

Magnesium and Malic Acid

for **ENERGY & PAIN** The Fibro-Care™ Story



by Margy Squires

Energy. Who needs it? Everybody! Fatigue is one of the top ten reasons people visit a doctor. Pain is another. Do you know one of the most important nutrients you need for both? Magnesium...

A national deficiency

More than 75% of the American population are deficient in magnesium (Mg). According to a conversation with an expert in vitamin and mineral testing, the real figure may be as high as 90%. If you have fibromyalgia and/or systemic endurance intolerance disease (SEID, also called Chronic Fatigue Syndrome/ME), research already tells us that you're probably Mg deficient.

Ask yourself these questions. Do you sleep well? Are you tired no matter how much you sleep? Do you have energy, especially after exercising? Are your muscles soft and flexible? Or do they feel tight and painful for no apparent reason? Do you have any degenerative disorders like diabetes, thyroid, arthritis? Are you carbohydrate intolerant? If you're a woman, are you struggling with hormone imbalance either PMS, pre- or perimenopause? Magnesium can answer all these questions by helping these conditions, but only if you have enough of it!

A Relationship to pain

If you suffer from any chronic pain condition, research studies reveal that magnesium levels are often low. In fact, your ability to deal with pain (pain threshold) is directly affected by how much magnesium your body has stored. Bringing your intracellular magnesium levels to normal or optimal (at least 5.5 mg/dL) will help you reduce your pain levels and lessen your muscle fatigue, too, as a side benefit.

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The bare facts

You have roughly 21-28 grams of magnesium; 99% found in bones, teeth and soft tissue, 1% in the bloodstream. Magnesium is found both in circulating blood plasma and within the cells (intracellular). It's the intracellular Mg which we're concerned about that regulates or is involved in over 325 enzyme reactions, especially in the production of energy from foods.

The energy equation

You get your energy from a system of complicated biochemical reaction that occur in the Krebs Energy Cycle or Citric Acid Cycle which few of us would be able to explain. What you do need to know is several reactions in the cycle are magnesium dependent. Energy does not happen without magnesium. "It activates every enzyme that produces energy, new protein, almost all the energy in every single cell in the body," says Mildred Seelig M.D., author of *The Magnesium Factor*. Seelig is considered a magnesium expert, having made a career out of studying Mg for more than 40 plus years. Magnesium is involved in every energy dependent reaction by its role in the metabolism of glucose, fatty acids, and amino acids. It also plays a part in the manufacture and use of a compound found in all cells: adenosine triphosphate (ATP). When ATP is broken down, it produces the energy for muscles and organs to function. To repeat: Energy requires magnesium!

Get the test

So how do you find out if you have enough magnesium? There is only one way, with a magnesium red blood cell test that checks the intracellular levels (magnesium RBC). A blood plasma or serum measures non-cellular magnesium only. It is not often easy to find out your Mg level as many health care professionals will not order the Mg RBC test. But if your pain and or fatigue are continued symptoms for you, it is worth the effort to find a health care professional who will.

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Magnesium, Malic Acid...

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Supplement

It's difficult to get your 500 mg optimal daily magnesium from food intake alone. So how could you possibly hope to meet the higher therapeutic amount for FM and SEID (300-900 mg) and other chronic conditions? It's obvious that supplementation is necessary for the majority of Americans, especially those with chronic pain, fatigue and any other condition in the box on the right.

Figure out how to get your optimal dose. It's important! Read the label as the serving size is two capsules or tablets twice a day. One Fibro-Care™ is not enough! The formula is to multiple your body weight by 2.5-4.5 mg. The result equals your magnesium *daily* dose. Start low (90 mg) with a meal and slowly increase every 3-4 days, to let your body adjust gradually.

No mineral acts alone

When I first learned of the magnesium deficiency in FM and SEID, I wanted TyH to make a magnesium product to help as many people as possible. With the help of a biochemist friend, Fibro-Care™ was formulated. We chose the most absorbable magnesium in the form of bisglycinate) and looked at the rest of the chemistry involved.

