

Magnesium

Like lithium, magnesium is a natural mineral. It is part of our diet, and deficiencies of magnesium have been linked to depression. Magnesium also has effects in the brain that we know are helpful in bipolar disorder, such as blocking the transmission of calcium and N-methyl-D-aspartate.

Magnesium can help in rapid cycling bipolar, particularly when used with the medication verapamil.

Magnesium also helps teeth grinding at night (*bruxism*) and involuntary movements (*tics or Tourette's disorder*).

—Chris Aiken, MD, updated 6/28/2025

Magnesium	
How natural?	It occurs naturally in the body and is part of our diet.
Benefit	Depression, teeth grinding, tics, rapid cycling bipolar
Side effects	Rare. Possible low heart rate.
How to find it	Online stores (Amazon, Drugstore.com) or specialty supplement shops
Dose	For bipolar: 375mg magnesium oxide daily For depression: 250-375mg daily For teeth grinding (bruxism): 200-400mg daily For tic disorder: take 300-500mg daily with vitamin B6 200mg daily

Quick links to recommended products

www.chrisaikenmd.com/supplements

Consumer Labs Top Picks

Consumer Labs tests products for safety and integrity. They recommend magnesium citrate or oxide (see brands below). The citrate/oxide is just the binding agent and won't impact the benefits of magnesium though may impact side effects and absorption. Most of the mental health studies were done with oxide. They recommend the chloride form if dosing above 350mg, and then using the liquid to prevent breakdown in the tablets.

CL's Top Picks among magnesium supplements:

Among products Approved by CL for their quality and labeling, the cost to obtain 200 mg of magnesium ranged from just 3 cents to \$1.99. CL's *Overall Top Pick* among these products is *Vitacost Magnesium Citrate*, which provides 200 mg of magnesium per tablet for 6 cents. Although supplements made with magnesium oxide are a bit less expensive than those made with magnesium citrate (e.g., *Finest Nutrition [Walgreens] Magnesium 250 mg* provides 250 mg of magnesium for 3 cents), magnesium oxide is not absorbed as well as magnesium citrate.

There are two things to keep in mind with *Vitacost Magnesium Citrate*. The first is that although the label recommends a daily serving of 2 tablets, this is somewhat higher than the daily upper limit for intake of magnesium from a supplement. If you are just trying to get some extra magnesium, take only 1 tablet daily. Second, citrate-containing supplements can increase absorption of aluminum from other medications and foods (and aluminum may be harmful in the body). This is not a problem for people with normal kidney function. However, it would be best not to take magnesium citrate along with aluminum-containing medications, such as Maalox.

If you need to take large doses of magnesium (more than 350 mg), consider the **chloride** form of magnesium, as it is less likely to cause diarrhea than magnesium oxide and magnesium citrate, although it is more expensive. CL's *Top Pick* among magnesium chloride supplements is *NutriCology Magnesium Chloride Liquid*, which provides 200 mg of magnesium per 1 ½ teaspoons for 30 cents. This product is a good choice for people who have trouble swallowing pills or prefer a liquid.

You can also get magnesium chloride as a pill from *Piping Rock Magnesium Chloride*, which provides 62.17 mg of magnesium per tablet for 8 cents. A drawback though, is that magnesium chloride as a tablet can quickly attract water — in fact, after leaving one of the *Piping Rock* tablets out for less than a day for a photo shoot, droplets formed on its surface (see photo to the right) and this water caused adjacent pills to become wet as well. If you're going to use magnesium chloride, it's best to get it in liquid form to avoid this problem.



Magnesium chloride tablet (round) rapidly absorbed water from air, damaging it and adjacent pills

Combinations with magnesium: