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# BIOLOGICAL SIGNIFICANCE OF BIOLOGICALLY ACTIVE SUBSTANCES IN THE BODY, DISEASES ARISING FROM THE LACK OF BIOLOGICALLY ACTIVE SUBSTANCES

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#### Abstract

Biologically active substances are organic compounds necessary for the vital activity and normal metabolism of living organisms. Essential substances necessary for the human body in everyday life, i.e. vitamins A, B1, B2, B6, B12, D, K, play a very important role in the functioning of the human body. If one of these substances is lacking, it causes various diseases in the human body. The main source of vitamins is plants. Microorganisms They also play an important role in the production of vitamins. Its biological significance lies in its corrective effect on metabolism, intensifies the chemical reactions taking place in the body, affects the absorption of nutrients by the body, contributes to the normal growth of cells and the development of the entire body, the intake of enzymes into the body and their normal functioning. Vitamins are involved in energy metabolism in the body, the biosynthesis of amino acids and fatty acids, the process of photoreception (vitamin A), blood clotting (vitamin K) and the absorption of calcium (vitamin D). Thus, if the vitamin is absent or completely absent in the body, the metabolism is disrupted.

**Keywords**: Biologically active substance , hypovitaminosis, avitaminosis, beriberi, pellagra, hyporiboflavinosis, rickets.

#### Introduction

**The purpose of the study** is to study the importance of vitamins in the body, their types and diseases caused by vitamin deficiency, the symptoms of vitamin deficiency.

**Materials and results of the study** : We will find out which foods and medicinal plants contain the most important vitamins, and how their deficiency affects the body.

Vitamin A. If a person's body has a decrease in this vitamin, then the ability to see decreases, for example, he will not see in the dark, i.e. night blindness is also due to a lack of this vitamin in the body. due to a lack of vitamin A, a person's hair becomes dry and their nails become soft. This vitamin is most abundant in carrots, tomatoes, green peas, melons, oranges, and dairy products.





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Vitamin B1. If this vitamin is reduced in the body, a person becomes restless, memory decreases, nerves become irritable and appetite is suppressed. This medicine is found in cereals, oats, pearl barley, lamb and a number of other foods.

Vitamin B2. Deficiency of this vitamin in the human body causes tears, anemia, weakness, chapped lips and wrinkles. Vitamin B2 is found in eggs, lamb, yeast, and cheese.

Vitamin B6. As a result of its decrease in the body, the human heart becomes sluggish. It is found in pearl barley, cabbage, carrots, zucchini, raisins, cheese, and other foods.

Vitamin C. When it decreases in the human body, gums hurt, joints begin to hurt, wounds do not heal quickly, and a person gets tired quickly. It is found in large quantities in potatoes, cabbage, bell peppers, various mushrooms, strawberries, lemons and oranges.

Vitamin D. This vitamin affects mineral metabolism and bone formation. This is especially necessary during the period of rapid growth and ossification of the skeleton of young children. A lack of this vitamin causes rickets. Vitamin D is abundant in cottage cheese, milk, butter, liver, and egg yolk.

Vitamin K. This vitamin is one of the main factors in blood clotting. With a lack of vitamin K in the body, bleeding occurs from various organs (nose, spine, midgut, etc.), diseases of the intestines, liver, kidneys are more often observed. This vitamin is found in onions, cabbage, pumpkin, green peas, beans, greens, liver, and eggs.

Vitamin E. A lack of vitamin E leads to a malfunction of the sebaceous glands. In such cases, the hair turns gray and falls out quickly. This herb is abundant in bread, rice dishes, oatmeal, and liver. With a lack of the above-mentioned vitamins in the human body, various negative changes occur. These include nail loss, neck rashes, and sores on the face. For these diseases, it is recommended to consume more nut, safflower, hemp oils.

