



The Hoffman Centre for Integrative Medicine

Are You Overlooking the Importance of “Magnesium”

Patient Handout

The Fourth Most Abundantly Needed Mineral in Your Body?

- Although magnesium may not be at the top of the list of minerals that first come to your mind as necessary for good health, it is in fact very important to your body and is required to maintain wellness.
- Magnesium is actually the fourth most abundant mineral in your body, which demonstrates how much your body depends on its presence. More than half of the magnesium found in your body is located in your bones and the remaining quantity is primarily located in cells of tissues, muscles, organs and bodily fluids. Like other minerals found in your body, magnesium cannot be produced within the body and therefore must be received through outside sources, such as diet and supplements.
- There are multiples benefits to keeping a healthy level of magnesium present in your body, including effective temperature regulation, energy production, transmission of nerve impulses and the healthy formation of bones and teeth. Like other important vitamins and minerals, magnesium is essential for good health.

Why is Magnesium so Important?

- Magnesium is not just responsible for a few of your bodily functions. Rather, it is necessary for more than 300 biochemical reactions in all different parts of your body. Magnesium contains an enzyme that is required to help trigger chemical reactions within bodily functions, which helps in metabolising proteins, fats and carbohydrates, along with assisting in the proper function of genes. Another important reason to have healthy levels of magnesium, this storage is not possible.
- Magnesium helps to relax your nerves and muscles, build and strengthen your bones, as well as assists with the healthy, smooth circulation of blood flow. Since magnesium is associated with so many diverse actions in your body, having a magnesium deficiency can have a negative impact. So many organs and systems in your body require magnesium in order to function properly including your:
 - Cardiovascular system
 - Nervous system
 - Kidneys
 - Digestive system
 - Hormone secreting glands
 - Brain
- As mentioned, your muscles are also affected by magnesium. Your liver is also a vital organ that requires magnesium to metabolise. With all of these vital organs and systems requiring magnesium to operate, maintaining a healthy balance of the magnesium mineral is essential to proper growth and overall health.

How to Know If You Need More Magnesium

- Since it is so important to keep healthy levels of magnesium in your system, knowing the symptoms of a magnesium deficiency is imperative. As there are multiple systems affected, the symptoms for a magnesium deficiency are just as diverse. Some of the symptoms include:
 - Muscle weakness, cramps, twitches
 - Lack of appetite
 - Insomnia
 - Weakening of bone structures
 - Imbalanced blood sugar levels
 - Seizures
 - Elevated fats in the bloodstream
- An additional magnesium deficiency “clue” for some people can be the “difficulty in phasing out background noise”
- Magnesium deficiencies can also have very negative effects on your heart muscle. The resulting symptoms associated with your heart include:
 - Arrhythmia
 - Irregular contraction
 - Increased heart rate
- If you are experiencing some of these symptoms, you may want to consult your healthcare practitioner for information on whether or not a magnesium deficiency may be the cause.

How to Increase Your Magnesium Intake

- There are different ways that you can increase the amount of magnesium that you consume. As stated earlier, your body cannot naturally produce magnesium because it is a mineral; therefore, you must receive it from outside sources. There are certain foods that are known to be high in magnesium levels, which is one way that you can be certain you are consuming the needed mineral. Some of these foods include:
 - Spinach
 - Cooked turnip greens
 - Steamed broccoli
 - Flax seeds
 - Raw celery
 - Ripe tomato
 - Almonds and cashew nuts
- There are many more foods that contain high levels of magnesium and you can determine which ones work best for your by discussing your magnesium intake with your healthcare provider.
- However, keep in mind that the majority of Americans are not getting enough magnesium in their daily diets. As many as 68 per cent of Americans do not consume the daily recommended amount of magnesium, according to a government study and 19 percent do not consume even half of it.
- Even the National Institutes of Health Office of Dietary Supplements (ODS) points out that:

“For many people, dietary intake may not be high enough to promote an optimal magnesium status, which may be protective against disorders such as cardiovascular disease and immune dysfunction”

- With that in mind, another way to increase your intake of magnesium is through supplementation. You can purchase magnesium as a dietary supplement in two different forms. One form is chelated and the other is non-chelated. Chelated magnesium means that the magnesium molecule is jointed with another molecule, which is normally a form of amino acids, which serve as foundations for proteins. Name of these supplements that are widely used include:
 - Magnesium glycinate
 - Magnesium aspartate
 - Magnesium taurate
- The other form of magnesium that you can purchase, the non-chelated form, involves the magnesium being attached to an organic acid or a fatty acid. These forms include magnesium sulphate, magnesium oxide and magnesium carbonate.
- For determining which form of magnesium would best suit your bodily needs, discuss these options with your healthcare practitioner.
- Ask your health care practitioner help you understand the differences in the magnesium supplements available, as well as recommend the option most suited for your needs.

