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## TO THE ISSUE OF NUTRITION IN THE ASPECT OF PHYSIOLOGY

**Abstract:** Digestion as an external link of the functional nutrition system that links the external environment with the internal environment of the body and corrects homeostasis of biologically active substances, mineral composition, therefore, our work reflects nutrition aspects based on literary analysis.

**Keywords:** function, disorders, nutrition, population.

Public health is not only a medical concept, but a largely social, sociopolitical and economic category. In the last decades of the 20th century, the world community began to realize and rethink the crucial importance of the problem of nutrition of the population.

The development of the territories of the European North sets the task of a demographic nature - maintaining the health of the population with a long active life and reproduction of healthy offspring.

Experts noted that digestion as an external link in a functional nutritional system that communicates the external environment with the internal environment of the body and corrects homeostasis of biologically active substances, mineral composition, and the body trophism.

It has a high lability under the action on the body of various extreme environmental factors, including social and stressful nature.

Foreign and domestic authors noted that the regulation of the motor activity of the gastrointestinal tract (GIT), an active part belongs to the triple alliance: the vagus nerves, sympathetic nerves, spinal parasympathetic nervous system. In the spinal ganglia of the thoracic spinal cord is the representation of receptors of the gastrointestinal tract.

Based on the classical theory of digestion, a balanced nutrition theory was formed. It considers food consumption as a way to maintain the constancy of the molecular composition in the body, where energy and plastic (construction) costs are reimbursed due to new food intakes. The theory of balanced nutrition has established a set of vital nutrients and to determine the quantitative needs for proteins, fats, carbohydrates, vitamins, salts, etc. It allows you to adapt nutrition to the physiological characteristics of the body, to physical exertion, climatic and other conditions.

Functional systems are dynamic self-regulating organizations, the activities of all whose components contribute to obtaining

adaptive results that are vital for the body.

Useful adaptive results include, for example, the internal constants of the organism, homeostasis indicators, which determine its normal vital activity. This is the body's content of nutrients, salts, water, oxygen, carbon dioxide, blood pressure, temperature, etc.

Since there are many useful adaptive results in the body that provide various aspects of its metabolism, the whole organism is built from the cumulative activity of many functional systems.

Any decrease in the nutrient content in the body through the primary stimulation of the chemoreceptors of the gastrointestinal tract, blood vessels and tissues through the nervous and humoral pathways leads to the excitation of the corresponding parts of the hypothalamic region. Nervous arousal comes from the receptors of the digestive tract, especially the stomach, as food is evacuated from it. Blood that is deprived of nutrients ("fasting blood") acts as a humoral stimulus, which acts reflexively, stimulating the receptors of the vascular bed and directly on special lateral hypothalamus chemoreceptors.

Then substances that, at today's level of knowledge, appear to be neutral, and also toxic substances - permanent and inevitable satellites of natural nutrition. It was the presence of toxic flow that gave rise to the recently popular idea of suppressing intestinal flora. However, in reality, apparently, the flow of toxic substances, if it does not exceed certain limits, is physiological (that is, it does not interfere with physiological processes, it is harmless). As a result of bacterial metabolism, hormones and biologically active substances are also formed.

Dietary fibers play a significant role in normalizing the activity of the gastrointestinal tract, as they ensure the forma

tion of jelly-like structures, which in turn affects gastric emptying, absorption rate in the small intestine and transit time (passage) of food through the digestive canal. Dietary fibers are able to absorb bile acids and, thus, affect their distribution along the gastrointestinal tract, and this, in turn, significantly affects various aspects of cholesterol metabolism in the body as a whole. Finally, food fibers affect the habitat of bacteria in the intestines and are one of their sources. Dietary fiber is necessary for normal functioning not only of the digestive system, but also of the organism as a whole. The relationship between the widespread in the developed countries of the so-called refined diets and cholesterol metabolism, the formation of gallstones has been demonstrated.

According to most experts, errors in the structure of nutrition, and in particular the consumption of refined products have become one of the reasons for the development of many serious diseases in humans. Atherosclerosis, hypertension, diabetes and a number of other diseases are the result of not only excessive consumption of

protein or carbohydrates, but also insufficient use of dietary fiber. There is evidence that the lack of dietary fiber in the diet can provoke colon cancer.

Many forms of the pathology of the gastrointestinal tract and metabolism are preventable and treatable by introducing dietary fiber into the diet. These fibers are able to alter the absorption of glucose, so they can be used for the prevention and treatment of diabetes, hypoglycemia, and obesity. Plant fibers have an anti-toxic effect.

Summing up the literature analysis, it can be emphasized that the energy and molecular approach is important from the point of view of not only the classical, but also the new theory of adequate nutrition. At the same time, the technology<sup>7</sup> of food processing in the body is also extremely important for the day of the new theory. From here comes the immutable conclusion that nutrition should be not only balanced, but also adequate, that is, appropriate to the capabilities of the organism, the natural mechanisms of assimilation of food.

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