT is the classical parenteral method, which consists in the subcutaneous administration of increasing doses of the allergen according to the schemes specially developed depending on the type of allergen injected. The following non-injection ASIT methods are currently described: oral; sublingual; intranasal; endobronchial.

Conclusions. Thus, ASIT is the only type of therapy for allergic diseases that affects the main pathogenetic mechanisms of their development and induces changes in the immune system that have a positive effect on the long-term prognosis of allergic diseases.

INFLUENCE OF CETRARIA ISLANDICA ON BEHAVIORAL ACTIVITY OF RATS ON THE BACKGROUND OF EXPERIMENTAL HYPOTHYROIDISM

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Introduction. Recently, the problems of thyroidology are becoming especially relevant. Pathologies of the thyroid gland occupy one of the main places among endocrine diseases and takes 47.3%. Dysfunction of the thyroid gland leads to severe pathological disorders of other organs and systems of the human body. The most common complications of thyroid pathology are diseases of the cardiovascular and nervous systems. One of the most common thyroid dysfunctions is hypothyroidism, which leads to disorders of higher nervous activity, accompanied by a decrease in spontaneous behavioral activity and decreased cognitive abilities.

The aim of this study was to determine the effect of aqueous extract from Cetraria islandica on the spontaneous behavioral activity of rats on the background of merkazolilum-induced hypothyroidism.

Materials and methods. Experimental hypothyroidism was induced by daily administration of an aqueous solution of merkazolilum (500 mg in 1 l) instead of drinking water for 30 days. Experimental animals were randomly divided into 3 groups: 1– intact control; 2 – rats treated with the thyrostatic merkazolilum (control pathology); 3 – hypothyroid rats treated with aqueous extract