**22 Little Known Dangers of Magnesium Deficiency**

Every single body organ, especially the kidneys, muscles, and the heart , use magnesium, so it is an essential mineral for our general health.

Sometimes, you may not be aware of it, but if you experience symptoms like abnormal heart rhythms, muscle spasm, eye twitches, weakness, or fatigue without some evident reason, your body probably lacks sufficient amounts of this mineral.

Moreover, blood tests cannot indicate magnesium deficiency as only one percent of it is distributed by blood, so you should examine the levels of magnesium if you already experience some of the most common magnesium deficiency symptoms.

It is mostly stored in the organs and bone, as it serves to support numerous biological functions. Hence, it is possible t have low magnesium levels in the body and not be aware of it, so this deficiency is often called “invisible deficiency.”

Research has shown that even 80 percent of US adults  do not consume this magnesium enough and may lack it. Another study showed that only 25 percent of Americans are getting the recommended daily amount of magnesium, which is 310 to 320 milligrams (mg) for women and 400 to 420 for men.

What’s more, Dr. Carolyn Dean, a medical and naturopathic doctor even states that this amount of magnesium is *“just enough to ward off outright deficiency.”*

It is a mistake to believe that magnesium is needed only for our bones and heart, as the role of this mineral for the entire body is simply incredibly important. Research has found 3,751 magnesium-binding sites on human proteins, suggesting that it greatly supports health and prevent multiple illnesses.

It is also included in over 300 different enzymes in the body and is vital for the detoxification of the organism, as it helps the removal of toxins, heavy metals, and environmental chemicals.

**These are some of the roles of magnesium in our body:**

* Helping the digestion of fats, proteins, carbohydrates
* Serving as a building block for RNA and DNA synthesis
* Activation of the nerves and muscles
* Activation of adenosine triphosphate (ATP) in order to create energy
* Acting as a precursor to neurotransmitters such as serotonin

The Magnesium Miracle, published in 2014, was written by Dr. Dean, a man who studied this mineral for more than 15 years. This book explains the scientifically proven effects of magnesium deficiency in the following 22 medical areas:

* Nerve problems
* Musculoskeletal conditions (fibromyalgia, cramps, chronic back pain, etc.)
* Asthma
* Blood clots
* Hypoglycemia
* Bowel diseases
* Diabetes
* Liver disease
* Cystitis
* Anxiety and panic attacks
* Fatigue
* Depression
* Raynaud’s syndrome
* Kidney disease
* Tooth decay
* Heart disease
* Migraine
* Hypertension
* Osteoporosis
* Obstetrics and gynecology (PMS, infertility, and preeclampsia)
* Insomnia

The early symptoms of a deficiency of this mineral include fatigue, weakness, loss of appetite, nausea, and headaches, while the following signs occur it this deficiency is not treated on time and lasts for a longer period of time:

* Numbness and tingling
* Coronary spasms
* Muscle contractions and spasms
* Personality changes
* Abnormal heart rhythms
* Seizures

Magnesium can be of great help in the prevention of chronic diseases. Numerous studies have shown that it supports the proper function of metabolism, specifically in terms of glucose regulation, type @ diabetes prevention, and insulin sensitivity.

To clarify this, high levels of magnesium in the body lower the risk of impaired glucose and insulin metabolism and decelerate the development from pre-diabetes to diabetes in middle-aged individuals.

According to experts, *“Magnesium intake may be particularly beneficial in offsetting your risk of developing diabetes if you are high risk.”*

Additionally, researchers have provided evidence that the increased intake of the mineral leads to a higher bone mineral density in people. Norwegian researchers have found that the presence of magnesium in drinking water reduced the risk of hip fractures.

In general, this mineral can help you lower the risk of all types of cancer. The American Journal of Clinical Nutrition published a study which showed the link between higher intakes of dietary magnesium and the reduced risk of colorectal tumors.

The meta-analysis showed that for every 100-mg increase in magnesium intake, the risk of a colorectal tumor was reduced by 13 percent, while the risk of colorectal cancer by 12 percent. Researchers believe that the anti-cancer properties of magnesium many be due to the capacity to reduce insulin resistance, which may cause favorable effects on the tumor development.

Magnesium can be found in high amounts in green leafy vegetables such as spinach and Swiss chard, seaweed, nuts, avocados, beans, and seeds, like pumpkin, sunflower, and sesame seeds. One of the best options is to juice your vegetables in order to get the most out of them.

Yet, it is not enough just to consume magnesium-rich foods, as nowadays, most food grown lacks magnesium and other minerals.

**Dr. Dean says:**

*“Magnesium is farmed out of the soil much more than calcium… A hundred years ago, we would get maybe 500 milligrams of magnesium in an ordinary diet. Now we’re lucky to get 200 milligrams.”*

Namely, in many foods grown these days, herbicides, such as glyphosate, act as chelators, and thus block the uptake and utilization of minerals, so magnesium r hard to find in food. Additionally, it is depleted in the process of cooking and processing.

On the other hand, many foods affect the way the body absorbs this essential mineral. For instance, the consumption of alcohol in excess influences the absorption of vitamin D, which helps the magnesium absorption.

