

Magnesium

Magnesium is a so-called macro-mineral, present in quite large amounts in the body and essential for more than 300 different biochemical reactions.

Magnesium is involved in the following: normal nerve and muscle function, a healthy immune system, steady heartbeat, and strong bones. Typical for magnesium deficiency is a tendency to suffer from muscle cramps, especially during the night. Magnesium may also be seen as an antagonist for calcium: calcium tightens muscles, whereby magnesium helps to loosen them. It increases the absorption of potassium, which is also involved in muscle function. Among other things, it relaxes blood vessels and increases the production of the neurotransmitters serotonin, melatonin and GABA.

Pharmacy customer: Hello. Oh I hope you speak English, my German is not very good!

PTA: Good morning. No problem, I lived in Ireland for two years before starting my PTA course. How may I help you?

For the last few days, and nights, I've been getting the most excruciating spasms in my calf muscles!

Could you describe the cramps for me please?

They come without any warning and last for about 30 seconds or so. I usually try to go against the cramp by stretching my toes up to my shins. But that doesn't always help.

Do you do any sport at all?

Yes, I've been going jogging three days a week, for the last month or so.

You could possibly have magnesium deficiency. Do you take any kinds of dietary supplements?

No, not really.

Well I have this dietary supplement with magnesium. Magnesium is a really important mineral for the human body.

Should I get a blood test done to see if I have enough?

It is quite difficult to assess the levels of magnesium in the body.

Why?

On average a healthy person would have about 25 milligrams of magnesium in the whole body. As most of this is found in bones and cells, and only something less than one per cent in blood, it is difficult to detect a so-called hypomagnesemia, which is an abnormally low level of magnesium.

Okay! How much should I take?

I have another question: Do you take medication for your thyroid gland?

Yes, I take 125µg of levothyroxine every day.

The problem with taking thyroxine and magnesium at the same time is that the magnesium reacts with the thyroxine and this decreases the levels of the thyroid hormone, which is not something that you would want, is it?

I didn't know that.

And you should not only take thyroxine 30 minutes before breakfast, you should never take it with mineral water, as most mineral water contains magnesium.

I am always careful about that! I always take medication with tap-water. So, when should I take the magnesium?

At least two hours after taking your thyroid medication. And not more than 300 milligrams per day.

Why not?

Too much magnesium can lead to diarrhoea. Because of your thyroid medication, I recommend taking the magnesium in the evening. The cramps should improve in the next day or so.

Thank you, you have been very reassuring.

You are welcome. Goodbye.

Goodbye. ■

*Catherine Croghan,
Lecturer in English and native speaker*

VOCABULARY

amounts	Mengen
steady	gleichbleibend
deficiency	Mangel
antagonist	Antagonist, Gegenspieler
tightens	zusammenziehen
loosen	auflockern, entkrampfen
potassium	Kalium
blood vessels	Blutgefäße
excruciating	qualvoll, schmerzhaft
spasms	Krämpfe
calf muscles	Wadenmuskeln
dietary supplements	Nahrungs- ergänzungsmittel
assess	etwas feststellen
average	Durchschnitt
hypomagnesemia	Hypomagnesiämie, Magnesiummangel
abnormally	(hier) ungewöhnlich
thyroid gland	Schilddrüse
decreases	reduziert

PTA

DIE PTA IN DER APOTHEKE



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