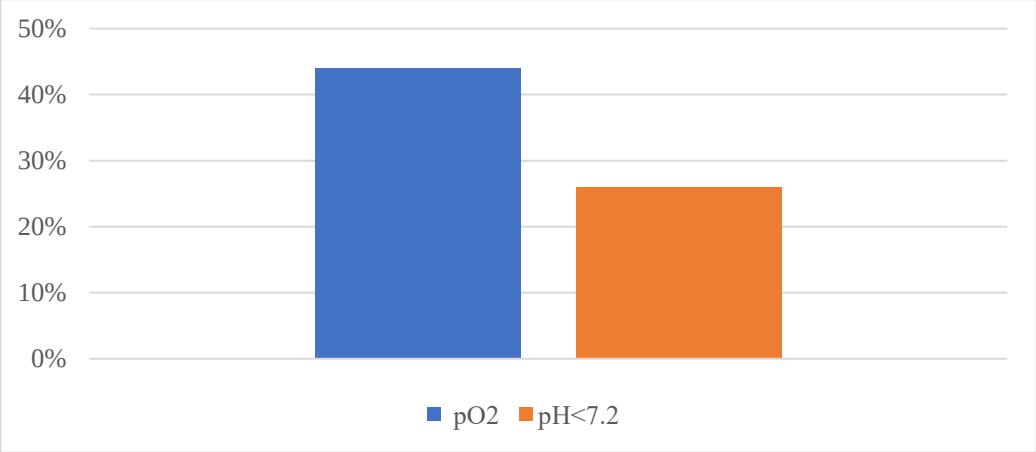

Figure 2. The number of prematurely born newborns with laboratory indicators of an anoxemia

In control group at children against the background of an oxygenotherapy it is noted at augmentation of average value pO_2 from 23.8±14 to 50.3±17 mm Hg.

6 prematurely born against the background of an oxygenotherapy control researches are conducted. 83% of children had hemodynamically significant OAD. When comparing data before carrying out an oxygenotherapy decrease of the average size of diameter of a duct from 0.33 to 0.21 cm is noted ($p<0.01$) at augmentation of average value pO_2 from 23.8±14 to 50.3±17 mm Hg.

Conclusions. The OAD sizes at prematurely born newborns have dependence on gestational age. Morphofunktsionalnal a dismaturity of an organism of prematurely born is subject to frequent development of an anoxemia and conservation of the functioning hemodynamically significant OAD. The well-timed oxygenotherapy to such children promotes reliable decrease of diameter of a duct.

THEORETICAL STUDY OF THE INFLUENCE OF DOPHAMINE BRAIN SYSTEM ON THE MECHANISMS OF APPETITE FORMATION UNDER THE OBESITY CONDITIONS.

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Introduction. Today, obesity is defined as a pathological condition characterized by an increase in the area of adipose tissue, which causes the formation of metabolic disorders, in particular, the exchange of carbohydrates. However, another complicating factor in the development of obesity is a pathological change in appetite, which is often accompanied by overeating. It is known that the dopaminergic system, which is responsible for enjoyment of food, emotional memory is actively involved in the central processes of the regulation of eating behavior. Therefore, today it is promising to study the central mechanisms of appetite disturbance in obesity and to find ways to correct them.

Aim. The aim of the work is theoretical study of the influence of the dopaminergic brain system on the mechanisms correction of obesity.

Result of discussion. Many studies have argued that excessive weight leads to an imbalance in the work of many hormones, in particular the decrease in the level of dopamine and serotonin in the brain. Serotonin and dopamine are stimulative neurotransmitters, secretion of which occurs with the participation of appropriate enzymes: tyrozinehydroxylase and tryptophanhydroxylase. At the same time, it is known from literary sources that the activity of these enzymes on the background of the development of humoral and metabolic stress in obesity is significantly reduced, which explains the decrease in the content of dopamine and serotonin in neurons of the brain and appetite disorders under these conditions. It should be noted that serotonin directly affects the content of anorexigenic mediators in the nuclei of the hypothalamus, in particular proopiomelanocortin, increasing the formation of the latter. Thus, in conditions of serotonin deficiency there are no processes of appetite suppression, which is accompanied by its corresponding growth. In turn, the reduction of the orexygenic dopamine mediator was not accompanied by a decrease in

appetite, which may be due to the attraction of emotional memory, whose mechanism consists in reproducing actions that lead to the growth of dopamine, in particular, eating.

Conclusions. Thus, according to the conducted studies results, it can be argued that the level of serotonin and dopamine in the brain is an important part of the regulation of eating behavior, but, as you know, not the only levers of influence on the appetite formation, which requires further research.

COMPARATIVE STUDY OF BEARBERRY LEAVES POLYPHENOL EXTRACTS HYPOGLYCEMIC ACTIVITY

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Introduction. The modern diet and lifestyle lead to metabolic disorders development. Quite often the insulin resistance (IR) state is registered in patients. One of the main features of IR is tolerance to glucose, so the improving of glucose metabolism must be the primary task. In this regard, plant diet has benefits because of polyphenols and other biologically active compounds.

Aim. The aim of this study was to conduct the comparable oral glucose tolerance test (OGTT) after treating rats by bearberry (Arctostáphylos úva-úrsi) leaves polyphenol extracts with the different way of extraction.

Materials and methods. 24 male rats weighting 160-180 g, who were kept in standard vivarium conditions, were randomly divided into 4 groups. One group was intact animals (G1), other 3 groups were intragastrically administered plant origin complex preparations during 2 weeks: ethanol polyphenol extract (EPE) of bearberry leaves (G2), water polyphenol extract (WPE) of bearberry leaves (G3) and control group (G4). Polyphenol extracts were administered in dose 9 mg of polyphenols on 100 g of body weight. On the 15th day of the administration was conducted OGTT. Fasting animals, except G1, were given intragastrically glucose solution in dose 3 mg/100 g of body weight. Blood samples for glucose analysis using glucometer were taken at time 0, 15, 30, 60 and 120 minutes after glucose load.

Results and discussion. In 30 minutes induced hyperglycemia resulted in 1,78-fold increase of blood glucose level on the average of control group (G4). In the G2 hyperglycemic rats, maximum reduction of blood glucose level by 27.32% compared to control level was fixed on 60th minute of the experiment. However maximum reduction of 23.54% was observed in control on 120 minute compared to the beginning of the experiment. In generally our results indicate that the EPE administration is relatively more potent than WPE administration, so the way of ethanol extraction allows to store more biologically active compounds. Bearberry leaves contain arbutin, flavonoids and alkaloid compounds that may stimulate glucose utilization by the tissues.

Conclusions. Thus, we have found that bearberry leaves ethanol polyphenol extract administration improved the tolerance to glucose in glucose induced hypeglycemic rats. Such treatment can be useful for correction of IR state or complex therapy of diabetes mellitus type 2. But future investigations are definitely required.

STUDY OF THE INFLUENCE OF THE GENISTA TINCTORIA ON THE FUNCTION OF THE THYROID GLAND

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Introduction. Diseases of the thyroid gland are an actual medical and social problem of modern society. This is due both to the wide, constantly growing prevalence of thyroid gland pathology, and to the resulting, with its dysfunction, damage to the somatic, reproductive, mental health of the population. The causes of thyroid diseases are plentiful - from iodine deficiency and adverse environmental conditions to