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## **DIETARY SUPPLEMENTS AND THEIR BENEFITS**

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Biologically active additives (BAA) are supplements to food. They are used as an additional source of food fibers, vitamins, minerals and amino acids to eliminate their deficit and optimize the diet. These supplements are not medicines and can be bought at any chemist's without prescription.

Any classification of BAA is conventional. But there are the most popular ones.

**Vitamins.** Vitamins are useful, but in very limited amounts for the body normal functioning. Almost all of them can't be synthesized by our organism, and the best source of vitamins is considered food.

**Amino acids.** Eight of 20 proteinogenic amino acids are essential, because they can't be synthesized by the human body and must enter together with food.

**Essential fatty acids.** There are two classes: omega-3-unsaturated fatty acids and omega-6-unsaturated fatty acids. Both groups are essential to the human body. They are not synthesized and should enter the body together with food. Fatty seafood is the best fatty acids food source.

**Probiotics.** Probiotics are used for therapeutic purposes to normalize intestinal microflora. The most known probiotics are bifidobacteria and lactobacilli.

Physiological effects of BAA are achieved by introducing to the organism nutrients which have marked biological activity in relation to a person. But BAA differ from synthetic to natural for different reasons: 1) the production purity can lead to the natural impurities absence, affecting the main component biological activity significantly, 2) synthetic drugs can contain trans-isomers, that can't be in natural raw materials and the human's body enzyme systems can react improperly, 3) the synthesized medicines are the racemic left- and right-rotating isomers mixture. Only one isomers type has biological activity, 4) natural vitamins consist of numerous chemical compounds, while synthetic vitamins are represented by one chemical formula.

Most people who use BAA assume that they are healthy in general or safe and effective for the specific conditions treatment and prevention. However, the FDA does not require biologically active additives manufacturers prove their safety or effectiveness. Most additives have not been examined thoroughly.

BAA can be useful, but we need to pay attention not only to the compositions, but also to the manufacturers. There are thousands of additives on the market, and only a few of them can be helpful. Some dietary supplements combine incompatible substances. Most of the bioadditives contain undeclared medicinal components really harmful to our health. Thus, bioadditives for increasing potency often contain sildenafil - active ingredient «Viagra». The weight loss bioadditives 85% contain sibutramine (substance left the market in 2010 due to severe side effects on the cardiovascular system).

Only BAA containing substances in the body are recommended for use in insufficient quantities. Therefore, the patients are advised to take the necessary tests first and assign the BAA program.

Instructions for selecting the BAA are as follows:

1. Consult a specialist.
2. Buy supplements only at the chemist's or licensed stores.
3. Study the available information on drugs properly.
4. Do not buy supplements "used for all diseases".

If the diet is balanced, supplements are not necessary mostly. The main option for people is to include into the menu dairy products, vegetable oils and nuts, vegetables and fruits, different kinds of fish and liver constantly. BAAs are not considered medicines. They are used only for disease prevention or as supplements to essential drugs.