

Email from me to Jerry:

Hi Jerry, I thought you might be interested in something I "discovered". Below you will find an entry to my running log that will help support what I am going to tell you.

I have been taking 500 mg of magnesium per day. This is along with the CoQ10 that I think I told you about. I think it has really helped. The great deal of running I did earlier this year probably depleted both. Ever since I started taking the magnesium supplement I have started feeling better and better when I am running. Below are some quotes I found on line. There are many more like them. Evidently more than 1/2 the population does not get enough magnesium in their diets. I also read in a number of places that only 1% of magnesium in our systems is in the blood stream. So blood work is not able to detect a deficiency. It is also true that if you take a magnesium supplement it could take months to build up magnesium in the skeletal system. Also, I read that normal magnesium helps to regulate blood sugar and also helps people get a normal nights sleep.

Exercise is known to use up magnesium. One symptom of low magnesium is muscle tightness. When you exercise your muscles are continually contracting and relaxing. It is the job of calcium in your body to cause contraction. Magnesium causes relaxation. If someone is deficient in magnesium their muscle don't relax, i.e. they are always tight.

I have been running well lately and I attribute it to the CoQ10 and magnesium supplements I have been taking. Consider this entry to my running log.

Tues 11/29/16 **6 miles** (The same 6 miles as Sun 4/17/16)

I ran 6 miles on the 2 mile "hill course". The temperature was about 60 degrees.

Distance (miles)	Net elevation change (feet)	Split Times Today	Split Times 4/17/16
1	- 315	9:08	9:18
2	+315	12:08	12:53
3	+145	10:16	11:25
4	- 145	8:37	9:22
5	- 315	8:16	8:49
6	+315	10:58	11:52

time today: 59:23 or 9:54/mile

time on 4/17/16: 1:03:39 or 10:37/mile

I had no idea I could run so much faster today on this tough course!

Here are some quotes I have found online concerning magnesium.

"The latest government study shows a staggering 68% of Americans do not consume the recommended daily intake of magnesium."

"People with diabetes are more likely than those without to be low in magnesium. According to an article on *About.com*, "Elevated blood glucose levels increase the [loss of magnesium](#) in the urine, which in turn lowers blood levels of magnesium." So getting enough magnesium is especially important in diabetes."

"The study aimed to determine the effects of short-term, high-intensity anaerobic exercise on magnesium homeostasis. 13 men completed the exercise task; all were consuming the recommended dietary allowance for magnesium. Results immediately after exercise revealed urinary excretion of magnesium increased by 21% (131.5 ± 6.8 mg/day) from the pre-exercise value (108 ± 6.6 mg/day). The authors concluded that the increase in magnesium excretion following exercise may depend on the intensity of exercise, and the relative contribution of anaerobic metabolism to the total energy expended during exercise."

Sheehan describes the mechanism of magnesium in the brain. Magnesium ions are the 'gatekeepers' between NMDA (short for N-methyl D aspartate) neuroreceptors and the cell membranes. These neuroreceptors are responsible for both short-term and long-term memory. Without adequate magnesium, there is essentially no 'soldiers at the gate' to block the free flow of ions, and this can lead to cell death, and issues related to short- and long-term recall¹. There are many brain health issues that can be impacted by magnesium. Tues 11/29/16

Email from Jerry to me:

Hi Jim,

Thanks for that great heads-up re magnesium. Given our many areas of similarity, you probably won't be surprised to hear that I have a whole bottle of magnesium in our drug cabinet. However, I stopped taking the tablets a while back, for no apparent reason. I think the bottle got shoved behind other bottles and I just forgot about it. I took one after I got your message and will now keep that bottle forefront in the cabinet! Fortunately, I've been taking a little magnesium daily in that my "One-A-Day 50+ vitamin pill has 110 mg of magnesium.

Thanks again for the info re magnesium. I'm looking forward to good results with that combined with CoQ10!

Jerry