

Magnesium

COMMON NAME: Magnesium

SCIENTIFIC NAME: Magnesium glycinate, magnesium oxide, magnesium citrate

NOT RECOMMENDED - EVIDENCE

LEVELS OF EVIDENCE



Recommended:

Several well-designed studies in humans have shown positive benefit. Our team is confident about its therapeutic potential.



Recommended with Caution:

Preliminary studies suggest some benefit. Future trials are needed before we can make a stronger recommendation.



Not Recommended - Evidence:

Our team does not recommend this product because clinical trials to date suggest little or no benefit.



Not Recommended – High Risk:

Our team recommends against using this product because clinical trials to date suggest substantial risk greater than the benefit.

Evaluated Benefits

No evidence of efficacy or not indicated

Source

Water accounts for ~10% of daily magnesium intake. Chlorophyll (and thus green vegetables such as spinach) is the major source of magnesium. Nuts, seeds (especially pumpkin), and unprocessed cereals are also rich in magnesium.

Indications/Population

Lowering of total and LDL cholesterol

Mechanism of Action

Magnesium is involved in more than 300 essential metabolic reactions. Epidemiological studies reported an inverse association between dietary magnesium intake and incidence of coronary heart disease. The pathophysiologic mechanisms underlying these observed beneficial effects of magnesium intake are not fully understood.

Magnesium may be responsible for the suppression of postprandial hyperlipidemia by promoting the formation of insoluble compounds with ingested fat and resulting in the excretion of dietary fat in the stool. Another possibility is that magnesium may increase chylomicron clearance in the stool and dietary fat is not absorbed in the intestines.

Side Effects

Diarrhea, weakness, palpitations

Dosing

300-500 mg magnesium oxide once a typical day to patients free of renal insufficiency

5 ml bittern containing 500 mg of magnesium (A bittern is a natural $MgCl_2$ solution from sea or salt lake water.)

Drug Interactions/Cautions

Magnesium can interfere with quinolone and tetracycline antibiotics. Magnesium can interfere with calcium channel blockers and can cause hypotension. Magnesium can accumulate in patients with reduced kidney function.

References

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