The Importance of Magnesium for People With Atrial Fibrillation

by TRAVIS VAN SLOOTEN

The Role of Magnesium for Atrial Fibrillation

Magnesium is an important mineral for everyone, but it's a particularly important mineral for people with atrial fibrillation.

Magnesium is an important electrolyte that is involved in over 300 enzymatic reactions in the body! The majority of magnesium is found in your bones and inside cells. The heart is particularly rich in magnesium.

Through my research on this topic, I have learned that most people with atrial fibrillation are deficient in magnesium. As someone with AFib myself, I discovered I was severely deficient in magnesium. If you have AFib, there is a very good chance you are deficient as well.

While not a miracle cure, many people who are battling atrial fibrillation have been able to "tame the beast" by simply getting more magnesium in their body. By "taming the beast" I mean they have been able to reduce the frequency and/or severity of their AFib episodes.

Testing Your Magnesium Levels

How do you know for sure if you are deficient in magnesium? You test it!

There are two common tests available, but they aren't terribly accurate. There is a third test that is highly accurate but it is expensive and not easy to find someone to administer the test. The tests are:

1. Serum blood test
2. Red blood cell count (RBC) test
3. EXA test

Serum Blood Test

This is the most common test available. This is the test your doctor will do if you ask them to test your magnesium levels.

This test is done with a simple blood draw. Unfortunately, this is the least accurate test. The majority of magnesium is found in your bones and inside your cells, and only about one percent of your magnesium stores are found in your blood.

Furthermore, the magnesium in blood serum is tightly controlled — so much so, that the levels will be maintained at the expense of the levels inside your cells. In other words, if your magnesium levels in your blood serum are low, magnesium will be taken from inside your cells to maintain normal levels.

Do you see the problem? A serum blood test will almost always indicate your magnesium levels are normal. This test isn't very helpful at all and not recommended.

Red Blood Cell Count (RBC) Test

The red blood cell count test is better than the serum test but still not optimal. This test measures intercellular magnesium but only in the red blood cells.

Like the serum test, this one is done with a blood draw as well.

Because the RBC at least gives us some insight on intercellular magnesium levels, it's more accurate but still not ideal. This test still might indicate your magnesium levels are in a normal range when in fact they aren't.

According to Dr. Carolyn Dean, an expert on magnesium, you want to be at least 6.0-6.5mg/dL for the RBC. The normal range for the RBC is 4.2-6.8mg/dL. If you take the RBC test and you're on the lower end of normal, chances are your magnesium levels aren't optimal.

EXA Test

The EXA test is the most accurate as it measures intercellular magnesium throughout the body. This is a test your doctor probably doesn't even know about. You usually have to find a functional or naturopathic doctor to administer it.

It's also not cheap and rarely covered by insurance — expect to pay $250 or more out of pocket. I have taken this test twice. To read about my latest experience taking this test, and to see what the test reports look like, visit this blog post.

This test is administered by having a doctor gently scrape the inside of your cheek with a plastic scraper. The cells that are collected on the scraper are then sealed in an envelope and mailed away to be analyzed.

How to Increase Your Magnesium Levels

After you've been tested, preferably using the RBC or EXA test, you'll have a good indication of how deficient you really are and can plan accordingly.

The RDA (recommended dietary allowance) for magnesium is 420 mg/day for men and 320 mg/day for women. Unfortunately, surveys have shown that the dietary intake of magnesium by adults is 200 mg/day or less.

If you are deficient, the obvious first thing you should do is aim to get more magnesium-rich foods in your atrial fibrillation diet. Spinach, chard, dark chocolate, pumpkin seeds, black beans, and almonds top the list of the most magnesium-rich foods. Other magnesium-rich foods include yogurt, avocados, figs, blackstrap molasses, and bananas.

For most of us, however, eating more magnesium-rich foods won't be practical or desired. And in reality, if you are very deficient in magnesium, eating more magnesium-rich foods just isn't going to cut it.

For most of us, magnesium supplements will be required to replenish our magnesium levels.

