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Does Magnesium Threonate Live up to the Claims Made About It?—Here's My Personal Experience With It.

by Wayne Persky

Brain fog is a very common symptom of microscopic colitis (MC).

It's not even mentioned in the medical description of MC, but most MC patients soon realize that they have it. Most sources describe brain fog as some form of cognitive dysfunction that usually includes memory issues and poor mental clarity. Individuals who have brain fog are generally unable to focus their powers of concentration on specific projects, especially if mathematical calculations or logical thinking are required. And even if the proper diet is adopted immediately, healing often progresses so slowly that two or more years may pass before the brain fog completely disappears for many MC patients. We urgently need improved ways to resolve brain fog.

According to claims based on the results of a randomized, double-blind, placebo-controlled trial, published in the Journal of Alzheimer's Disease in 2016, magnesium threonate might have the capacity to treat brain fog. **(1)** Resolving brain fog was not one of the stated goals of this research project. But the trial proved that magnesium threonate has a very impressive ability to improve memory and cognitive function in older adults, especially those who have compromised memory and cognition. And that certainly appears to address the essence of brain fog.

Why I decided to try magnesium threonate.

I've been in remission for over fifteen years, so my brain fog was resolved many years ago. Therefore, I'm not in a position where I could test potential brain fog solutions. However, I had a stroke almost two and a half years ago, and the damage done by the stroke should make me a candidate for testing the effectiveness of magnesium threonate.

Here's why I believe that I make a suitable guinea pig.

The loss of balance and coordination caused by a stroke appears to be the result of nerve damage that causes the loss of special nerve structures called synapses. Their function in the brain and central nervous system is to enable a neuron (nerve cell) to pass an electrical or chemical signal across a gap to another neuron or to a target such as a muscle cell. If we lose too many synapses, our ability to control our muscles becomes compromised, and our balance, coordination, and strength will suffer. In the brain, the loss of synapses can interfere with our ability to focus our thoughts, and our ability to retrieve memories, because of the disruption in communications.

Magnesium threonate is widely promoted as a synapse density enhancer.
In other words, its claim to fame is based on its ability to increase the number of synapses in the brain (and presumably in the central nervous system). Therefore, this product should treat brain fog.

The labeled dose of the supplement I selected is three capsules per day. Since this is a relatively new product, I started with only one capsule per day for a couple of days. I had no ill effects, so I began taking two per day and continued for five days. As everything seemed well, I increased the dose to three capsules per day, and at the time of this writing, I've been taking that dose for about six weeks. I was taking 300 mg of magnesium glycinate originally, so I adjusted that dose as I increased the magnesium threonate. Three capsules of magnesium threonate amount to 144 mg of elemental magnesium (this can vary by the brand). Experimenting with the amount of magnesium glycinate, I found that one (100 mg) tablet is not enough (I had leg cramps), so I'm taking two magnesium glycinate tablets along with the three magnesium threonate capsules, each day, divided among meals and snacks throughout the day. This makes my total magnesium dose 344 mg.

Is it helping?
Without any scientific testing, this can only be considered to be my personal opinion. And we all know that it's very easy to misinterpret personal results because of bias, so we need to be very careful in how we view these results. Additionally, because of my advanced age, I have to distinguish between normal old-age symptoms and stroke-caused symptoms. That said, I'm well aware that most symptoms that doctors mistakenly attribute to advancing age are actually due to either diet issues and vitamin deficiencies, or medication side effects. And of course we always have to remain aware that the placebo effect can be very powerful.

Here's my impression at this point.
I normally have no aches or pains, and I have noticed none with this treatment. After three or four weeks, it seemed pretty clear that my cognizance and memory had noticeably improved. My ability to recall names and various details seems to be significantly improved. I rarely have to stop and think for a while to recall a name or some other information. Previously, it often took a half-day, or even a full day to recall names or other information that I was unable to immediately recall. It's too soon to say that issue has been totally resolved, but at this point, it seems to be a thing of the past.

At the four-week point, frankly, I hadn't noticed any improvement in my residual post-stroke symptoms, such as balance, coordination, and gait, which was somewhat discouraging. At the six-week point though, I'm beginning to notice that early in the morning, before my first cup of coffee, my balance and gait seem to be consistently improved. Previously, I was noticeably clumsy and had poor balance, before my first cup of coffee.

However, this effect could be due to improved sleep.
Prior to this treatment, I almost always woke up at least two or three times during the night, usually needing to use the bathroom. Then I typically had some difficulty getting back to sleep. Now, during some nights, I'll wake up once, and then getting back to sleep seems easier. On other nights, I'll sleep right through until about half-an-hour-before-dawn, which is when I normally get up.

