

Effect of different micronutrient combinations on the protection of the cells from damage caused by elevated sugar levels (hyperglycaemia)

Another important substance that can cause considerable damage to the body cells is sugar (glucose). This series of scientific tests addressed the question of whether different micronutrient combinations can provide protection against so-called glucose stress.

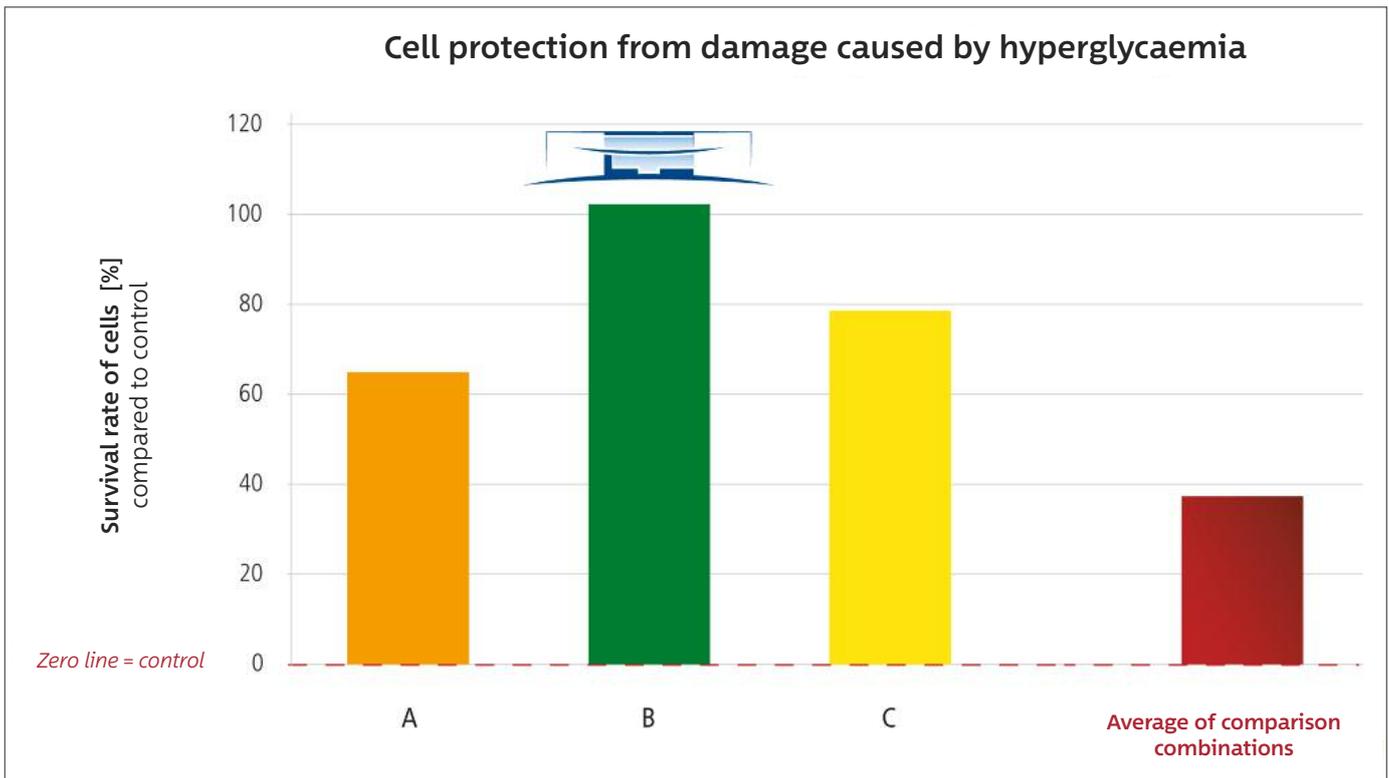
An excess of sugar in the blood "clogs" the surfaces of cells and restricts them in their function. Another mechanism contributing to a restricted cell function is the fact that glucose molecules block the uptake of vitamin C molecules into the cells, thus leading to a deficiency of vitamin C inside the cell. If human cells are exposed to very high glucose levels over a longer period, they die.

This series of tests investigated the protective effects of different micronutrient combinations on human body cells (smooth muscle cells) exposed to elevated glucose (sugar) levels. The survival rate of cells was measured and compared with the control (zero line). The control consisted of cells which were exposed to high sugar concentrations, without the addition of micronutrients.

On average, the comparison combinations showed a certain protective effect. Compared to the control group, the survival rate of the cells was 37% (red column).

Worldwide, millions of people suffer from diabetes, a metabolic disorder characterized by high sugar concentrations in the blood.





Tested micronutrient combinations composed of:

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

B: Vitamin C, vitamin E, vitamins B1-B12, biotin, magnesium, chromium, folic acid, inositol, choline

C: Vitamin C in the form of ascorbic acid, buffered vitamin C and ascorbyl palmitate, as well as bioflavonoids

In contrast, the scientifically developed and tested micronutrient combinations showed a significant increase in cell protection. This applied in particular to a combination developed specifically for this purpose (column B). This combination was able to protect all cells (100%) and to keep them alive.

With a cell survival rate of almost 80%, a combination of different forms of vitamin C was particularly effective.