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ФІЗИЧНА РЕАБІЛІТАЦІЯ ТА ЗДОРОВ'ЯЗБЕРЕЖУВАЛЬНІ ТЕХНОЛОГІЇ: РЕАЛІЇ І ПЕРСПЕКТИВИ

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СУЧАСНІ ЗДОРОВ'ЯЗБЕРЕЖУВАЛЬНІ ТЕХНОЛОГІЇ В ОСВІТІ ТА ПОПУЛЯРИЗАЦІЯ ЗДОРОВОГО СПОСОБУ ЖИТТЯ

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VEGETARIANISM IN TERMS OF MEDICINE AND NUTRITION

Modern medicine and dietetics show the importance and value of knowledge about proper nutrition. A rational nutrition system includes taking into account gender and age characteristics, labor activity, natural features of the relief and climate, as well as ethnic factors. Even though meat production is economically more expensive than vegetable production, these enterprises are developing as an existing social order. The statistics are such that to feed one person with meat, the same area of land is used for eating twenty vegetarians [1,4]. This imbalance in the rational use of natural resources causes not only additional financial losses in the economy but also a wasteful and ecophobia attitude towards the environment and living organisms.

Purpose of the study: to analyze whether a plant-based diet can satisfy all the needs of the human body for essential substances, such as fats, carbohydrates, and proteins. Plunging to the topic of vegetarianism, you can consider several theories, rules, and fundamental approaches that deny the use of this food system. It can be said with great accuracy that there are diseases in which vegetarianism becomes mandatory. Such a nutrition system is recommended to the patient for preventive purposes, for example, on fasting days [8]. However, it is important to remember that vegetarianism is not beneficial in all cases, and a harmful effect is possible**.**

Scientific studies on the influence of vegetarianism on the human body ambiguously assess this nutrition system as a universal one that every person can join. Before concluding the benefits or harms of vegetarianism, it is necessary to understand the principles of the human gastrointestinal tract system, to understand what effect food of plant and animal origin has on the body. In the course of evolution, starting from the earliest stages, new organs appeared in the digestive system. So, in modern animals, including humans, the digestive system includes the stomach and small intestine, the main function of which is the digestion and absorption of food. All digestive processes are manifested in the large intestine. During phylogenesis, organs such as the pancreas and liver appeared [6]. These glands arose as a result of the evolution of the middle section of the digestive tract. Evolutionary transformations of the glands occurred as a result of adaptation to the nutritional conditions of a certain type of animal.

When switching to a diet consisting of plant foods, the pancreas receives the main load [2,7]. The enzyme composition of pancreatic juice is directly related to the type of food consumed. It is important that with prolonged maintenance of a certain

diet, the secretory process in the pancreas undergoes adaptive changes, manifested in a change in the amount of juice and the ratio of enzymes secreted by acinar cells. If we approach the consideration of the function of the pancreas in terms of the composition of the food consumed, then a person is more related to carnivores. It is characteristic that the basal secretion of electrolytes is small or absent at all, the pancreas is quite sensitive to the action of secretin, a stimulator of electrolyte secretion. In herbivores, there is a pronounced basal secretion of electrolytes by the pancreas and its weak response to secretin. These data once again indicate that for a normally developing person, in the absence of diseases, a varied diet is preferable, including food of both plant and animal origin [5].

There are 22 amino acids. At the same time, it is believed that several of them (8 in adults and 9 in children) cannot be synthesized by the body and must be obtained from food or supplied by the intestinal microflora, therefore they are called "essential". A "complete" protein contains all 22 essential amino acids. Essential amino acids the body does not synthesize themselves (isoleucine, leucine, lysine, histidine, methionine, phenylalanine, threonine, tryptophan, valine). He gets them from food. Our body does not need proteins themselves, but amino acids, which are not “vegetable” or “animal”. Complete proteins with a full range of amino acids are found in all leafy vegetables containing chlorophyll, in all types of nuts, in some fruits (pears, persimmons, apricots), as well as in sprouted grains of wheat and other cereals. A rich source of vegetable protein is lentils, beans, and other types of legumes, soy and soy products (for example, tofu and okara), food chestnuts, and amaranth oil. Animal proteins are found in excess in all types of dairy products: cottage cheese, milk, fermented baked milk, cheeses, etc. For natural reasons, the human body absorbs iron, which is necessary, from plant foods worse than from red meat. This can lead to a decrease in hemoglobin levels and iron deficiency anemia. There are heme iron, which the body receives from animal sources, and non-heme iron, which is taken from plant sources. Iron deficiency in the body causes a weakening of the immune system and decreases resistance to colds, and viral, and bacterial diseases. Complications from the nervous system, liver dysfunction, and menstrual irregularities are possible [3, 9]. Legumes, beets, and pomegranates will help replace meat without losing hemoglobin. Another well-known problem for vegetarians is the lack of calcium and vitamin B12. This deficiency can lead to psoriasis, diabetes, and cancer, as well as damage to the nervous system. The absence of milk and eggs in the diet of vegans can cause a deficiency of animal protein. The lack of creatine released from protein leads to muscle disorders. The human body synthesizes creatine from three amino acids: glycine, arginine, and methionine. Creatine deficiency can lead to disorders of nervous activity, cognitive decline, and even mental retardation and dementia, as well as impaired motor functions, muscle weakness, and atrophy [10]. Often lacking in vegans, carnosine protects against degenerative processes in the body and aging. There is also a lack of cholesterol, which is involved in the synthesis of testosterone: this means that the diet can provoke hormonal abnormalities. Deficiency in docosahexaenoic fatty acid (DHA), which is obtained primarily from animal products, can lead to rapid aging, heart disease, mental health, and mental performance problems. Children are the most vulnerable to this danger. The main and most common problem of vegans is a

deficiency of vitamins B12 and D. To get vitamin D from food, you need to eat foods fortified with the vitamin, and these are mostly non-vegetarian foods. During the day, the human body with food enters within 80-100 g of protein (the optimal protein is 1 g per 1 kg of body weight), of which 30 g of protein should be of animal origin. Animal protein can completely transform into protein structures of the body, while vegetable protein synthesis is the least effective: the conversion coefficient is 0.6–0.7 [5,7]. Proteins as food components are macromolecular substances that have a more complex structure than carbohydrates and fats. As the main components of all tissues of the body, they are present in almost all secretions and fluids. A person cannot exist without the constant consumption of proteins, which, having gone through all the enzymatic reactions in the form of amino acids, are used to synthesize proteins from body tissues, enzymes, hormones, etc. Protein is the building material of our body. Plant foods show an insufficient content of nutrients important for the normal development of children and young people.

Conclusion. A rationally planned vegetarian (including vegan) diet is beneficial. Contains a complete set of nutrients, which is important in the prevention and treatment of various diseases. A properly formulated diet is suitable for all stages of the life cycle, including pregnancy, lactation, infancy, childhood, adolescence, and adulthood. It will bring benefits, including for athletes with a short cycle of use, not on an ongoing basis.

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