On a side note, regarding sleep issues.
I note that having to get up three or four times during the night to use the

bathroom was a persistent symptom back when I had a chronic magnesium deficiency, a number of years ago. It's also a symptom of pre-diabetes. I don't have any other symptoms of pre-diabetes now, but I did back then, however. Interestingly, note that virtually all of the symptoms of pre-diabetes overlap the symptoms of a chronic magnesium deficiency. Please remember this if your doctor ever tells you that you have pre-diabetes. Either start taking magnesium, or at least have your magnesium level tested. Otherwise, your risk of developing type 2 diabetes will be quite high. Magnesium deficiency is closely associated with diabetes.

So will magnesium threonate treat brain fog?

We need more evidence to be sure that this will work for everyone (or even most people), but so far, I'm cautiously optimistic. The advertising claims seem to be justified. It appears to be working for me, even better than I had hoped. Previously, if I tried to work around machinery, and I had to duck under something, or step over anything, I often lost my balance and I was at risk of falling. If I tried to do both at the same time, I had to grab onto something for support. I noticed this morning that I no longer seem to have that problem— I'm steady on my feet in such situations.

The stroke caused me to have to relearn how to do many things, including typing on a keyboard. I notice that while typing out this article today I'm suddenly able to type faster, and I make fewer mistakes. Many of the improvements are subtle, but all together, I have to say that they're quite impressive. I'm hopeful that magnesium threonate is what we've been searching for to treat brain fog.

Reference:

1. Liu, G., Weinger, J. G., Lu, Z.-L., Xue, F. & Sadeghpour, S. (2016). Efficacy and safety of MMFS-01, a synapse density enhancer, for treating cognitive impairment in older adults: A randomized, double-blind, placebo-controlled trial. J Alzheimers Dis. 2016;49(4):971-90. doi: 10.3233/JAD-150538. Retrived from https://www.ncbi.nlm.nih.gov/pubmed/26519439

Flares and Helpful Hints for Managing Them

Microscopic colitis is a life long struggle. Many of us obtain remission for periods of time, but then our condition deteriorates and we go into a flare. The experiences collected on the Microscopic Colitis Forum have provided some common themes and ways to fight our way back to healthy guts. Here are the most common causes.

Unrecognized Gluten Contamination is Common

Gluten has a sneaky way of finding its way into food that we think should be safe. In the United States, the FDA definition for a food being labeled “gluten free” is less than 20 ppm. But people vary in their sensitivity to gluten, and may react at that level.

Then there is the whole issue of cross-contamination in foods that are naturally gluten free. Crop rotation, shared storage and transport, and food processing facilities that share equipment with wheat and flour are all possible sources of contamination. This is one reason why gluten-free breads and baked goods are risky. An item that worked well when first tried can later on become a problem when sources of ingredients change.

Restaurants are especially risky, even with the best intentions. A recent study showed that about 32% of restaurant food labeled gluten free actually contained gluten. And gluten-free pizza and pasta were the biggest offenders, with around 50% contamination rate. Medications, cosmetics and other body products need to be checked too.

The other factor to keep in mind is the additive effect. Even if an individual item has a low amount of gluten that doesn't cause a reaction for you, if you are consuming several such items on a regular basis, it could be too much.

New Sensitivity

Every so often a new sensitivity to a previously OK food will arise. This can be tough to track down, but here are a couple of suggestions. Try keeping a detailed food journal where you list the foods you ate along with a description of any symptoms that show up. Many people have found this to be very helpful.

You might also consider Enterolab testing, even if you have been tested in the past. Besides the main culprits of gluten, dairy, soy and eggs, they now test for a number of other grains, meats, legumes and some vegetables. And even negative results are very helpful, as you now would have confidence that the foods you tested negative to are OK to eat and you don't need to worry about them.

Additive Effects of Mildly Reactive Foods

This type of flare is most common when we try to add back too many new foods too quickly when we start feeling better. We get pretty bored with the limited diet, so the temptation is strong. Foods that we can handle in small amounts can cause problems when overdone or when combined, as our recovery is still pretty fragile. Fruits, foods with a lot of fiber, and histamine-containing foods are common examples. This is a "tipping point" type flare that requires some work to figure out. What seems to work best is to return to the basic diet that minimizes fiber, fruit, and acidic foods like tomato sauce. Then when the flare subsides, slowly add back other foods one at a time in smaller amounts.

Stress

Stress can be a major, but often unrecognized contributor to a flare. It can happen no matter how well-managed that individual's diet may be, or how long she or he has been in remission. In some cases, an MC patient will successfully handle a very stressful situation, only to end up in a flare weeks or months later, after the crisis is resolved, and the stress should be diminishing.

These flares are often so tenacious that it's necessary to go back to a very

simple diet, even discontinue the use of supplements until the flare is resolved, and sometimes resort to medications such as Entocort. The mind-body connection is very powerful! And when under stress, it can be difficult to find the motivation and energy to maintain a healthy diet and lifestyle.

