

Case report

Many people with multiple sclerosis medicate themselves in the best way they can, because medical science is largely unhelpful. However, they can be putting themselves at risk by choosing inappropriate supplements listed in books or on the internet.

Magnesium and nocturnal spasms in an MS patient

David Potterton ND suggests that a low-dose high absorption magnesium, that closely resembles food, may be safer and more effective than many high-dose low-absorption supplements made from the isolated chemical form of magnesium

MUSCLE SPASMS, particularly at night, are a frequent complaint of patients with multiple sclerosis. The spasms disrupt sleep and can be very painful.

A frequently-prescribed orthodox treatment for this is Gabapentin, a GABA analogue. This may be effective, or partially effective, but in other patients it is ineffective, or may cause adverse effects, so that treatment cannot be continued. This case report suggests that treatment with an appropriate form of magnesium may be effective, even in difficult cases. It does not deal with other aspects of the management of MS, such as change of diet, although dietary changes were made.

Magnesium

Magnesium is an essential mineral found in a wide range of foods in varying amounts. Legumes, nuts, whole grains and fresh green vegetables are good sources. However, only 30-40 per cent of dietary magnesium is absorbed. Requirements are higher in people who take calcium supplements, have high blood cholesterol levels, or who have a high protein diet.

Deficiency is associated with a variety of symptoms, including muscle cramps and aches, weakness and tiredness, numbness and tingling, insomnia, constipation, chronic fatigue, low blood sugar, tremor, anxiety, dizziness and confusion.

Patients with MS also complain frequently of a sluggish bowel action and may opt for a high fibre diet. Where the diet contains refined and processed foods, this will often be deficient in magnesium.

However, adding bran to the diet in an effort to ease constipation may exacerbate magnesium deficiency as bran binds the mineral and reduces absorption.

Excessive magnesium from over-supplementation can cause nausea, vomiting, low blood pressure and heart problems. An excess of magnesium from food sources is unlikely unless kidney disease prevents the magnesium from being excreted.

Case history

In May, 2004, I was asked to visit Mrs J., a 55-year-old woman who had suffered from multiple sclerosis for 22 years.

Her main reason for requesting my advice was that she suffered "agonising" muscles cramps at night. She was born with only one kidney and, as a child, had suffered from mumps, measles and chicken pox. During the bout of measles she had lost her sight for six weeks.

In her early thirties she began to suffer neck pain, back pain and numbness.

She was referred to a hospital consultant who requested an MRI scan and a lumbar puncture, following which he diagnosed her condition as "myelitis" and reassured her that it was "not MS". She then visited an osteopath to see if he could provide any further help for her back pain. He suggested that the diagnosis of myelitis was incorrect and that she may have multiple sclerosis.

This was subsequently confirmed.

At my visit Mrs J. said she smoked 15 cigarettes a day and drank six cups of tea. Her diet consisted of meat, fish, dairy products, fruit, vegetables and oat cereals. She ate very little bread.

She was able to walk, but with great difficulty, and said she absolutely refused to use a wheelchair.

The top of the sideboard in her dining room was covered in

bottles and packets of “health” supplements, most of which she took every day, and which she said was the result of her own research into MS over the years.

In his book, *Better Health Through Natural Healing*¹, Ross Trattler, ND, DO, lists 29 nutritional supplements recommended for MS, of which 11 are asterisked as the most frequently used therapeutic agents.

Mrs J’s GP had prescribed the central α_2 agonist Zanaflex, which helps reduce spasticity. Mrs J found that this did not prevent her agonising cramps. Gabapentin was offered but she declined to take it because of the side-effect profile.

Among Mrs J’s collection of supplements was a supply of calcium/magnesium tablets containing 500mg of calcium and 250mg of magnesium. She took four of these a day. I do not recommend 2,000mg of calcium a day to any patient, particularly someone with only one kidney, as excess calcium can lead to the formation of kidney stones, as well as cause constipation.

Mrs J said that her intake of 1,000mg a day magnesium was having no effect on her muscle cramps.

According to Dr Stephen Davies and Dr Alan Stewart in their book *Nutritional Medicine*², the body of the average human adult contains 20-30 grams of magnesium, of which 70 per cent is in teeth and bones and the rest in the cells. They say that the average daily intake of a healthy adult should be between 400mg and 800mg.

I told Mrs J that I would like to replace her calcium/magnesium supplement with a 30mg magnesium supplement³ that I recommend for cramp. It does not come with calcium, but it does contain its own digestive enzymes and other components that are usually associated with the magnesium found in food. Therefore, because it closely resembles food, it should be more easily absorbed and more bioavailable than the chemical compounds mainly used for magnesium supplements.

The UK recommended intake for magnesium – the daily amount deemed adequate to prevent deficiencies in 97.5 per cent of the UK population – is 300mg for men and 270mg for women. The United States has recently revised its figures upwards and now recommends an intake of 400mg per day for men aged 19-30 and 420mg for those over 30; the figures for women under and over 30 are 300 and 310mg per day respectively. However, some investigators believe these should be set even higher at 450-500mg per day.

Less than one per cent of magnesium is found in blood serum, although that is used as the commonest indicator of magnesium status.

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The instructions were to take one magnesium tablet at night.

A course of cramp bark extract (*Viburnum opulus*), which contains an undetermined amount of organic magnesium, was also given.

By the next appointment Mrs J. reported that she had reduced her cigarette consumption to five a day and that her cramps had improved but that she was still experiencing some muscular pain.

The dose of magnesium was increased to two tablets at night (60mg).

At the third appointment Mrs J. reported that the “magnesium is working” and that it had taken effect after the second night of doubling the dose. This, together with dietary changes and other recommendations, had made her feel very healthy and more energetic.

Mrs J. did not request a repeat supply of the cramp bark extract as leaving it off did not reduce the positive effect of the magnesium.

After four months Mrs J. still experiences relief from the muscular spasms and continues to take 60mg of magnesium at night.

Case 2

In this case (not involving multiple sclerosis), nocturnal cramping pain occurring every night, was reported by a man, aged 78. He also experienced palpitations from time to time, particularly if he was feeling stressed.

In addition to other advice and treatment, he was given Magnesium 30mg³ to take before retiring at night. He has reported that both the palpitations and nocturnal cramp have resolved.

Discussion

Many people with multiple sclerosis medicate themselves in the best way they can, because medical science is largely unhelpful. However, they can be putting themselves at risk by choosing inappropriate supplements listed in books or on the internet. A patient like Mrs J with only one kidney may be at increased risk from some supplements.

This case study shows that replacing high-dose, low-absorption mineral supplements with low-dose, high-absorption mineral supplements that resemble food may be a safer, more effective option.

Low-dose magnesium may also be a better option for patients with nocturnal cramp, but with no other complications.

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Conflicts of interest: None declared.

1. *Better Health Through Natural Healing*, by Ross Trattler ND DO, Thorsons, ISBN 0-7225-1382-8
2. *Nutritional Medicine*, by Dr Stephen Davies and Dr Alan Stewart, Pan Books, ISBN 0 330 28833 4.
3. Food State Magnesium 30mg, available from Natures Own, Hanley Swan, Worcestershire.