Dr. Danine Fruge, associate medical director at the Pritikin Longevity Center in Florida also suggests that the body excretes magnesium through the kidneys in the case of high sugar intake as well, *“resulting in a net loss.”*

**Reduced magnesium levels are also linked to these factors:**

* Unhealthy digestive system, which prevents the proper absorption of magnesium in the body’s (Crohn’s disease, leaky gut, etc.)
* Menopause
* Age- Elder people have an increased risk to become magnesium deficient as its absorption is reduced with age; Also, they are more likely to take medications which interfere with the magnesium absorption)
* Excessive consumption of soda or caffeine
* Certain medications, such as diuretics, some antibiotics (like gentamicin and tobramycin), corticosteroids (prednisone or Deltasone), insulin, and antacids

**Vitamin K2, Calcium, and Vitamin D Must Be Balanced with Magnesium**

Supplementation can help you lower the risks of magnesium deficiency, but it is not that simple. To be clear, when taking magnesium supplements, you should also take calcium, vitamin D3, and vitamin K2 as well, as they all work together. For instance, excess calcium amounts without proper magnesium intake may cause a heart attack and sudden death.

Researchers who have examined the Paleolithic or caveman diet found that the ratio of calcium to magnesium in the diet that our bodies evolved to consume is 1-to-1. In general, our diet is higher in calcium than magnesium, and their ratio is about 3.5-to-1.

In the case of high calcium, but low magnesium amounts, a person may experience muscle spasms and heart issues. Dr. Dean explains:

*“What happens is, the muscle and nerve function that magnesium is responsible for is diminished. If you don’t have enough magnesium, your muscles go into spasm. Calcium causes muscles to contract. If you had a balance, the muscles would do their thing. They’d relax, contract, and create their activity.”*

Furthermore, the balance of calcium and magnesium also demands the sufficient amounts of vitamins K2 and D. These 4 important nutrients support each other, and imbalance between  may be the reason for the link between calcium supplements and the increased risk of heart attacks and stroke, as well as the cases of vitamin D toxicity.

These adverse effects are partially due to the fact that vitamin K2 keeps calcium in the appropriate place, so in the case of its deficiency, the added calcium accumulates on wrong places, such as the soft tissue, and causes even more problems.

Similarly, if you take vitamin D orally, you should also consider taking vitamin K2 and more magnesium, either as supplements or in food, as excess vitamin D doses without magnesium and vitamin K2 in proper amounts may cause vitamin D toxicity and magnesium deficiency symptoms, such as inappropriate calcification which causes heart damage.

**How to raise the Magnesium Levels**

The levels of magnesium can be greatly elevated through juicing greens. Organic foods are often richer in it if grown in soils high in nutrients.

However, if you decide to take magnesium supplements, you can choose between multiple different kinds, as this mineral must be bound to another substance, and you cannot find a 100 percent magnesium supplement.

The “bowel test” is of great help as it determines if you take excessive amounts of magnesium via supplementation.

**In Dr. Dean’s words:**

*“The best way to tell if you are getting enough magnesium is the “bowel test”. You know when you have too much magnesium when your stools become loose. This, in fact, may be a blessing for people with constipation… [which] is one of the many ways magnesium deficiency manifests.”*

Another extremely effective way to raise your magnesium levels is to take regular Epsom salt baths or foot baths. Epsom salt is actually a magnesium sulfate, which can be easily absorbed through the skin. You can also use magnesium oil for topical use. Yet, note that you should avoid magnesium stearate, as even though it is commonly used, it is a harmful additive.

The substance combined with magnesium in the supplement influences the absorption and its bioavailability, and may also provide additionally health benefits.

The various forms differ, and some of the best alternatives include magnesium threonate and citrate, as they enter cell membranes, as well as the mitochondria, and boost the energy levels.

**We will provide some important information on these combinations in supplements:**

* Magnesium glycinate is a chelated magnesium form which provides the highest levels of absorption and bioavailability. It is perfect in the case of magnesium deficiency.
* Magnesium oxide is a non-chelated type, and it is commonly combined with a fatty or organic acid. It includes 60 percent magnesium, and its use may soften the stool.
* Magnesium carbonate has 45 percent magnesium and has potent antacid effects.
* Magnesium chloride (Magnesium lactate) has only 12 percent magnesium, but its absorption is better than others, even though they contain more magnesium.
* Magnesium taurate is the mixture of magnesium and an amino acid, known as taurine. Its use calms the body and mind.
* Magnesium citrate is the combination of magnesium and citric acid, it is absorbed , inexpensive, and has strong laxative effects.
* Magnesium threonate has a remarkable ability to enter the mitochondrial membrane, and since it is a new one, it provides promising effects and is potentially the best supplement on the market.
* Magnesium sulfate/Magnesium hydroxide (milk of magnesia)- Both of these are used as laxatives, but make sure you use them as directed, in order to avoid overdosing.

Source:[articles.mercola.com](http://articles.mercola.com/sites/articles/archive/2015/01/19/magnesium-deficiency.aspx)
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