Your Medications Could Lower Your Magnesium Levels

- There are many medicines that affect you levels of magnesium as well. Some of these medicines include thiazide diuretics and loop diuretics that are used to lower blood pressure and antibiotics, including neomycin, tetracycline, erythromycin, sulfamathoxazole and sulfonamides. Other medications that can affect magnesium levels are birth control pills, warfarin and cyclosporine. If you take prescription medication, ask your healthcare provider or pharmacist if they could be causing a deficiency of magnesium in your body, along with the associated side effects.

Numerous Health Conditions Associated with Magnesium

There is a long list of health conditions that can be improved with proper magnesium levels. Some of the conditions that magnesium can help prevent include:

- Heart attack
 - Alcoholism
 - Autism
 - Congestive heart failure
 - Asthma
 - Diabetes
- Other negative health conditions associated with a lack of magnesium include but are not limited to coronary heart disease, glaucoma, epilepsy, hypertension, inflammatory bowel disease, migraines and multiple sclerosis.
 - One recent study published in Magnesium Research even found that, in magnesium deficient people, taking a magnesium supplement not only increased magnesium levels but also reduced levels of C-reactive protein (CRP). CRP is a special type of protein produced by your liver. When your body experiences systemic inflammation, levels of this protein go up. Many researchers and doctors now believe that CRP may be as important as, or more important than, cholesterol levels in determining risk of heart disease.

- The researchers noted:
“The findings show that many individuals have a low magnesium status associated with increased chronic inflammatory stress that could be alleviated by increased magnesium intake.”

Current Issues and Misconceptions about Magnesium: Does it Help Your Heart, Blood Pressure and Diabetes?

- Magnesium and its relation to potassium and blood pressure has been a debated issue within the medical field; however, there have been studies that have shown the positive relationship between healthy magnesium levels and healthy blood pressure levels. Green vegetables and foods high in magnesium are also typically high in levels of potassium and calcium and are low in sodium and fat. Because of this, it can be difficult at times to evaluate the independent effect of magnesium on blood pressure and other health conditions because it can simply be hard to eliminate other nutritional factors.
- However, new scientific evidence by Dietary Approaches to Stop Hypertension (DASH) is strong in proving that diets containing plentiful amounts of magnesium are very effective in individuals working to modify their hypertension. This group also suggests that even people with “pre-hypertension” who want to avoid developing full blown high blood pressure should also make sure they eat a magnesium rich diet.
- Magnesium also decreases the chance of developing diabetes in older women. The Iowa Women’s Health Study followed a group of women beginning in 1986 and the study determined that the risk is lowered based solely on the dietary intake of whole grains, dietary fibre and magnesium. Also, several studies have tested the option of using supplemental magnesium for controlling Type 2 diabetes. This study concluded that the participants who received the magnesium supplement had higher blood levels of magnesium and had improved control of their diabetes.
- Another common topic of discussion around magnesium deals with its relation to cardiovascular disease. Some studies have shown that having higher blood levels of magnesium can lower your risk of having coronary heart disease as well as reduce your risk of having a stroke. These studies recommend consuming healthy amounts of magnesium to benefit your entire cardiovascular system. These findings are also leading to new research on how magnesium levels may be associated with cardiovascular disease.

Consider this....

- Magnesium has been proven to affect multiple important bodily functions and your risk for certain unhealthy conditions could be significantly lowered by maintaining healthy levels of this pertinent mineral. Whether you simply want to relieve muscle aches, PMS symptoms, digestive irregularities or address more serious issues such as diabetes and hypertension control, your healthcare professional can give you more information on how you can achieve healthy levels of the magnesium mineral through both dietary and supplement options.

Reference

Applied Kinesiology Centre – healthrealizations.com