

## BIOLOGICALLY ACTIVE SUBSTANCES. VITAMINS.

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**Abstract:** *Biologically active substances are natural complexes containing minerals, vitamins, dietary fiber, plant extracts, unsaturated fatty acids, amino acids, etc. They are natural substances obtained from plant, animal or mineral raw materials, and can also be obtained by chemical or, in some cases, microbiological synthesis.*

**Key words:** *vitamin, microelement, hormone, enzyme.*

Biologically active compounds are considered as micronutrients. Their lack (or lack) in nutrients causes metabolic disorders and several diseases. If proteins, fats and carbohydrates perform the functions of building and supplying the body with energy, biologically active substances enter into the composition of hormones and enzymes and ensure normal metabolism, growth and development, and the health of the body. Iom is important in reproduction. Their difference from drugs is that they are natural and close to the body's physiological norm.

Biologically active substances are studied by bioorganic chemistry, pharmaceutical chemistry, biological chemistry and other sciences. The reason for the intensive development of this direction is that modern investigation methods are the reason for studying the conformational structures, intermolecular interactions, the separation of substances from complex mixtures, the properties of endogenous biologically active substances, and the study of many important physico-chemical life activities. Most importantly, the mechanisms of action of biologically active substances are being studied at the molecular, cellular and systems level.

In many cases, the beneficial nature of biologically active substances is not paid attention to. However, natural products such as milk products, greens and fruits are also very necessary for the body. If they are added to daily meals and consumed, there may be no shortage of biologically active substances in the body. But due to insufficient consumption of fruits and vegetables at the table, as well as preparation of daily meals at high heat, even the use of a microwave device in cooking sometimes does not give the expected result. When this is done, the natural vitamins and biologically active substances of the ingredients and products will eventually decrease, or even disappear completely.

The beneficial aspects of biologically active substances include the fact that they compensate for the lack of vitamins, macro and microelements, irreplaceable amino acids, fatty acids in the body, diseases of the cardiovascular, nervous, gastrointestinal, endocrine systems, cancer, obesity prevents and treats such diseases, increases resistance to various harmful factors, strengthens immunity, ensures normal metabolism of substances in the body at different ages and during pregnancy. removes toxic substances and slags formed

during vital processes in tissues and cells, makes the body flexible to changes in external and internal conditions.

The harmful aspects of biologically active substances are as follows:

The concentrations of such substances may not be taken into account, they may be consumed more than the norm, they may act as poison rather than benefit.

It is not possible to eat constantly, it is necessary to take into account the diet and seasonal factors. As a result of constant consumption, hypervitaminosis or gastrointestinal and liver diseases may develop.

The order of storage of biologically active substances is the same as that of medicinal substances, and even if they are stored a little incorrectly, the direction of action can be completely different.

Caffeine contained in some biological substances can have a negative effect on the cardiovascular and nervous systems.

Taking biologically active substances together with other drugs can cause negative consequences.

Nowadays, the increase of Internet networks, illegal advertising and trade of biologically active substances leads to their arbitrary and excessive consumption, increasing interest among teenagers and young people, and the increase of various frauds.

Therefore, it is impossible to consume biologically active substances arbitrarily, indiscriminately, without a doctor's prescription, and it would be appropriate to accept such substances in the composition of more natural food products.

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