

## **Improving immunity**

### **- Vitamin C**

Has a strongly stimulating effect on both the cellular and humoral immune system. Vitamin C can increase the release of interferon in relation E.g infusion of 7.5g per application.

### **- L-glutamine**

This amino acid shows highly mucosa regenerating properties in the gastrointestinal tract and thus ensures effective barrier function of the mucous membranes. As an indispensable source of energy for all cells of the immune system, L-glutamine also leads to an increased proliferation of T lymphocytes and NK cells (via IL-2).

### **- L-arginine**

L-arginine also increases the activity of the NK cells. The amino acid can be used as an infusion, e.g. with 2g or as capsules with 500mg.

### **- Selenium**

Selenium supplementation can also have a positive effect on natural killer cells. On the one hand, the trace element contributes to reduced expression of HLA molecules on tumor cells and can thus make them more sensitive to NK cells, on the other hand, selenium can also directly increase the number of NK cells in the blood.

### **- Zinc**

The essential trace element is crucial for the function of many catalytic and regulatory metabolic processes. Zinc also plays a major role in cell differentiation and proliferation, for example of mucous membrane cells. Decreased NK cell lysis activity was observed, for example, in patients with zinc deficiency. Thus, zinc supplementation is assumed to increase the cytotoxic function of the NK cells.

Zinc is used both as an injection and as capsules.

### **- Arabinogalactan**

Arabinogalactan is a highly branched polysaccharide that has a positive effect on our microbial intestinal flora by promoting, among other effects on the growth of protective gut bacterias such as bifidobacteria and lactobacillus. Arabinogalactan stimulates NK cells and increases their cytotoxicity. It also increases the release of proinflammatory cytokines such as IFN, IL-1  $\beta$  and TNF- $\alpha$ .

The polysaccharide can be taken as capsules or powder, the dosages range from 0.2-2g.