

# Influence of different micronutrient combinations on the growth of healthy cells

Healthy cell growth is exceptionally important for the development and maintenance of a healthy body. Billions of cells - the smallest functional units of the body - are constantly involved in regenerative processes where old and damaged cells are being removed and replaced with new cells. These processes are an essential prerequisite for every period of life and for the prevention of early aging and disease.

The growth of newly-formed cells requires a regular supply of nutrients. Since cells differ widely with regard to their function, they place different demands on the supply of nutrients, particularly of *micronutrients*.

## Do the tested micronutrient combinations promote the growth of healthy cells?

In order to follow up on this question, tests were carried out on human connective tissue cells (fibroblasts), which are important for the stability and elasticity of the skin. The dosages used corresponded to the respective recommended daily allowance of the comparison products. The effectiveness of the micronutrient combinations is reflected in cell growth.

Similar to the graphs in the previous section, the control (no addition of micronutrients) is shown as a zero line. Columns that face upwards indicate a growth-promoting effect; columns that face downwards indicate a growth-inhibiting effect.

The differences between the comparative combinations and the combinations developed and tested on a scientific basis were unambiguous, too: the average value of the comparison combinations (red column) shows that the tested comparison combinations had no stimulating effect on the growth of fibroblasts. On the contrary, they inhibited the cell growth of healthy fibroblasts (approx. 20% growth inhibition).

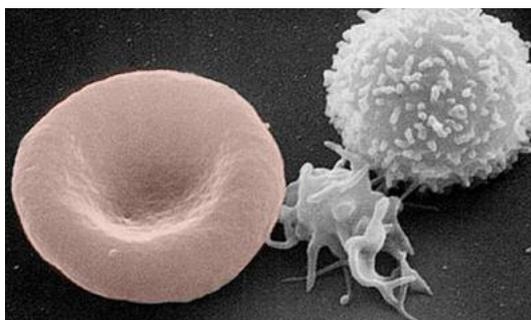
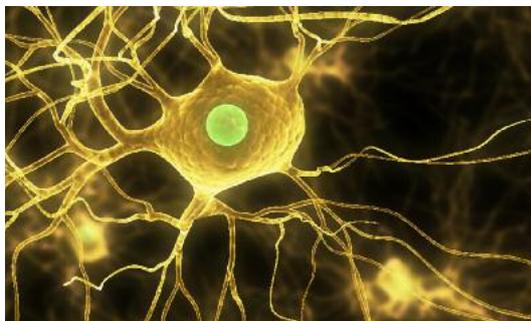
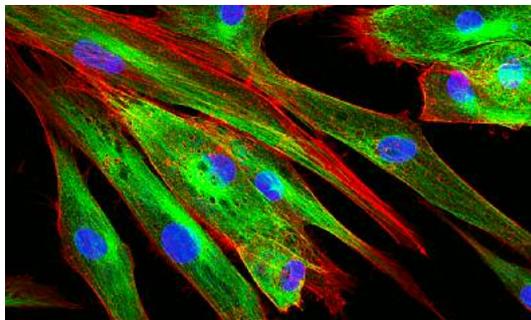
In contrast, an additional cell growth of more than 50% was achieved with the micronutrient combination (column A) devel-

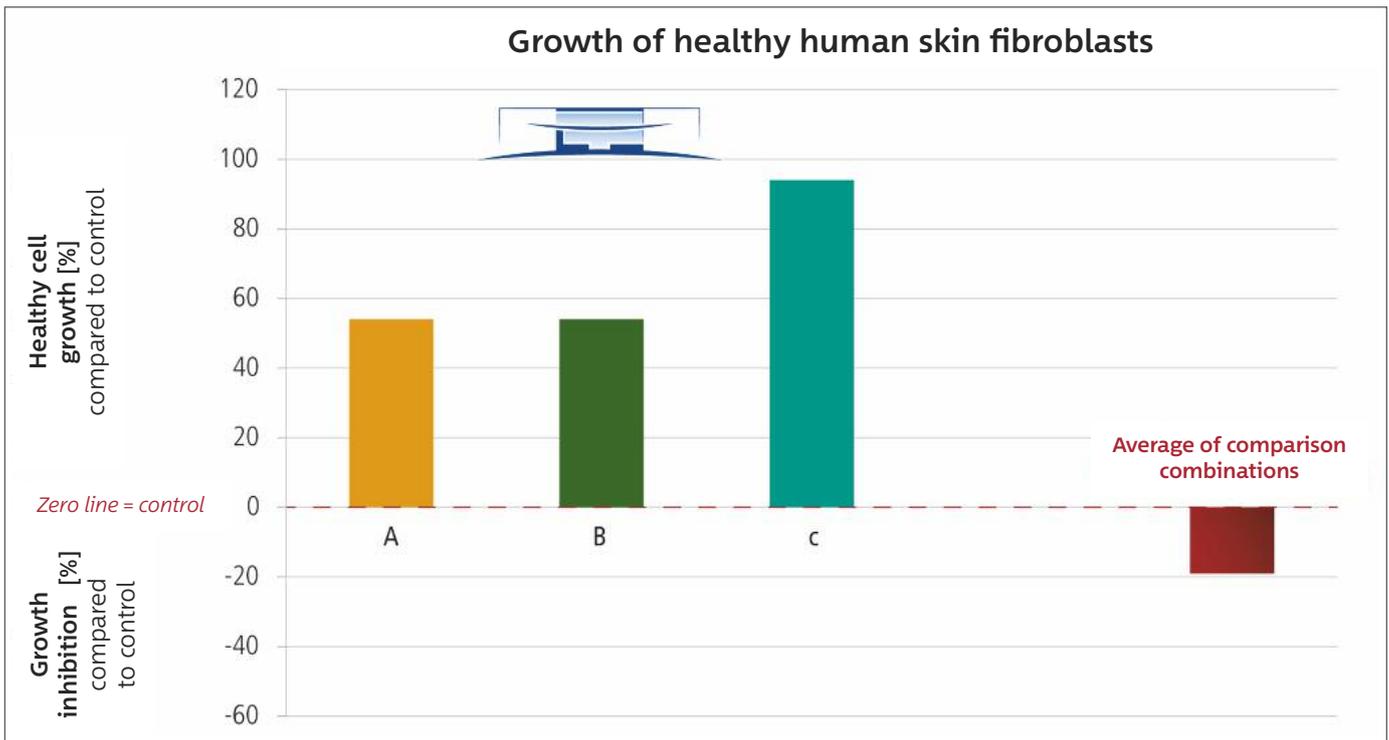
### Healthy growth of the various cell types of the body is a prerequisite for life.

Above: Connective tissue cell (fibroblast)

Middle: Nerve cell

Below: Blood cells (Leukocyte, erythrocyte, thrombocyte)





**Tested micronutrient combinations composed of:**

**A:** Different vitamins, minerals, trace elements, amino acids and phytochemicals

**B:** Green tea extract, curcumin, resveratrol, cruciferous plants, quercetin

**C:** Vitamin C, E, B6, D, folic acid, lysine, proline, copper, betaine, chondroitin sulfate, acetylglucosamine, pycnogenol

oped in collaboration with the Research Institute. A similar positive effect was obtained with a special combination (column B) developed from plant extracts.

Particular noteworthy was the effect of another combination (column C) developed specifically to support healthy cell and collagen formation. Applying this micronutrient combination, the cell growth of healthy fibroblasts was increased by almost 100%.

These results emphasize the importance of developing purposeful micronutrient combinations.