

# In-Office Tissue Mineral Test

*"Here's an inexpensive low tech test that helps you screen for tissue minerals by creating an artificial cramp and assessing the value."*

Here's a test that helps you screen for tissue minerals. It's easy for you or your staff to do and has some great benefits. Personally, I like using the low tech inexpensive tests whenever I can. So when a group of Naturopaths and Chiropractors from the Nutritional Therapy Association shared this concept, I was definitely interested.

It's called the Lowenberg test but they presented it with an interesting slant. You see, one of the strongest indicators of a need for tissue calcium is muscle cramping at rest. However, muscles need other minerals and co-factors besides calcium to work at optimal performance. Whenever I think of muscles I always think of the heart muscle and how the heart needs magnesium to function properly.

I remember one of the international experts on magnesium, Dr. Mildred Seelig, saying at a lecture, "50% of



the world's population is low in magnesium." One government study showed a staggering "68% of Americans don't consume the already low recommended daily intake of magnesium." So you can see right away this test has some interesting screening properties.

The goal of the modified Lowenberg Test is to create an artificial cramp using a blood pressure cuff and assess the value.

I have attached a written version of how to do the test but here is the short version. First, this test is not

for patients with underlying vascular disease. But for the average patient, place a blood pressure cuff around the "belly" of the calf muscle and inflate slowly, about 10 mm hg per pump. Ask the patient to tell you when they experience pain or discomfort. It's more than pressure, we want a distinct discomfort. I describe it as the moment before you think the cramp is coming.

A person with sufficient tissue calcium can withstand 240 mm hg or more easily. If a person experiences cramping, irritation or

pain below 200 mm hg of pressure, they fail the test. Use a slightly lower cutoff of 180 mm hg for elderly or frail patients. Always do the test on both legs. Use the muscle as your testing indicator that has the most dysfunction, which is the leg with the lowest number.

If your patient fails the screen, you have several options. You can give them a multi-mineral formula with all the co-factors necessary to replenish tissue minerals for 30 days and retest. I like to use Osteo-B II which has a nice 1-1 ratio of calcium to magnesium as well as the support minerals necessary to facilitate bone health. Most patients don't realize that we need small amounts of zinc, copper, manganese and boron as well as vitamins D, C and K. Osteo-B II also has the phosphorylated B vitamins to support the Krebs cycle. I suggest 3 tablets, twice a day. You may also add some digestive support if they have gas, burping or bloating.

Explain that you will be repeating the test in 30 days; and if they don't respond to the first round of nutrients, you will do an extended office visit to individualize the type of nutrients they need.

As a side note: whenever I give patients the option to individualize nutrients as opposed to taking my favorites, the majority chooses the individualized approach. But I must confess the fun part for me comes when I use neurolingual taste testing, which I consider a more direct approach.

I have heard neurologists discuss the mechanism about how the nerves in the mouth go directly to the hypothalamus and then give a signal to the muscles in lightning speed which allows the muscle to respond based on new stimuli. It is pretty amazing

when someone has cramping at 150 mm hg of pressure and they taste a supplement and seconds later they can easily withstand 200 or more. The downside of Neurolingual testing is that it takes longer so you will need a separate appointment. But you will be amazed at the things the body wants and how fast it will respond.

I say the fun part because this is where you'll discover things you've never considered. For example, I had a patient with blinding cluster headaches. I tried 6 or 7 supplements alone or in combination and to my surprise nothing completely worked. Finally, I added OOrganik-15 to the two products that had produced the best results, Mixed EFAs and Mg-Zyme. My thinking was that maybe the brain is not getting enough oxygen when he was under stress and thus the spasm. Amazingly, he passed the test easily. OOrganik-15 is a natural methyl donor. OOrganik-15 is used clinically to increase oxygenation at the tissue level. By the way, his cluster headaches were dramatically reduced in frequency and intensity.

One of the side benefits of individualized testing is the attention patients feel as you strive to understand their condition. Yes, patients sometimes wince as they taste the products, but they all appreciate the care. The testing sheet below was developed by the Nutritional Therapy Association in Washington. I think you will find it very helpful as you determine the optimal testing sequence for your practice. Also, The Nutritional Therapy Association offers a curriculum for physicians and their assistants to assess nutritional status. I placed a link below with helpful information.

Thanks for reading this week's edition. I'll see you next Tuesday.