

# Vitamins Affecting the Function of The Nervous System

**Jalolova Ozoda Kosimjanovna**

Andijan Medical Institute, Department of Pathology and Physiology

**Kodirov Sherzodbek**

Andijan State Medical Institute,  
Faculty of Medicine 3rd year student

**Annotation:** Is a system that the nervous system plays a crucial role in the evolution of the animal organism and in the formation of complex relationships between organisms and the external environment.

**Keywords:** Nervous system, vitamins

Nervous system is based on nerve cells. Each cell is called a neuron, with its own short branches (dendrites) and a single long fiber (axon). The nervous system is basically a collection of neurons. The nervous system develops in phylogeny and ontogeny from the outer layer of the body - the ectoderm. During the historical development of organisms, the structure of the nervous system became more complex, the size and type of nerve cells increased, the structure of neurons and the interactions between individual nerve cells, as well as the function of the nervous system, took shape. The second tissue of the nervous system, the neuroglia, is formed (it performs basic and trophic functions).

During the development of the nervous system, the central nervous system and the peripheral nervous system are formed.

The nervous system is conditionally divided into two parts. One of them is the autonomic nervous system, which travels to parts of the body that are not subject to human will and supplies them with nerves. The second part goes to the skeletal muscles and some of the organs involved in the movement, subject to human will.

Now let's talk about the function of the nervous system:

Functions of the nervous system:

Higher nervous activity.

Subsystem function of the nervous system.

The nervous system receives various information from the external environment and internal organs and delivers them to the central nervous system, collects information, makes interactions between organs and organ systems, and ensures the integrity of the organism. It connects the body with the external environment and adapts it to the external environment.

The sub-function of the nervous system:

It regulates, regulates the work of all cells, tissues, organs and systems of the human body and ensures their interaction with each other. This function is performed by nerve centers located in the spinal cord and lower parts of the brain (medulla, midbrain, septum, and cerebellum).

Vitamins (Latin vita - life), drugs - organic compounds necessary for the vital activity of a living organism and normal metabolism. They have different chemical structure. Information about people getting sick as a result of a lack of certain nutrients is recorded in ancient Chinese books, and later in the works of Hippocrates. The study of vitamins from a scientific point of view began in the XVIII century. English physician J. Lind (1757), French physiologist F. Majandi (1816), Russian physician NI Lunin (1880), Dutch physician Eikman (1897), and English scientist F. Hopkins (1906) made significant contributions to the study of vitamins. Vitamins are not synthesized in the body, a person gets the necessary vitamins for himself with various nutrients. When there is a lack of vitamins in the diet, hypovitaminosis occurs, and at least avitaminosis. The main source of vitamin is plants (see Vitamin plants). Microorganisms also play a major role in the formation of vitamins. The biological significance of vitamins is that they have a regulating effect on metabolism. Vitamins enhance the chemical reactions that take place in the body, the body affects the absorption of nutrients, promotes the normal growth of cells and the development of the whole organism, enters the enzymes in the body and ensures their normal function and activity. Vitamins

are involved in energy metabolism (V<sub>1</sub>, V<sub>2</sub> V.), biosynthesis of amino acids (V<sub>6</sub>, V<sub>12</sub> V.) and fatty acids (pantothenic acid), photoreception (vitamin A), blood clotting (vitamin K) and calcium assimilation (D) vitamin). Thus, if the body lacks or does not have any vitamins at all, the metabolism is disturbed. Lack of vitamins in food reduces a person's ability to work, reduces the body's resistance to disease and the adverse effects of the external environment. Vitamin deficiency is caused not only by a lack of vitamins in the diet, but also by a violation of the processes of their absorption in the intestine, their delivery to the tissues and their conversion into a biologically active form. But the excess of some vitamins over physiological needs can also lead to hypervitaminosis. In the following years, the chemical structure of more than 30 vitamins was fully studied and many were synthesized (see Vitamin Industry).

Initially, Vitamins were conditionally capitalized in the Latin alphabet: A, B, C, D, Ye, R, and so on. marked with Later, the unique name of international standardization on the chemical structure of vitamins was adopted. Vitamins are divided into water-soluble, fat-soluble and vitamin-like compounds. Fat-soluble vitamins include A, D, "1 Ye and K, water-soluble vitamins are complex vitamins and vitamins C and RR. includes some sterols (ergosterol, etc.) that are converted into vitamins. A person's daily requirement for vitamins depends on the general condition of the body, work style, health or disease. Vitamins for human life, especially A, B, V<sub>2</sub>, C, D, RR are important.

