

# Chow Line

News from the College of Food, Agricultural, and Environmental Sciences

## Magnesium essential powerhouse for body

### What is magnesium and what does it do? Is a supplement necessary?

First, the basics: Magnesium is an essential nutrient and plays a role in more than 300 processes in the body. While outright deficiencies are rare, many Americans don't consume enough magnesium to gain potential protective effects against health problems. Magnesium supplements are readily available, but taking more than recommended can result in side effects. You should be careful and talk with a doctor, pharmacist or dietitian about the pros and cons.

Now, the details: Magnesium is a real powerhouse in the body. Most of the body's magnesium isn't in the bloodstream, it's in the bone. In fact, it works closely with calcium and vitamin D to help form and maintain strong bones and teeth. Magnesium also helps regulate muscle and nerve function, and helps muscles relax and contract.

In addition, magnesium helps control blood sugar levels. It has been shown to reduce the risk of insulin resistance, a situation in which the body has trouble using insulin to move sugars from the bloodstream into cells where it can be used for energy. Research indicates that people who consume a higher level of magnesium in their diet tend to have a lower risk of developing type 2 diabetes, but it's not clear yet if magnesium could actually help treat diabetes once it has developed.

Magnesium also plays a role in regulating blood pressure and can help the heart keep a steady rhythm. It is being studied to see how much it can help reduce the risk of heart disease.

Another important role magnesium plays in the body is to help make protein and DNA.

The recommended daily intake amount of magnesium for adults is 400 to 420 milligrams



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for men and 310 to 320 milligrams for women. It is found in many foods. Some of the best sources are leafy greens and other green vegetables (chlorophyll contains magnesium); beans and other legumes, including tofu and other soy products; nuts and seeds, especially almonds, cashews, Brazil nuts, pine nuts and sunflower seeds; and whole grains.

It's not necessary to keep track of the amount of magnesium you consume from food. Unless you have a kidney problem, the body gets rid of excess amounts you might consume through the urine. But authorities say any magnesium supplement should be limited to no more than 350 milligrams a day. Too much magnesium from supplements or medications that contain magnesium can cause diarrhea, nausea and abdominal cramps. Extremely high amounts can adversely affect the heart, causing an irregular beat or even cardiac arrest.

Magnesium supplements can also interfere with medications, particularly antibiotics and certain medications used to treat osteoporosis. This is just one reason why it's important to consult with a health-care provider before you begin taking a new vitamin or mineral supplement. It is also why it's a good idea to focus on getting most of your nutrients from a healthy, balanced diet.

For more about magnesium, see the National Institute of Health's fact sheet online at [ods.od.nih.gov/factsheets/Magnesium-Consumer/](http://ods.od.nih.gov/factsheets/Magnesium-Consumer/).

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**Editor:** This column was reviewed by Irene Hatsu, Ohio State University Extension specialist in Food Security.

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