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PLANET HEALTH NEWSLETTER

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THE IMPORTANCE OF MAGNESIUM

An essential mineral, magnesium is vital to a number of the body's functions. According to [Livestrong.com](https://www.livestrong.com), magnesium plays an important role in maintaining immune health, blood sugar levels, cardiovascular health, nerve and muscle function, and bone health, among others.

The Office of Dietary Supplements (ODS) estimates that nearly half of Americans get less than the recommended daily intake of magnesium. Side effects of low magnesium levels may include nausea or vomiting, a loss of appetite, and/or low energy. Symptoms of severe magnesium deficiency include tingling or numbness, muscle cramps, personality changes, seizures, and/or an abnormal heart rhythm.

While the body does not produce magnesium on its own, it can be obtained by a number of plant and animal food sources including leafy greens, nuts and seeds, whole grains, beans and fortified cereals, the Cleveland Clinic reports.

Research shows that the level of magnesium in the blood is an important factor in the immune system's ability to tackle pathogens and cancer cells. Published in the journal *Cell*, researchers from the University of Basel (Switzerland) and University Hospital Basel reported that T cells need a sufficient quantity of magnesium in order to operate efficiently. Their findings may have important implications for cancer patients.

The researchers, led by Professor Christoph Hess, from the Department of Biomedicine at the University of Basel and University Hospital Basel and the Department of Medicine at the University of Cambridge, discovered that T cells can eliminate abnormal or infected cells efficiently only in a magnesium-rich environment. Specifically, magnesium is important for the function of a T cell surface protein called LFA-1.

According to the researchers, LFA-1 acts as a docking site, which plays a key role in the activation of T cells, "However, in the inactive state this docking site is in a bet conformation and thus cannot efficiently bind to infected or abnormal cells," Hess explained. "This is where magnesium comes into play. If magnesium is present in sufficient quantities in the vicinity of the T cells, it binds to LFA-1 and ensures that it remains in an extended—and therefore active—position."

Another study found that more magnesium in a daily diet may leads to better brain health as people age. In the study conducted by scientists at the Neuroimaging and Brain Lab in The Australian National University (ANU), the researchers found that more than 6,000 cognitively healthy participants in the United Kingdom aged 40 to 73 found people who consume more than 550 milligrams of magnesium each day have a brain age that is approximately one year younger by the time they reach 55 compared with someone with a normal magnesium intake of about 350 milligrams a day.

"Our study shows a 41 percent increase in magnesium intake could lead to less age-related brain shrinkage, which is associated with better cognitive function and lower risk or delayed onset of dementia in late life." Said lead author and PhD researcher Khawlah Alateeq, from the ANU National Centre for Epidemiology and Population Health. "This research highlights the potential benefits of a diet high in magnesium and the role it plays in promoting good brain health."

KEY BENEFITS OF MAGNESIUM

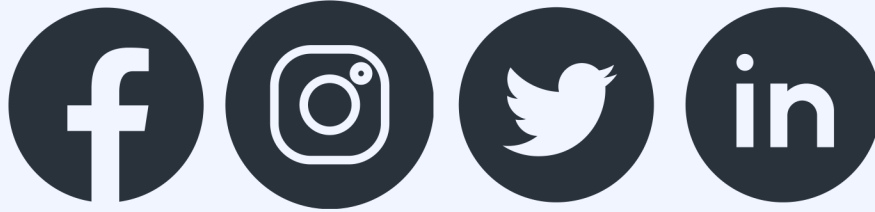
- Prevent the calcification of soft tissue
- Lowers blood pressure
- Helps to reduce and dissolve calcium phosphate kidney stones
- Help prevent osteoporosis, cardiovascular disease, and certain forms of cancer
- Reduces cholesterol levels

WHAT'S NEW?



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