The following is a description of the most commonly used vitamins. Retinol (vitamin A) is common in nature.

Provitamin (carotenoid pigments that are converted to retinol in the body). Participates in the formation of visual pigments, promotes normal growth and adaptation of the eye to different levels of light.

Causes of vitamin D deficiency?

Lack of sunlight and being indoors for long periods of time is one of the main reasons for the lack of "sun vitamin". Lack of balance in nutrition, the body's need for macro and micronutrients, pregnancy and lactation, aging, disruption of the intestinal microflora and a number of diseases also cause an increase in the need for vitamin D in the body.

Why do you need vitamin D?

Providing the amount of calcium in the blood, preventing rickets, is important for the bones to be strong for teeth and nails.

Now that we know that vitamin D is important, let's talk about its effects on the central nervous system:

There is also a link between vitamin D and MNS. When its amount is low, cognitive function may decline, dementia may increase, and Alzheimer's disease may develop. The use of vitamin D in prophylaxis in the elderly with changes in movement and coordination is also beneficial. Effects on the central nervous system. There is also a link between vitamin D and MNS. When its amount is low, cognitive function may decline, dementia may increase, and Alzheimer's disease may develop. The use of vitamin D in prophylaxis in the elderly with changes in movement and coordination is also beneficial.

Function of Vitamin B<sub>2</sub>:

Vitamin B<sub>2</sub> (riboflavin) - plays a balancing role in the process of cell metabolism and the process in the surface layer of the skin, as well as in the process of respiration. Riboflavin- in the process of growth participates and is included in the growth factors. Participates in the metabolism of protein, fat and carbohydrates. Regulates the state of the central nervous system, affects the metabolism of the eyeball, helps to sense light and color separation.

If we rarely take vitamins to strengthen the nervous system, or do not take them at all, a number of problems arise:

we often fall into a state of depression, we are under stress and to restore health and normal mood we spend more time;

insomnia at night comes to us frequently;

memory bright, attention spread;

there is a vague mental change;

Causes chronic fatigue, drowsiness or irritation, common.

All of these symptoms indicate that the body needs vitamins to strengthen the nervous system in adults.

What vitamins are needed?

B vitamins to relieve disorders of the central nervous system (CNS):

B1 (thiamine), which relieves anxiety and is a powerful antidepressant;

B2 (riboflavin) improves mood and good sleep, helps improve quality of life;

B6 (pyridoxine) affects the state of our memory and the level of brain activity, is responsible for the production of hemoglobin;

Vitamins B9 (folic acid) and B12 (cobalamin) help to restore the nervous system, relieve stress, remove high excitability, help to get out of depression.

In addition to B vitamins, vitamin A (retinol) not only normalizes the nervous system, but also participates in the restoration of the nervous system, which protects against free radicals and maintains a high standard of living.

Vitamin C replenishes the body with energy, fights viruses and at the same time helps to strengthen the nervous system. So, vitamins of the nervous system help to restore their functions, but the better thing is to help your personal situation and your doctor decide. Vitamins are "antistress" and substances that are beneficial for the nervous system.

Magnesium helps to reduce irritability, helps to get rid of insomnia and chronic fatigue, supports the normal functioning of the heart.

Calcium. Provides transmission of impulses between nerve cells, which has a positive effect on mood and physical well-being.

Vitamin C. Helps produce serotonin, so it helps to get out of a depressed state. Folic acid. Helps improve mood and improve sleep. pantothenic acid. Coordinates processes occurring in the nervous system.

Vitamins B2 and B3 (PP). Stimulates energy production in the body.

Vitamin B6. Helps to improve mood and improve brain function.

Vitamin B12. Helps prevent the destruction of nerve cells.

Thiamine. Ensures normal functioning of the nervous system. Neuritis, a disorder of the heart rhythm, protects against memory loss.

How much well-being changes from taking dietary supplements to help fight stress.

Complexes of mother, magnesium, folic acid and other beneficial ingredients help to forget unnecessary worries and look at life with optimism.

A proper "sleep-wake" cycle is established, it will not be difficult to fall asleep at night, and there will be no feeling of weakness or lethargy during the day. Memory and attention improves, making mental work easier. As a result of exposure to sedative herbs and "anti-stress" vitamins, women and men are less likely to experience headaches or muscle aches, decreased blood pressure, and heart attacks. People move more easily, their physical activity increases, which also has a positive effect on their health.

This means that vitamins are very important for our body. It is necessary not only for our body and also for the most important nervous system function.

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