

Magnesium: Vascular Protection for Diabetics

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There are currently between 6 and 8 million diabetics living in Germany. It is above all the secondary diseases which are feared: every year there are approximately 44,000 strokes, 27,000 heart attacks, 6,000 new cases of blindness, while amputations have to be carried out in approximately 28,000 patients (International World Diabetes Day November 14, 2005). The trend, which is still rising, provides justification for identifying all recognisable risk factors and eliminating these where possible. These include (in addition to being overweight, lack of exercise, high blood pressure, nicotine) the intake of the anti-stress mineral magnesium. If the supply of magnesium in the food and drinking water is insufficient, and there are increased losses in the urine, many diabetics display a magnesium deficiency. According to a study carried out by Lenardis et al. (University of Hohenheim, 2000), of around 5,500 diabetics, only 11% of the insulin-dependent and 15% of the non-insulin-dependent patients had optimum serum magnesium values (over 0.80 mmol/l) (Mag-Bull 22:53-59). Previously it had been shown in extensive epidemiological studies, in the USA etc, that the cardiovascular risk correlates to the serum magnesium. In the case of reduced concentrations, the cardiovascular risk is increased, so that the aim should be to achieve concentrations above 0.80 mmol/l (Fortschr. Med.2000; 142: 441-2).

More recent study results have impressively supported this recommendation: it has been possible to show that so-called C reactive protein (CRP), a protein body which is formed in increasing amounts in the liver and is released into the blood during inflammatory processes, is also formed in increased quantities if the serum magnesium is reduced, e.g. in the case of the obese (Guerrero-Romero et al. : Int. Obes. Relat. Metab, Disord. 2002; 26: 469-74). - King et al. (Diabetes Care 2003; 26: 1535-9) analysed the data from 1018 US diabetics and found that raised CRP values correlated with raised HbA(1c) concentrations, i.e. inflammatory processes can play a role in the development of (vascular) complications. In the year 2005 the group under King confirmed their observations on the basis of more recent data and showed that these diabetics also took in too little magnesium in their food (J. Am. Coll. Nutr. 2005; 24: 166-71).

In view of the extensive data that is available, the Society for Biofactors recommends that all diabetics should ensure that they consume sufficient quantities of magnesium; the occurrence of nocturnal calf cramps is an early sign of magnesium deficiency. If in doubt, a magnesium product (available over-the-counter at the pharmacy) should be taken regularly, e.g. in the form of magnesium orotate, as orotic acid contains an additional protection factor. If the patient's kidneys are functioning correctly, no serious adverse side effects are to be expected.