Next page: magnesium supplements for people with AFib.

Magnesium Supplements to Boost Magnesium Levels

Before we discuss supplements for atrial fibrillation, there is an important disclaimer: **people with kidney disease**

should not supplement with magnesium without their doctor’s approval!

The kidneys process excess magnesium so only people with normal kidney function should proceed without a doctor's approval.

There are many different forms of magnesium. Some forms have more elemental magnesium than others, and some are better absorbed than others.

- **Magnesium oxide is the most common form found in supplements and is the cheapest.** It also has the most elemental magnesium than any other form. For example, a 500mg magnesium oxide tablet will have roughly 300mg of elemental magnesium. Unfortunately, it is the least absorbed form of magnesium; only about four percent of the elemental magnesium is absorbed by the body!
- **Magnesium glycinate, or chelated magnesium, is usually the form most atrial fibrillation patients take as it is easily absorbed and well tolerated.** Magnesium citrate is another form of magnesium that is well absorbed and popular among AFib patients.
- **I personally take a liquid magnesium chloride supplement.** It is readily absorbed and has done a decent job of boosting my magnesium levels as per the latest EXA test I took.
- **In addition to liquid magnesium chloride, I use a magnesium chloride spray.** This type of supplement works by spraying your skin with it and letting it soak in. This is referred to as transdermal delivery of magnesium.
- **Transdermal magnesium therapy can be highly effective.** Some experts say it can be more effective than oral supplements as the digestive process is totally bypassed. Magnesium is delivered directly to your cells via the skin.

How Much Magnesium Should I Take?

Based on my research and own experimentation, AFib patients should aim to get anywhere from 400 – 800mg per day. Your mileage may vary!

I typically aim for 600mg per day, as I am very deficient in magnesium. It's best to start out on the low end of the range and slowly increase your dosage over time.

The dosage question is very tricky because we are all different so the actual magnesium that is absorbed and used will vary from person to person. And some people don't tolerate oral supplements at all.

Side Effects

The most common complaint with magnesium supplementation is loose stools. If this happens to you after starting oral supplements, your body isn't absorbing the magnesium.

You're either taking a form that your body doesn't absorb very well or you're a "magnesium waster," which is common among AFib patients. This just means that for whatever reason, your body readily "wastes" magnesium (it doesn't absorb it very well).

If you have loose stools there are a few things you can do. First, try a different form of magnesium. As I mentioned earlier, there are many forms of magnesium.

You might not do well on magnesium citrate but you might do great on magnesium glycinate. You will need to experiment with different forms and possibly different brands.

Second, you can adjust the amount of magnesium you're taking and how much you take each time. It's best to take magnesium in equal doses spread out throughout the day.

If you're taking 600mg per day, for example, you should take 200mg in the morning, 200mg in the afternoon, and 200mg at night. Don’t take the full dose at the same time!

If 600mg of divided doses is still causing loose stools, then reduce it to 400mg of divided doses, as an example.

Third, consider using a magnesium spray exclusively. This type of magnesium supplement bypasses the digestive process completely. Most AFib patients can tolerate this form of magnesium even if they don't tolerate any form of oral supplement.

Final Notes on Magnesium Supplementation

It's generally recommended to take magnesium supplements with food, as its better absorbed and decreases your chances of having an upset stomach.

Vitamin D is important for optimal absorption of magnesium so if you increase your magnesium, you should ideally increase your vitamin D intake as well. This can be done by getting more sun exposure or by taking a vitamin D-3 supplement.

As I said in the opening paragraphs of this article, don’t expect miracles! Maintaining magnesium levels will not cure your AFib. In fact, it might not make any difference at all.

Many AFib patients, however, have improved the quality of their lives by maintaining proper levels of magnesium. They have been able to reduce the frequency and/or severity of their AFib episodes simply by getting more magnesium in their body!

For that reason alone it's worth it for every person with AFib to have their magnesium levels tested and to try to maintain ideal levels of magnesium!