

BfR assesses maximum daily level for magnesium in food supplements

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The maximum daily level for magnesium in food supplements should not exceed 250 milligrams (mg). This is the recommendation of the German Federal Institute for Risk Assessment (BfR), taking into account new data.

"Food supplements are in vogue, and many people believe that they can provide [health](#) benefits," says BfR President Prof. Dr. Dr. Andreas Hensel. "But the consumption of food supplements may also be associated with health risks. The best nutritional strategy basically involves a balanced and varied [diet](#) with plenty of fruit and vegetables. Such a diet supplies a healthy body with all essential substances. In most cases, therefore, food supplements are superfluous." The increased intake of magnesium via such products as [food](#) supplements in addition to the magnesium ingested through a person's normal diet can lead to diarrhoea.

Health problems caused by excessive magnesium intake are fully reversible within one or two days, and do not pose a significant health risk to healthy individuals with normal renal function. Nevertheless, these problems are to be viewed as undesirable health effects. Cases of diarrhoea were not observed with intakes of up to 250 mg magnesium per day in addition to the magnesium intake via the normal diet.

The maximum daily level applies to people from the age of 4 upwards. Due to a lack of data, it is not possible to derive a maximum daily level for children below the age of four. The BfR recommends that the

maximum daily dose be divided between at least two intakes per day, as most studies used to derive the maximum level spread the magnesium intake over two or more portions a day, and it is likely that this improves tolerability. In connection with the intake of magnesium via the normal diet, no negative health effects have been observed to date in healthy consumers.

As before, the new assessment of the BfR is based on the current tolerable upper intake level (UL) derived by the EU's Scientific Committee on Food (SCF), a predecessor body of the European Food Safety Authority (EFSA). In 2001, the SCF derived a UL of 250 mg of magnesium per day for additional (= supplemental) [magnesium](#) intake via [food supplements](#) or fortified foods. The current assessment by the BfR also incorporates the findings of more recent human studies.

Magnesium is an essential mineral and an element common in the Earth's crust as well as in the human body. It plays an important role in many metabolic processes, as well as in the formation of nucleic acids, bone formation, membrane physiology, neuromuscular signal transmission and muscle contraction.

More information: BfR assesses recommended maximum daily level for intake of magnesium via food supplements. *BfR Opinion* No 034/2017, 12 December 2017. [DOI: 10.17590/20171212-093551](https://doi.org/10.17590/20171212-093551)

Provided by BfR Federal Institute for Risk Assessment

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