

## Micronutrients – powerful support for the immune system!

Our immune system is particularly challenged during the colder months. Cold weather, dry heated air, and less sunlight can weaken our defenses. A balanced diet with sufficient fiber, protein, vitamins, and minerals forms the basis for better resistance to infections and staying healthy through fall and winter.

### Vitamin C – the classic immune booster

Vitamin C (e.g., from peppers and citrus fruits) is one of the most important water-soluble antioxidants. It protects cells from oxidative stress, supports the function of immune cells, and promotes regeneration processes. Studies show that sufficient vitamin C intake can reduce the duration and severity of colds – especially when taken in a timely manner and in sufficient quantities.

### Zinc – first aid for infections

Zinc (e.g., from seafood and legumes) is involved as a cofactor in over 200 enzyme systems and plays a central role in immune defense. It supports the function of T lymphocytes, promotes wound healing, and has anti-inflammatory effects. At the first signs of a cold, a targeted zinc supplement can help shorten the duration of the illness.

### Vitamin D – more than just a sun vitamin

Vitamin D has an immunomodulatory effect and is essential for a balanced immune response. Low vitamin D levels are associated with increased susceptibility to infection. Since the body's own production is limited in winter and its occurrence in common foods is restricted, care should be taken to ensure an adequate supply via supplements, especially during this time.

### Magnesium – often underestimated, but crucial

Magnesium (e.g., from green vegetables and whole grain products) is involved in numerous metabolic processes and supports the activation of vitamin D in the body. It also helps reduce inflammation and has a relaxing effect on the muscles and nervous system. A magnesium deficiency can therefore indirectly weaken the immune system.

## Beta-glucan – fiber with immune-boosting properties

The soluble fiber beta-glucan, found in grains such as oats and barley, as well as in mushrooms and yeast, can specifically activate immune cells. It binds to specific receptors on immune cells in the intestine, thereby stimulating the body's defense responses. Studies show positive effects on susceptibility to upper respiratory tract infections, which is why beta-glucan has also found its way into pharmacies.

## Omega-3 fatty acids – natural inflammation inhibitors

Omega-3 fatty acids have an anti-inflammatory effect and support a balanced immune response. EPA and DHA from fatty fish and algae play a particularly important role here, as they can reduce the formation of pro-inflammatory messenger substances. Since our Central European diet is rich in pro-inflammatory omega-6 fatty acids, supplementation may be considered following consultation or blood analysis.

## Conclusion

A strong immune system is not created by individual nutrients, but by the interaction of a balanced diet, sufficient exercise, sleep, and stress management. Vitamins, minerals, fiber, and omega-3 fatty acids make an important contribution to this. Regularly eating fiber-rich foods such as whole grains, legumes, and vegetables, as well as healthy, protein-rich foods such as fish and legumes, not only supports digestion but also general well-being and the immune system—especially during the cold season. Individual nutritional counseling helps to identify personal needs and provide targeted support.