There is a lot of information in previous newsletters and on the Forum about how to manage your stress, so I won't repeat it all here. Here are links to a two-part series on stress in previous newsletters.
http://www.microscopiccolitisfoundation.org/uploads/5/8/3/2/58327395/newsletter_2.pdf

http://www.microscopiccolitisfoundation.org/uploads/5/8/3/2/58327395/newsletter_3r.pdf

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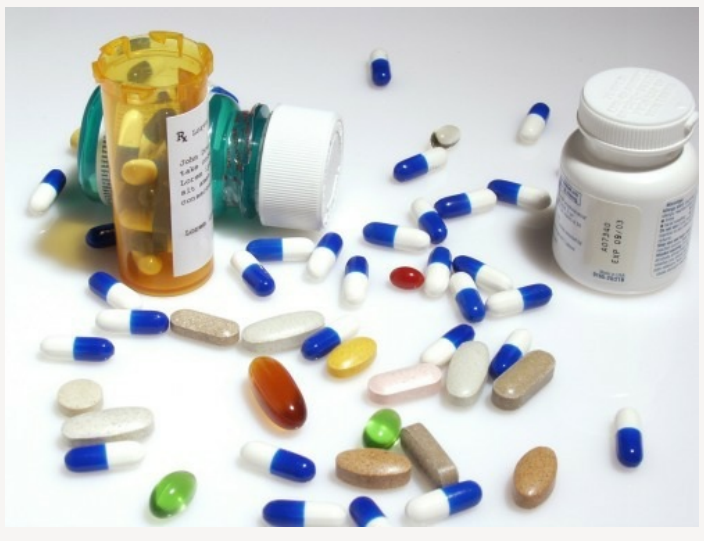
"In the course of nibbling in your pantry
I have discovered I have several food allergies."



Why is the percentage of adverse drug reactions reported so low?

Patients have been experiencing adverse drug reactions (ADRs) for thousands of years, ever since the first doctors began prescribing concoctions to treat patient ailments. And for most of those years, adverse reactions to prescription medications have been viewed mostly as a necessary evil in the medical profession. Even when both doctor and patient are well aware of the risks, many risky drugs are prescribed anyway. In some cases, even drugs that are known to have possible side effects that may lead to a lethal outcome, are prescribed.

So it's not surprising that under-reporting of ADRs by doctors is so common. And there's good reason for this lax attitude. The main problem appears to be that no incentive exists to encourage the reporting of ADRs.

In some other countries, doctors are required by law to report ADRs. Surprisingly, in the USA, the Food and Drug Administration (FDA) doesn't even require doctors to report ADRs. They recommend it, but they don't require it. Many doctors are not even sure of what to report, and how to report it. **(1)** So anything other than a low reporting rate could hardly be expected. The FDA is aware that even in large trials involving thousands of subjects, some safety issues will not be discovered. Most drugs are tested on subjects who are generally in better health, and who are taking fewer other drugs than the patients who will use the drug after it becomes approved for sale. In fact, in many cases, a high percentage of the people who will receive a prescription for the drug when it becomes available, would not qualify for the initial trial, because they have one or more health issues.

The issue of under-reporting is well-illustrated by the results of a survey taken among physicians in Germany in 2017. **(2)** Of 316 qualifying physicians, 176 completed the questions in the survey. 137 of them (78 %) stated that they rarely, very rarely, or never report ADRs to the “competent authority”. The most often listed reasons for not reporting ADRs were lack of time, the opinion that the reporting process is complicated, and the opinion that reporting ADRs requires too much time. Slightly over half of the respondents (72) mentioned that they don't report ADRs that are already known.

Back in 2006 an analysis of 37 studies from 12 countries showed that the overall median under-reporting rate for general practices was about 95 %, while the under-reporting rate for serious or severe ADRs was about 80 %. **(3)** Not much progress has been made over the years, because it's thought that in the US, only about 1 % to 10 % of all ADRs are ever reported to the FDA. **(4)**

In fact, not only are there no incentives, there are often disincentives associated with the reporting of ADRs. According to Godwin (2019), some doctors who have reported ADRs to the FDA have had negative experiences. Doctors who have gone a step farther and published articles about ADRs, in order to warn other doctors, have had generally negative experiences with the pharmaceutical industry. One individual even reported being threatened with a lawsuit because of an article he had written. Few doctors have the time or the temperament for such harassment, so they just stop reporting ADRs and publishing articles about them. This situation has the attributes of a football game between the pharmaceutical industry and the physicians, with the FDA acting as referee. Unfortunately, the patients are the ball in this game, so they don't make the rules, they just get kicked around. Needless to say, changes need to be made.

References:

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4. Godwin, A. (2019, June 2). ASCO poster: Reporting adverse drug events has chilling effect. [Web log message]. Retrieved from https://www.medscape.com/viewarticle/913602?src=WNL_confalert_190603_MSCPEDIT&uac=95382HN&impID=1983303&faf=1Godwin, A. (2019, June 2). ASCO poster: Reporting adverse drug events has chilling effect. [Web log message]. Retrieved from https://www.medscape.com/viewarticle/913602?src=WNL_confalert_190603_MSCPEDIT&uac=95382HN&impID=1983303&faf=1