Nutrition Corner

How Magnesium helps our Body

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Magnesium is a mineral involved in many body processes, including mineral absorption, energy production, muscle and nerve function, and DNA production. Over half of the magnesium in the body is in the bones, while the rest is found in soft tissue.

Our body does not naturally make magnesium, so you need to consume it through your diet or with supplements. Foods containing magnesium include green leafy vegetables, fortified breakfast cereals, seeds, nuts, and certain dairy products.

It is estimated that half of people in the United States obtain less magnesium from food than recommended. Taking magnesium supplements can help you meet your daily magnesium needs.

Magnesium is helpful in the treatment and management of many health conditions, including heart disease, bone health, and migraines.

1. Heart and Blood Vessel Disease

Magnesium may help regulate and treat several heart disease conditions. It acts as a vasodilator, meaning it widens the blood vessels, which can help lower blood pressure. Decreasing your blood pressure can help reduce your risk for heart disease and stroke.

People with high blood pressure (hypertension) may see a benefit if they take magnesium with other blood pressure-lowering medications but will likely not see a drastic change with only magnesium.

The U.S. Food and Drug Administration (FDA) specifies that evidence of magnesium reducing the risk of hypertension is inconsistent. They also state that any magnesium-containing food or supplements claiming to reduce hypertension must provide at least 84 milligrams of magnesium per serving for food and no more than 350 milligrams for supplements.

2. High Blood Sugar and Diabetes

Diets with high amounts of magnesium are linked to a lower risk of diabetes, likely due to magnesium's role in metabolizing glucose. Low levels of magnesium may also worsen insulin resistance, which can increase the risk of developing type 2 diabetes.

The American Diabetes Association states there is not enough evidence to support the use of magnesium to improve blood sugar levels in people with diabetes. More research is needed to understand how magnesium affects blood sugar levels and type 2 diabetes risk.

3. Constipation

Magnesium is the main ingredient of many laxatives. Multiple types of magnesium are commonly used to treat constipation, including magnesium citrate, hydroxide, oxide, and sulfate salts. To avoid adverse side effects, only use magnesium for occasional constipation treatment as needed and take it with a full 8-ounce glass of water.

The recommended starting dose of magnesium for constipation is 400-500 milligrams per day, based on symptom response and side effects experienced.

4. Bone Health

Magnesium is involved in bone formation and the regulation of bone strength. Several studies have found that people with low magnesium levels are at a higher risk for osteoporosis and osteopenia. Magnesium helps reduce the risk of bone fractures and osteoporosis, especially in postmenopausal and older women. One study found that postmenopausal women who supplemented with 290 milligrams of magnesium daily had decreased bone turnover and overall bone loss.

5. Migraines

Magnesium supplements may help reduce the frequency of migraines. Magnesium likely does this by reducing the constriction of blood vessels and the flow of neurotransmitters that cause migraine headaches.

Some medical organizations suggest that magnesium therapy is likely effective for migraine prevention. The therapeutic dose is usually higher than the recommended limit for magnesium, so it should only be taken under the supervision of a healthcare provider.

6. Mental Health

Magnesium supplements may help lower symptoms related to stress and anxiety. The mineral likely does this by affecting the chemical messengers in the brain. Some research suggests magnesium supplements can help treat symptoms related to depression.

Many studies have found an association between low levels of magnesium and disorders like attention-deficit/hyperactivity disorder (ADHD), schizophrenia, and autism spectrum disorder.

7. Sleep Health

Magnesium has recently become a popular supplement for aiding and improving sleep in people of all ages. The mineral can help maintain circadian rhythm and sleep quality, though research results have been mixed. Some studies have found that magnesium may help with several sleep-related factors, such as daytime sleepiness, snoring, time to fall asleep, sleep duration, and waking up at night. More research is needed to understand how useful magnesium is in sleep health

Risks of Too Much Magnesium

The daily upper limit for magnesium in dietary supplements and medications in all adults is 350 milligrams, not including magnesium naturally found in food. To avoid adverse side effects, you should not consume magnesium doses above this limit unless recommended by a healthcare provider.

Side effects associated with taking too much magnesium include diarrhea, nausea, abdominal pain, irregular heartbeat, and cardiac arrest. The risk for side effects is higher in people with kidney disease.

Magnesium supplements may interact with medications like:

Bisphosphonates: Magnesium

-cont. on page 25