

Ancient Medicine for Modern Times: Magnesium

By Dr. Marianne Teitelbaum

Over the next several months, I will be periodically writing about the importance of magnesium in our lives. I want everyone to know how this mineral works on various levels of the physiology. I will be writing several articles, each showing how magnesium works in preventing almost every disease you can think of.

So why is magnesium so important? Why is magnesium considered the “Lamp of Life?”

First, inside chlorophyll is the lamp of life and that lamp is magnesium. The capture of light energy from the sun is magnesium-dependent. Magnesium is bound as the central atom of the porphyrin ring of the green plant pigment chlorophyll. Magnesium is the element that causes plants to be able to convert light into energy and chlorophyll is identical to hemoglobin except the magnesium at the center has been taken out and iron put in.

Chlorophyll systems convert energy from visible light into small energy-rich molecules easy for cells to use.

As Dr. Mark Sircus puts it in his book, *Transdermal Magnesium Therapy*: “Chlorophyll with its magnesium core is recognized as one of nature’s richest sources of

important nutrients where its rich green pigment is vital for the body's rapid assimilation of amino acids and for the synthesis of enzymes. Thus, hundreds of enzymes need magnesium in order to work, which is why magnesium affects every aspect of our physiology.

Magnesium is needed by plants to form chlorophyll, which is the substance that makes plants green. Without magnesium sitting inside the heart of chlorophyll, plants would not be able to take nutrition from the sun because the process of photosynthesis would not go on. When magnesium is deficient things begin to die. In reality we cannot take a breath, move a muscle or think a thought without enough magnesium in our cells."

Let's first see how magnesium's influence on stabilizing the thyroid gland:

THE IMPORTANCE OF MAGNESIUM IN OUR LIVES. PART 1: THE ELUSIVE THYROID GLAND

This is a common scenario I see almost every day in my practice. I have a patient (usually female, although can occur in men as well), at any age, usually from the teens on through post-menopausal.

They present with all the symptoms of thyroid imbalance: loss of hair, weight gain, muscle cramping, cold hands and feet, irregular menstrual cycles, low energy, heartbeat irregularities, and so on.

They see their doctor and bloodwork is ordered. All the values for the thyroid gland are within normal limits. So the patient tries numerous things for her symptoms:

--- prescription medicines for the thyroid from the allopathic doctor
---thyroid glandular and iodine or kelp from the holistic doctor
---ashwagandha from the Ayurvedic doctor

But nothing seems to work. The patient becomes frustrated as the symptoms continue to mount.

The problems continue, because the real issue is not being addressed.

First, we need to see what is draining the thyroid – going to bed late, rushing through the day, stress, hyperactivity, too much talking and overuse of the senses.

Then we need to make sure the diet is healthy – I will not go into details on the diet since most of you know this by now.

But then the patient needs to understand this very important point as well: THE SYMPTOMS OF MAGNESIUM DEFICIENCY ARE IDENTICAL WITH MANY OF THE SYMPTOMS OF THYROID DISEASE.

So now let's address this very important issue.

When calcium and magnesium are not in balance the thyroid is affected. Magnesium carries calcium into the cell. The lack of magnesium will cause calcium to stay on the outside of the cell and build a “calcium shell” which allows a low cell hormone permeability. This means the thyroid hormones cannot get into the cell because they cannot pass through the calcium buildup. So the person is making enough hormones, but they can't get to their targeted site.

Many patients complain of irregular heartbeats or a fast pounding heartbeat. The primary function of magnesium that is critical in thyroid disease is that it enables the muscles to relax. With inadequate magnesium, the muscles cramp. Many of our patients describe leg or foot cramps or “Charlie horses”. But when this happens to the heart muscles, the heart does not go through a complete relaxation phase then the next contraction begins before the relaxation is complete. This results in rapid heartbeats and/or an irregular heart rate known as an arrhythmia.

If magnesium is low, the Vitamin D levels will be low since magnesium plays a role in the metabolism of cholesterol and Vitamin D is made from cholesterol. If Vitamin D goes low, then thyroid function will be affected. And conversely, Vitamin D, a fat-soluble vitamin, aids in the absorption of magnesium into the cells.

Magnesium is found in the blood and the spinal fluid and is the only electrolyte found in higher concentration in the spinal fluid than in the blood.

The reason for the large magnesium content in the spinal fluid is that the mineral is necessary for balancing the stimulating effects of the body’s hormones. The purpose of thyroid, gonadal, adrenal and other hormones is to charge up or excite the body.

Magnesium tends to slow down and relax the system, thus regulating the hormones and achieving a happy medium.

When magnesium is deficient there is no regulation. This can cause osteoporosis, periodontal disease, epilepsy, hyper-irritability, overactivity, and nervousness.

Magnesium is important in bone formation (more details about this in another article). If deficient, the bone tissue suffers and the hair falls out.

And finally, magnesium deficiency can cause low levels of DHEA. Known as the “mother of all hormones”, DHEA is converted in the body into several different hormones, including estrogen and testosterone. This hormone (DHEA) is made in the adrenal cortex, along with cortisone, hydrocortisone, and aldosterone. These steroid hormones are created from cholesterol. However, cholesterol cannot be synthesized without magnesium. So if magnesium is low, it begins a cascade of hormonal deficiencies, including the thyroid, adrenals and sex hormones.

It is estimated that 80% of people in developed countries have magnesium deficiency. Here are the common causes:

- Synthetic Vitamin C competes with magnesium absorption and thus depletes it in the system (it's better to eat the fruit containing the Vitamin C than to take synthetic Vitamin C supplements)
- Poor diet
- Water which is lacking minerals from the earth
- Prescription drugs
- Stress
- Eating sugar – it takes 50 molecules of magnesium to process one molecule of refined white sugar, which quickly depletes magnesium
- Diabetes causes the body to flush out important minerals, including magnesium
- Malabsorption – lack of friendly bacteria in the gut
- Taking synthetic calcium supplements

- Alcohol, coffee, soda and birth control pill use
- Synthetic oral Vitamin D – it binds the magnesium (I will be writing an article about the transdermal Vitamin D that Vaidya Mishra makes in another article – this is safe to use and won't deplete magnesium)

Foods high in magnesium are:

- Whole wheat
- Coconut
- Spinach (cooked)
- Avocado
- Sunflower seeds
- Dandelion greens
- Raisins
- Green peas
- Blackberries
- Beets
- Broccoli
- Green leafy vegetables (cooked)
- Orange juice (fresh-squeezed)

So, until the magnesium levels are normalized the thyroid function will continue to be low, even if the patient is on the thyroid medicine, glandular or ashwagandha.

It is recommended that magnesium be taken transdermally (through the skin) since taken orally will upset the intestinal tract and the kidneys.

We have several transdermal ways of getting this important nutrient: Dr. Mishra has made for us:

Relaxing and Detoxifying Bath Pouches (used in the bath – soak in the tub for 20 minutes using one bath pouch each time) – these have high quality and highly absorbable magnesium Dr. Mishra isolated out of his soma salt.

We also have Vata Oil with Magnesium and Vitamin D. Do a 20-minute oil massage as many days a week as time will allow.

And an upcoming article will feature the new Magnesium Roll-on Dr. Mishra will be putting on the market soon — we are eagerly awaiting this much-needed remedy! I personally will be prescribing this for every patient of mine.

So now, you can see we have several ways to address this imbalance, thanks to the foresight of Vaidya Mishra and his family lineage of Shaka Vansya Ayurveda (SVA), which have been treating patients transdermally for over 5,000 years.

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