Sleep disturbances, depression and stress: Consider magnesium deficiency!

The most well-known symptoms of magnesium deficiency are symptoms in the form of muscle cramps and cardiovascular disorders. In pregnant women, calf cramps and premature labour may be indications of a deficiency. However, psychological problems are just as common, such as listlessness, restlessness, irritability, difficulty concentrating, sensitivity to noise, rapid exhaustion and sleep disorders or even depression and confusion. Attention to this fact has been drawn by the Society for Biofactors (GfB). In the opinion of the scientists at the GfB, when these symptoms occur - which are often associated with stress overload and burnout – consideration should be given to a possible undersupply of this mineral.

"Since the 1970s the stress-shielding effect of magnesium has been known," reports the Chairman of the GfB, Prof. Hans-Georg Classen of the University of Hohenheim. This was the result of attenuation of the pituitary-adrenal axis, which was overactive under the influence of stress. "Magnesium became of particular interest, however, as a natural antagonist of the NMDA (N-methyl-D-aspartate) receptor," explains magnesium researcher Classen. This receptor, which occurs primarily in the central nervous system, was also inhibited by pharmaceuticals used in psychiatry or anaesthesiology. Consequently, magnesium was increasingly being used to treat problems of falling and remaining asleep and as a co-medication for depression, especially in cases of confirmed magnesium deficiency, according to Classen.
This is of particular relevance for senior citizens with diabetes, for example, who suffer significantly more often from depression and magnesium deficiency than non-diabetics. Various studies have already shown a connexion between depressive mood and the magnesium concentration in patients' blood.

Hypomagnesaemia, i.e. serum concentrations of below 0.76 mmol/l, or suboptimal levels below 0.80 mmol of Mg/l, are common: "Up to 14.5% of the total population are affected," explains Classen. Much more common was an undersupply in senior citizens after taking diuretics and among diabetics. Moreover, dis-stress promotes the loss of the mineral and can therefore result in a vicious circle in which magnesium deficiency and an increased susceptibility to stress reinforce one another. These risk groups could benefit from magnesium supplements in particular, advise the scientists from GfB.

In this context, the experts refer to the special properties of the magnesium salt of orotic acid, magnesium orotate. Orotic acid occurs naturally in milk (milk whey = oros). It has been shown experimentally that orotic acid has not only cardioprotective, but also cerebroprotective properties: by stimulating pyridimidine synthesis, it also has a favourable effect on memory formation and repair processes in the brain.
On the basis of these considerations, in the opinion of the GfB magnesium orotate is also indicated in cases of stress overload, depression and sleep disorders, whereby intake should continue for at least 2 to 3 weeks.

Bibliography


Classen HG: Systemic stress, magnesium status and cardiovascular damage. Magnesium 1986; 5: 105-110


Held K et al.: Oral Mg\(^{2+}\) supplementation reverses age-related neuroendocrine and sleep EEG changes in humans. Pharmacopsychiatry 2002; 35: 135-143

Murck H: Ketamine, magnesium and major depression - From pharmacology to pathophysiology and back. J Psychiatr Res 2013; 47: 955-965


The Society for Biofactors e.V. is a non-profit association, which pursues the aim of promoting the scientific basis of therapy and prophylaxis with biofactors.

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