

How to strengthen immunity to fight viruses and coronaviruses?

Much can be done for the proper functioning of the immune system through diet. With a varied selection of foods, we increase the chances of supplying the body with all the necessary nutrients. Some foods, however, contain high concentrations of substances that are more important for health and immune support than others. In this article we will focus on nutrients and foods that contain an increased amount of substances that are important for strengthening the immune system.

For proper functioning of the immune system it is necessary to have a balanced energy intake and to consume sufficient amount of quality proteins (essential amino acids). Sources of quality proteins are found mainly in food of animal origin (meat, fish, eggs, milk and dairy products), from vegetable sources we can use legumes (soy, lentils, beans, peas), whole grain cereals, quina, hemp seed and nuts. As well as proteins in the diet, fats are important, especially essential fatty acids. For a properly functioning immunity, it is important to eat enough $\omega 3$ of fatty acids from your diet, for example, from fish, walnuts, linseed oil and chia seeds. Beta-glucans belonging to the group of soluble fiber are other valuable tools for strengthening our immunity.



Beta-glucans increase resistance to viral, bacterial and fungal infections (activation of increased antibody production). They are found in significant quantities in cereals (barley, oats) and fungi (oyster mushrooms, shii-take). It is also recommended to increase the amount of antioxidant substances (vitamins and minerals) such as vitamins A, C, E, D, beta-carotenes and other carotenoids, zinc, selenium, copper and iron.

Vitamin A plays a major role in the proper immune response, its important sources being fish oil, liver, eggs, dairy products and carotenoid sources such as carrots, leafy vegetables, beetroot and ginger. Sufficient intake of vitamins C and E promotes white blood cell proliferation, rapid elimination of free radicals and increases the activity of pathogen cell destruction. Vitamin C food sources are fresh fruits and vegetables (especially peppers, horseradish, tomatoes, citrus, black currant, Brussels sprouts, kiwi, strawberries, broccoli, potatoes and cauliflower). Vitamin E sources are eggs, liver, cold pressed oils, cereal sprouts, leafy vegetables, spinach, Brussels sprouts, nuts, whole grain cereals, legumes, soybeans and ginger. Vitamin D is important in the adaptation of the immune system, the source of which is fish oil, sea fish, egg yolks, butter, milk and dairy products, fungi, and since it is involved in the synthesis of sunlight, it is advisable to consider supplementing it with a high-quality dietary supplement containing vitamin D3 in winter. Our immune system also strengthens a sufficient intake of zinc, which is sourced from pumpkin seeds, oysters, wheat germ, bran, legumes, onions and eggs.. Selenium is a powerful antioxidant and prevents inflammation. For enough selenium it is recommended to consume wheat germ, corn, onion, seeds, seafood, legumes, whole grain cereal products and eggs. Sufficient copper and iron are important for the proper functioning of the defenses, the sources of which are legumes, liver, leafy vegetables, nuts, egg yolk and whole grain cereals.

It is also recommended to strengthen our intestinal immunity (microbiome). In order to support the correct microbiome, it is important to eat in sufficient quantities fiber-rich foods (whole grain cereals, legumes, mushrooms, vegetables, fruits), as well as foods containing probiotics and prebiotics (sour dairy products, fermented vegetables, nuts, oatmeal or drinks from kombucha). Garlic, onion, horseradish, sea buckthorn, rose hips, nettle, ginger or green tea are recommended as other immune-enhancing foods and drinks.

Let us not forget to maintain a good mental health, get enough sleep, and pay extra attention to personal hygiene. A healthy and strong organism is the best protection.

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