Do you ever prescribe magnesium for patients with depression?

So, depression is not so simple to say one nutrient can be the cure. But the question is good. Asking to look deeper at the cause of depression is smart.

Yes, if I find a deficiency, I always treat it because it is playing into what the patient needs.

By some estimates, up to <u>80 percent of Americans</u> are not getting enough magnesium and may be deficient. Other research shows only about 25 percent of US adults are getting the recommended daily amount of 310 to 320 milligrams (mg) for women and 400 to 420 for men.

Magnesium is also found in more than 300 different enzymes in your body and plays a role in your body's detoxification processes, making it important for helping to prevent damage from environmental chemicals, heavy metals, and other toxins. In addition, magnesium is necessary for:

- Activating muscles and nerves
- Creating energy in your body by activating adenosine triphosphate (ATP)
- Helping digest proteins, carbohydrates, and fats
- Serving as a building block for RNA and DNA synthesis
- Acting as a precursor for neurotransmitters like serotonin

Do you think it is a good alternative to prescription antidepressants? If so, why?

I think Magnesium deficiency can be part of the story and can definitely help if it is found deficient in patients. As a functional medicine physician, I like to personalize and individualize my medical choices. I check intracellular nutrient levels in my patients to understand the full story of all their nutrients. A serum level may not be helpful, because those could be normal but the inside the cell levels might be deficient.

I like doing nutraevals by genova or spectracell FIA test to see where the patient stands. Often I find this nutrient low.

And yes treating the root cause of a problem will always be better then a medication.

So my first choice for depression will always include looking at a patients deficiencies, hormones like thyroid or vit D, stressors, and anything overall that might support the patient before I prescribe a medication.

What form of magnesium do you prescribe and why do you think is it better than others?

I use Mag citrate if I also want to help bowel function, or Mag Glycinate if I want the best absorption. I also use Mag Threonate, as in OptiMag Neuro.

I also like to provide Myers Infusions, which have IV Magnesium.

This is amazing if the patient is very anxious as well as depressed...

## Other favorites:

**OptiMag® Neuro** features the same Albion forms of magnesium found in OptiMag 125 plus Magtein™ (magnesium L-threonate), the only form of magnesium proven in animal studies to cross the blood-brain barrier. Boosting the brain's magnesium level is vital to healthy cognition, which includes long- and short-term memory, learning, stress management, and sleep.\*

What dosage do you recommend and how long do you recommend a patient stay on it?

Again, I individualize the treatment the range can be 200-1,000mg a day depends on the case.

Other Types of Magnesium Supplements That May Benefit You:

You may also be interested to know that there are other types of magnesium supplements sold on the market. That's because this mineral must be bound to a specific substance. There's no such thing as a 100 percent magnesium supplement, so it's better to be aware on how each product can affect your body before you purchase the wrong one:

Magnesium Glycinate	Magnesium Sulfate/Magnesium Hydroxide
This supplement is a chelated form of magnesium, which tends to provide the highest levels of absorption and bioavailability. It is generally used for people who are trying to correct a mineral deficiency.	Also known as milk of magnesia, magnesium sulfate/hydroxide is generally used as a laxative, similar to magnesium citrate. Be aware that you can overdose on this supplement, so only take the amount prescribed by your doctor.
Magnesium Chloride/Magnesium Lactate	Magnesium Taurate
Contains 12 percent magnesium only, but it has a better absorption rate compare to other magnesium supplements, such as magnesium oxide.	This supplement is a combination of magnesium and taurine, a type of amino acid that can help maintain proper electrolyte balance in your cells.28 The combination of the two can help promote a calming effect on your body and mind.
Magnesium Carbonate	Magnesium Threonate
Contains 45 percent magnesium, which has antacid properties that may help relieve you from the symptoms of acid reflux, heartburn or indigestion.27	This is a newer type of magnesium supplement that looks promising due to its impressive ability to penetrate the mitochondrial membrane, resulting in higher energy levels. I personally prefer this type to augment my magnesium levels.
Magnesium Oxide	
A non-chelated type of magnesium supplement, which is bound to an organic or a fatty acid. It typically contains 60 percent magnesium, and can help soften your stool as well.	

## **Remember to Balance Magnesium With These Other Vitamins**

If you decide to use any type of magnesium supplement, I strongly recommend increasing your intake of calcium, vitamin K2 and vitamin D through your diet to achieve well-balanced nutrient levels. Increasing magnesium alone can lead to hypermagnesemia, a condition that can cause serious side effects such as respiratory paralysis, abnormal cardiac conduction, narcosis and low blood pressure.

Ideally, your calcium to magnesium ratio should be 1:1. If you're lacking in this vital mineral, I suggest increasing your calcium intake first because it helps with muscle contraction, which can balance the muscle-relaxing effects of magnesium. Vitamin K2, on the other hand, is essential because it helps direct calcium to your bones to prevent arterial calcification. As for vitamin D, it's an important nutrient vital to many processes, and can be obtained by simply getting sensible sun exposure daily.

Are there any adverse effects or contraindications for magnesium?

Magnesium citrate can create diarrhea /nausea/vomiting/stomach cramps. It can also imbalance your other nutrients.

You want your calcium/magnesium to be 1:1 ratio.

Magnesium could also affect the absorbability of medications like warfarin and bisphosphonates.

Do you think magnesium works for certain kinds of depression better than others? (ie. menstrual/hormonal triggered depression, or trauma related depression vs. chronic depression)

Instead of labeling depression this way, it makes more sense to realize the patient's individual needs.

Magnesium is a mineral used by every organ in your body, especially your heart, muscles, and kidneys. If you suffer from unexplained fatigue or weakness, abnormal heart rhythms or even muscle spasms and eye twitches, low levels of magnesium could be to blame.

If you've recently had a blood test, you might assume it would show a magnesium deficiency. But only 1 percent of magnesium in your body is distributed in your blood, making a simple sample of magnesium from a serum magnesium blood test not very useful.

Most magnesium is stored in your bones and organs, where it is used for many biological functions. Yet, it's quite possible to be deficient and not know it, which is why magnesium deficiency has been dubbed the "invisible deficiency."

All bodily functions are dependent on vital energy, which means it requires healthy living foods. "We are what we eat" is a true statement. Assuring patients are educated on healthy whole food choices is critical to their overall health. At the healing Gardens we always have highly trained nutritionist to ensure my patient's diet choices are healthy and supportive of their current health care needs. Ask our office about our nutrition consults with Shonna Kempter or Kathy Westover. Or for further assistance, consider a consult with me to optimize your nutritional health or to address your medical needs with an integrative medicine approach. As an Integrative Medicine physician, I am highly trained in Nutritional Medicine. I find it critical to determine if patients have any nutritional deficiencies by doing labs that analyze the patient's intracellular nutrient status. If deficiencies are discovered, the patient is educated on diet changes, neutraceuticals, medical foods and sometimes even I.V. therapy. We offer vitamin infusions like Meyer's or tailored made infusions according to a patient's individual deficiencies. The patient is closely followed to ensure the deficiencies are resolved. The body needs all the necessary building blocks, and nutrients are the most critical ingredient. When nutrition is optimized the body is a miraculous energy producing vital healing machine.

Myers Infusions and Optimized Nutrition By Jacqueline Fields, MD and founder of Dr. Fields' Sacred Skin | September 2015 Nutrition is the essence of health.

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