The flora of our republic is rich in plants containing various vitamins important for human health. Vitamins contained in plants play an important role in protecting the body from various diseases, increasing resistance to diseases, rapid healing of wounds and injuries, and preventing rapid exhaustion of the body. At the same time, vitamins enhance the pharmacological effect of various drugs used by the patient and reduce the negative impact of these drugs on various organs. That is why the patient's body's need for various vitamins is higher than in the healthy period. Diseases such as senga, beriberi, rickets are caused by a lack of vitamins in the body and are treated with special vitamins. Vitamin-rich plants growing in the wild are common in different environmental conditions, and vitamins can be different in different plant organs. Below, I want to talk about some vitamin-rich plants.

**Nettle** is a common herb that grows in early spring and is very rich in vitamin C (100 grams of the plant's leaves contain 270 mg of vitamin C). In addition, the gazanda plant contains various trace elements - copper, manganese, iron, various fetonsites, chlorophyll, organic acids and additives. That is why in superficial medicine the gazanda plant is widely used in the treatment of hypovitaminosis, stomach and lung diseases, bleeding, Diabetes. In folk medicine, gazanda decoction together with honey is widely used for headaches, improving heart function, for colds of the kidneys, liver, stomach, lungs, rheumatism, anemia. Its juice improves metabolism and digestion of food in the body, activates the work of various organs. That is why it is advisable to add the young stems and leaves of the gazanda plant, rich in vitamins, to various dishes and consume them in the form of a salad. These greens are best consumed with hot food, since the 33 | Page

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biologically active substances and vitamins contained in them better retain their active state (ligach) can be easily harvested by hand.

**Dandelion** (Taraxacum officinali) in early spring, used as a vitamin green, is good for the human body. Cucumber is one of the most widely used vitamin-rich food plants in Western Europe, especially in France, Switzerland, Japan, and India. Up to 50% of vitamins C and B are contained in the leaves and roots of plants. During flowering, all parts of the plant contain milky sap, triterpenes, sterols, carotenoids, flavonoids, 25% inulin, phenolic acids in the root, vitamin B2. In medicine, it is widely used in the treatment of chest pain, anemia, weakness, liver and stomach diseases. Its dandelion leaves can be used to make salads, meat and fish dishes. To prepare the salad, 100 grams of dandelion leaves are soaked in slightly salted water, then dried and cut into pieces, mixed well with a spoonful of cream or mayonnaise and salt and eaten. Saffron root can be dried in the oven until browned, ground, and used as coffee.

SYMPTOMS OF VITAMIN A DEFICIENCY. *Symptoms of vitamin A deficiency*. Visual impairment – night blindness, color vision disorder. The roughness of the skin increases, the hair becomes thin and brittle.

Symptoms of vitamin B1 deficiency . (Beriberi disease) The skin becomes thin and dry. The sensitivity of the legs is impaired, a change in body temperature is noted. The muscles of the legs are tensed, in a more severe form, shortness of breath, tachycardia and severe swelling appear.

Symptoms of vitamin B2 deficiency. The skin darkens and peels intensely. The elbows of the hands are covered with red swollen spots, similar to the manifestation of an acute inflammatory process.

Symptoms of vitamin B6 deficiency . (Hyporiboflavinosis) Conjunctivitis develops. The red border of the lips dries and peels, cracks appear in the corners of the mouth. The tongue will turn bright red. Teeth marks appear on the side.

Symptoms of Vitamin B12 Deficiency Symptoms of anemia and atrophic gastritis develop. Muscle tone weakens, the patient's gait changes.

Symptoms of vitamin C deficiency. (gum disease) The gums are swollen and bleeding. The skin becomes thin, dry and brittle, hemarthrosis of the knee joint develops, teeth loosen and fall out.

# Conclusions

Thus, vitamins are important for the human body, their deficiency causes metabolic disorders, which leads to various diseases. In order not to get sick with these diseases, it is necessary to constantly consume vitamin-rich foods, fruits, vegetables and other foods.

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