

Top Five Benefits of Magnesium



Nowadays, everybody seems to be talking about Magnesium supplementation and how wonderful it is for our body, but why is that?

Magnesium (Mg) is the fourth most common mineral in the human body after calcium, sodium, and potassium.¹ It plays a crucial role in supporting overall health and well-being, as it helps maintain metabolic balance. Moreover, it actively participates in the synthesis of carbohydrates, lipids, nucleic acids, and proteins. This amazing element is also essential for specific functions in the neuromuscular and cardiovascular systems.²



The European Food Safety Authority (EFSA) estimates the adequate intake of Magnesium at 350 mg/day for men and 300 mg/day for women.³ However, the average British citizen may be somewhat deficient in Magnesium, as per evidence recently published.⁴ Although, mild deficiency of this micronutrient is not always linked to symptoms, when there is a greater deficiency, it can disrupt biochemical functions, leading to symptomatic magnesium deficiency.⁵

Magnesium is essential for the human body's well-functioning and positively impacts bones, muscles, metabolism, and the cardiovascular and nervous systems when present at adequate levels.⁶ However, there may be a relationship between chronically low levels of Magnesium and certain conditions, such as Hypertension, type 2 Diabetes, and osteoporosis.⁵

Bones

Magnesium is crucial for maintaining strong and healthy bones. Vitamin D and calcium work with Magnesium to ensure bone health.² Additionally, it helps regulate calcium levels in the body, ensuring that it is properly deposited in the bones.²

Several studies have found positive associations between magnesium intake and bone mineral density in both men and women.⁶ Hence, maintaining adequate magnesium levels contributes to the prevention of osteoporosis and helps ensure optimal bone health.⁶

Muscles and the Nervous System

Magnesium plays a role in muscle function and the transmission of nerve impulses.⁷ It helps muscles relax after contraction by balancing calcium levels in the body while participating in neurotransmitter release which helps regulate nerve impulses.¹ Appropriate magnesium levels contribute to overall smooth muscle function and stress reduction, and it may improve sleep quality.¹

Metabolism

This well-known mineral plays a key role in the activation of adenosine triphosphate (ATP), which is the primary energy currency of cells.¹ It helps optimise the use of nutrients from food through different enzymatic reactions involved in energy metabolism.⁷



Recent studies evidence the impact that Magnesium has on the regulation of blood sugar levels. It helps insulin transport glucose into cells, contributing to glucose metabolism and thus appropriate blood glucose levels.⁴

Maintaining magnesium levels within acceptable limits (350mg/day for men and 300mg/day for women) ensures increased energy levels and metabolic balance, including controlled blood sugar levels.

Heart

Magnesium is demonstrated to be crucial in maintaining proper heart function. It helps regulate blood pressure by relaxing blood vessels while also contributing to a healthy heart rhythm. Further, adequate Magnesium intake is associated with a reduced risk of cardiovascular diseases, including heart attacks and strokes.⁵ Hence, a diet rich in magnesium and low in fat is key to cardiovascular health and overall well-being.⁵

Inflammation

Magnesium deficiency acts as a trigger for the inflammatory process. Low magnesium levels are associated with higher intracellular calcium, which directly impacts neuronal cells, releasing neurotransmitters and specific inflammatory proteins.⁶ It is why maintaining adequate magnesium levels may help modulate inflammation.⁸

Sources of Magnesium

Apart from being an abundant mineral in the body, Magnesium is also naturally present in many foods, dietary supplements, and some medicines, like antacids and laxatives.⁵

Foods containing high quantities of dietary fiber, such as whole grains like brown rice or quinoa, seeds, nuts, vegetables, and legumes (black or kidney beans) are generally high in magnesium.⁵ Hence, a diet rich in seeds, nuts, and green leafy vegetables (spinach or kale) will help you achieve good magnesium levels and enjoy all the benefits this wonderful micronutrient offers.⁵

Some of the Magnesium-richest foods are listed below:

- Pumpkin seeds (156mg/ounce)
- Chia seeds (111mg/ounce)
- Dry roasted Almonds (80mg/ounce)
- Boiled Spinach (78mg/ half cup)
- 70-80% Dark Chocolate (252.2 mg/100 g)⁹
- Cooked Black beans (60mg/ half cup)

Although Magnesium can also be found in dairy products, meats, chocolate, coffee, and foods fortified with this micronutrient,⁶ its absorption may vary depending on the form of it found in each food.⁵



Magnesium Deficiency

Generally, 30% to 40% of the dietary magnesium consumed is typically absorbed by the body.⁵ However, certain health conditions (Crohn's, Diabetes, etc.), chronic alcoholism, and the quality of foods can determine exactly how much Magnesium is absorbed and eliminated by the body.¹

Keep in mind that aging can also reduce Magnesium absorption by 30%.¹ Meaning that mature people must ensure meeting Magnesium requirements to maintain correct body functioning.

Remember that Magnesium participates in numerous physiological tasks. When it gets notoriously low, some of these functions are disrupted, which can lead to a biochemical imbalance.¹ In consequence, you could experience symptomatic Magnesium deficiency. However, symptoms will depend on the magnitude of this deficiency. The lower the Magnesium levels, the more severe the symptoms will be.

Some of the symptoms associated with low Magnesium levels are:⁶

- ❖ Weakness, numbness, tingling, muscle cramps, and muscle spasms.
- ❖ Cardiac arrhythmia.
- ❖ Loss of appetite, nausea and vomiting.
- ❖ Agitation and low mood.

Overall, it is good to remember how vital Magnesium is for the correct biochemical functioning within the human body. Thus, it is essential to ensure adequate levels of this fabulous micronutrient which can be generally achieved through a balanced diet.

Nevertheless, if you think you may be deficient in Magnesium, it is important to consult with a healthcare professional for proper diagnosis and guidance. Keep in mind that Magnesium supplements should be taken under the supervision of a healthcare provider, as excessive magnesium intake can lead to adverse effects.

References

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