Most nutrients need the interaction of other nutrient cofactors in order to do their jobs more efficiently. For example, cofactors B1, B6 and manganese help magnesium do its energy job. B1 (thiamin) supports glucose metabolism as does malic acid. Vitamin B6 (pyridoxine) is necessary for the metabolism of amino acids. Of note, research suggests that B6 is often deficient when magnesium is deficient. Manganese is synergistic with thiamin, activates enzymes in many cellular activities, and stimulates thyroxin, a hormone that influences the body's metabolic rate. At the biochemist's advice, we also added vitamin C as she explained that C increases the amount of sugar stored as glycogen in the muscles and tissues, thus helping to maintain muscle energy. Additionally, vitamin C enhances the activity (synergy) of other nutrients. We chose Fibro-C™ since it is a buffered form and won't cause stomach irritation.

Malic acid

Malic acid or malate is the primer that jump starts the Krebs cycles and the energy ball can't even start rolling without it. Along with Mg, it's has a critical role in the energy equation. A helpful daily amount for FM/SEID is 900-1200 mg. Given its role for both energy and historically for pain relief, it made sense to add malic acid to the Fibro-Care™ formula.

The research

Fibro-Care™ was part of a double-blind and placebo-controlled published study for a successful treatment of FM and SEID. As no accepted explanation of cause or cure for FM and SEID exists and the magnesium deficiency still needs to be addressed, magnesium replacement should be the treatment of choice. Reach for Fibro-Care™ to address that essential magnesium need.

Expect results

FM and SEID experts believe that without supplementing, it would be impossible to see any improvement in energy or other symptoms caused by a magnesium deficiency. How long you supplement

WHO NEEDS FIBRO-CARE™?

You do if you struggle with:

- ADHD ♦ Angina ♦ Arthritis
- Asthma ♦ Brain Fog ♦ Celiac
- Chronic Pain ♦ Diabetes & "Pre-Diabetes"
- Fatigue & Muscle Pain ♦ Fibromyalgia
- Glaucoma ♦ Hearing Loss
- Heart Disease ♦ High Blood Pressure
- Kidney Stones ♦ Low Back Pain
- Low HDL Cholesterol ♦ Metabolic Syndrome
- Migraine ♦ Mitral Valve Prolapse ♦ Obesity
- Osteopenia/Osteoporosis ♦ PMS
- Post-Polio Syndrome ♦ Restless Leg Syndrome
- SEID (ME/Chronic Fatigue Syndrome
- Sleep Issues ♦ Stroke ♦ Vascular Disease

before you see results is difficult to answer and depends on your current magnesium status. Some notice a difference within days, others in weeks. Be patient! It can take up to eight months to feel better. The wait is worth it. Magnesium supplementation reduces muscle pain and fatigue (TyH customers taking Fibro-Care™ confirm this). Dr. Mark Pellegrino -- author of *Fibromyalgia: Up Close and Personal* and a physician with fibromyalgia who's seen more than 35,000 patients in his practice -- put Fibro-Care™ to the test. "I was using another magnesium and malic acid product for several years, thinking they were all the same. When I tried Fibro-Care™ on some of my patients as a test, they felt better! I now give Fibro-Care™ to all my patients with great results," he said.

What do patients think? Based on a national survey done by the Fibromyalgia Network, a newsletter with a 25-year publishing history, readers cited Fibro-Care™ as the number one nutritional product that helped their fibromyalgia and SEID.

SUMMARY

Fibro-Care™ is so important to FM/SEID that we developed a program around it -- TyH's *Get with the Program™*. Over the last three decades, Fibro-Care™ has become the #1 supplement for FM/SEID and nothing has helped my husband David and thousands of TyH customers like him except Fibro-Care™. Once you know what a difference the unique combination of magnesium, malic acid and the supporting nutrients in Fibro-Care™ make, you will choose to make it part of your FM and SEID energy and pain equation, too. Expect results!

Caution: *Those with kidney disease or cardiac AV block should seek professional medical advice before supplementing with any magnesium.*

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