

Probiotics - description, benefits, effect on the body and the best sources

Tkacheva Natalya, herbalist, nutritionist

Eliseeva Tatyana, editor-in-chief of the EdaPlus.info project

E-mail: tkacheva.n@edaplus.info, eliseeva.t@edaplus.info

Abstract. The bacteria living in our intestines are the basis of human health. Strong immunity and proper functioning of the gastrointestinal tract depend on the health and well-being of our little helpers.

To replenish the living microorganisms the body lacks, people have long used special products - sources of beneficial bacteria. Now such bacteria have also appeared on the shelves of pharmacies and stores in the form of dietary supplements and medications.

Keywords: probiotics, general characteristics, daily requirement, digestibility, beneficial properties, signs of deficiency, signs of excess

Foods rich in probiotics:

- Kefir
- Acidophilus milk
- Ryazhenka [1]
- Serum
- Curdled milk [2]
- Sour cream
- Camembert cheese and other soft varieties
- Yogurt with live bacteria [3]
- Soybean miso soup
- Black chocolate
- Pickles without vinegar (cucumbers, tomatoes, etc.)
- Artichoke
- Onions [4] and leeks
- Unpasteurized sauerkraut [5]
- Sourdough bread

Such popular summer dishes as okroshka and kefir soup, which, in addition to kefir, also includes chopped herbs, have a very good effect on the development of probiotic microorganisms. Regular consumption of green kefir soup will help not only restore intestinal microflora, but also lose excess weight!

General characteristics of probiotics

Probiotics are two main types of bacteria: lactobacilli and bifidobacteria. In addition, probiotics include certain types of yeast, streptococci, rods and other less common types of microorganisms.

Depending on the functions performed in the body, probiotics are divided into different types, among which there are all kinds of strains of beneficial microorganisms. For example, the Shirota strain, which belongs to lactobacilli, affects the body's immunity and stimulates intestinal motility, the Bulgaricus strain is used for lactose intolerance, the Nissle strain of *E. coli* is used to treat

inflammatory bowel diseases. For intestinal motility disorders, some strains of bifidobacteria and lactobacilli are used.

Probiotics are produced by the pharmaceutical industry in 2 forms - dry and liquid. The dry form is all kinds of powders, tablets and capsules. Probiotics are there in a “dormant state” and are activated within a few hours after consumption. Probiotics, which are in liquid form, begin to act immediately after entering the body. Usually the bottles contain a special nutrient medium to support the vital functions of living organisms.

Daily requirement for probiotics

The body's daily requirement for probiotics has not been officially established. The instructions for medications and probiotic dietary supplements usually indicate the recommended dosage of the drug for adults and children.

The need for probiotics increases:

- with diagnosed dysbiosis [6];
- weak immunity;
- intestinal dysfunctions (diarrhea and constipation [7]);
- other inflammatory bowel diseases (Crohn's disease, etc.);
- with antibiotic and antibacterial therapy;
- for chronic liver diseases [8];
- increased physical and mental stress [9,10];
- Chronic Fatigue Syndrome (CFS);
- dermatitis [11].

Decreased need for probiotics

In case of individual intolerance to foods and preparations containing probiotics.

Probiotic Absorption

Usually, 1-4 hours are enough for dry probiotics to begin to act; liquid ones begin to act immediately. Probiotics contained in food products begin to actively function immediately after they enter the intestines. But in order to survive, they need a special nutrient medium, represented by all kinds of healthy sugars - prebiotics.

Beneficial properties of probiotics, their effect on the body

Thanks to probiotics, the body begins to actively produce antibodies to various viruses and bacteria. Probiotics prevent the growth of pathogenic intestinal microflora.

They contribute to the healing of the mucous membrane of the large intestine, which helps the body get rid of colitis [12]. They process toxins produced by harmful microorganisms and synthesize B vitamins [13].

In addition, probiotics can improve the process of absorption of metabolic products.

Interaction with other elements

Water-soluble vitamins B and C [14], trace elements, amino acids and prebiotics (sugars) enhance the positive effects of probiotics. That is why liquid probiotics often include several of the compounds listed above.

Signs of a lack of probiotics in the body

- inflammatory bowel diseases;
- weak immunity;
- lack of beneficial intestinal microflora;
- poor skin condition;
- lack of B vitamins in the body;
- irritability;
- anxiety.

Signs of excess probiotics in the body:

- bloating;
- nausea;
- flatulence [1 5];
- allergic reactions [1 6].

Factors influencing the content of probiotics in the body:

Positively influencing factors include a strong immune system, a healthy nervous system, and sufficient consumption of foods containing probiotics and prebiotics.

Negative factors that worsen the condition of the intestinal microflora include: frequent use of antibiotics (not only in the form of drugs, but also in food). For example, meat that was soaked in antibiotics before sale, eggs from chickens [17] that were fed food with antibiotics, etc.

Probiotics for beauty and health

Probiotics also have a significant impact on the appearance of our skin. This property has been adopted by some representatives of the beauty industry. Therefore, today, among the great variety of skin care products, you can find those that contain our familiar probiotics. They not only act on the skin from the inside, they are applied to the skin in the form of masks, as well as homemade and industrial creams.

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Eliseeva Tatyana, editor-in-chief of the EdaPlus.info project

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