

Warning from experts: Nutrient deficiency is often underestimated in the elderly!

Hamburg – When the mental and physical performance of older people deteriorates, infections occur more frequently and walking becomes unsafe, these symptoms are easily attributed to the "normal" ageing process. However, a lack of vitamins and minerals can also be concealed behind suspected signs of ageing, scientists warned at a symposium of the Society for Biofactors in Hamburg on November 10. The reason for this is that elderly individuals are exposed to a variety of mutually reinforcing factors that can significantly impair the supply of vital nutrients: "During the course of the ageing process, the performance of the gastrointestinal tract constantly decreases," explained pharmacologist Prof. Dr. Dr. med. Dieter Loew. As a result, vitamins and minerals from the diet are less easily absorbed by the body. At the same time, many senior citizens take in fewer vitamins and minerals in their food. A critical supply of nutrients is exacerbated by chronic diseases and the associated treatment with medicines. Both could considerably increase the need for vitamins and minerals and therefore lead to deficiency situations, emphasised Dr. des. Uwe Gröber, pharmacist and Head of the Academy for Micronutrient Medicine in Essen. 40% of patients receiving drug treatment take 9 or more medications daily (1). This results in complex interactions with vitamins and minerals, as a result of which these individuals have a particularly high risk of deficiency symptoms, according to Gröber. If these are not recognised and compensated for in good time, there is a threat of serious consequences: These range from a weakened immune system and lack of vitality to nerve damage, dementia, osteoporosis and the exacerbation of existing diseases.

Vitamin B deficiency affects the nerves

A vitamin B1 deficiency, for example, leads to a short-term slump in performance in various parts of the nervous system, explained Prof. Dr. med. Karlheinz Reiners. On the one hand this could affect the brain: Slight deficits manifested themselves in a lack of concentration, forgetfulness or orientation disorders - with the development of dementia in the worst-case scenario, warned the neurologist. The long nerve tracts that reach to the feet and hands are also often damaged. This so-called polyneuropathy therefore usually takes the form of sensory disturbances such as pins and needles, a burning sensation or numbness in the feet or hands. People who suffer from diabetes mellitus, for example, have an increased risk of vitamin B1 deficiency because they excrete greater quantities of the vitamin through their kidneys. At the same time, many diabetics are affected by polyneuropathy as a consequence of their metabolic disorder, so that vitamin B1 deficiency in these patients must be prevented or compensated for without fail, Reiners emphasised. It is beneficial here to supply the body with the vitamin in the form of its precursor benfotiamine. This can be ab-

sorbed much more easily by the body, so that the vitamin reaches the nerve tissue in sufficiently high concentrations.

Vitamin B12 deficiency common in the elderly

Elderly people also carry a high risk of vitamin B12 deficiency: According to a recent study by the Helmholtz Centre, one in four individuals over the age of 65 is affected by this in Germany (2). In addition to the inadequate quality of the diet, the cause of the widespread undersupply of this vitamin in the elderly is above all its impaired absorption in the intestine: Vitamin B12 requires optimal conditions and transport molecules in the digestive tract in order to be able to pass from the food into the bloodstream. This complex process is often disturbed, particularly in individuals of advanced age, for example by a lack of gastric acid or transport molecules, by inflammation of the mucous membranes of the stomach (gastritis) or by the intake of pharmaceuticals such as acid blockers and the diabetes drug metformin. In order to compensate for a deficiency in elderly individuals with tablets, high dosages are required: Studies have shown that 1,000 µg of vitamin B12 per day is an effective dose in order to reliably compensate for a deficiency (3).

Dementia due to B12 deficiency

"In psychiatric terms, vitamin B12 deficiency results in depressive moods and cognitive impairments up to and including dementia," was how Reiners explained the consequences of the deficiency. A treatable cause can be found in up to 30% of patients with cognitive disorders, added Prof. Dr. med. Marija Djukic. In patients with suspected dementia, a vitamin B12 deficiency even proved to be the second most common treatable cause of the disease (4). Djukic advises people to have their vitamin status checked at an early stage, as neurological symptoms can be irreversible if they are treated too late.

Magnesium deficiency damages the heart and blood vessels

Particularly in conjunction with internistic diseases such as high blood pressure, cardiac insufficiency, arteriosclerosis, lipid metabolism disorders and diabetes mellitus, many elderly people are frequently found to have magnesium deficiency states, as Prof. Dr. med. Klaus Kisters reported. At all events, this deficiency has to be compensated for, according to the specialist in internal medicine, nephrology, clinical geriatrics and hypertension. Otherwise, new diseases or a worsening of existing diseases could be triggered, Kisters warned.

Teamwork for healthy bones

A combined magnesium and vitamin D deficiency is also common in patients with osteoporosis and muscle atrophy (sarcopaenia). Both magnesium and vitamin D are of key significance for bone health, whereby there is a close interaction between the two biofactors in the metabolism: Vitamin D promotes the absorption of magnesium in the small intestine. Magnesium, in turn, is required in order to convert vitamin D into the active form. Deficiency states of the two biofactors can therefore mutually reinforce each other, explained Kisters. In view of the increasing risk of osteoporosis in

post-menopausal women, it is therefore important to ensure a sufficient supply of both nutrients and to supplement them as required, the expert went on. The vitamin D supply is particularly critical for senior citizens, as Prof. Hilmar Stracke reported. This is because as we age, the skin's ability to produce vitamin D in the skin under the influence of UV light decreases. Only a few foods contain the vitamin in significant amounts. For this reason, the German Nutrition Society also points out the greater need for the supplementation of vitamin D by means of preparations in individuals over 65 years of age (5). Vitamin D also promotes the absorption of calcium in the intestine, which is another important bone building block. Therefore, according to the internist and metabolism expert Stracke, people should also ensure that they take in a sufficient supply of calcium through their food. Milk and dairy products, as well as calcium-rich mineral water, contain high levels of calcium.

Individuals who are susceptible to infections and skin problems should consider zinc deficiency!

Moreover, the diet of older people often contains too little zinc: 44% of men and 27% of women between the ages of 65 and 80 in Germany take in less zinc in their diet than is recommended to cover their daily requirements, explained pharmacologist Prof. Dr. med. Tilmann Ott, referring to the results of the National Food Consumption Study, part II (6). As Ott explained, a zinc deficiency is associated with a variety of symptoms that often occur with age. These include, for example, delayed wound healing, skin diseases, disturbances to the sensation of smell and taste and a weakened immune system with increased susceptibility to infections.

Keeping an eye on the supply of biofactors

Prof. Dr. med. Hans-Georg Classen, Chairman of the German Society for Biofactors (GfB), pointed out that the intake recommendations – which also form the basis of the National Food Consumption Study – relate to healthy people. They do not take into account any additional requirements resulting from illnesses, medications or stress. It can therefore be expected that a lack of biofactors is a frequent but all too rarely recognised occurrence in older individuals, was Classen's summary of the situation. The experts therefore appealed for more attention to be paid to the supply of biofactors in individuals of an advanced stage and the targeted compensation of deficiency states in order to maintain health, vitality and quality of life in the best possible way.

A brochure with the presentations of the speakers can be ordered or downloaded free of charge from the website of the Gesellschaft für Biofaktoren (Society for Biofactors) at: www.gf-biofaktoren.de

Source: Symposium of the Society for Biofactors: "Risikogruppen einen kritischen Versorgung mit Biofaktoren: Der alternde Mensch im Fokus" ("Risk groups – a critical supply of biofactors: focus on the ageing individual") on November 10, 2018 in Hamburg.

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