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<https://youtu.be/uXsJobb-ocA>

## Magnesium- “the Master Mineral” you should know.

“Gold, silver and platinum get the most attention as precious metals, but people do not give recognition for metals that are essential for our health, without we cannot survive.”

Let us talk about the importance of magnesium in our body, that is involved in hundreds of chemical reactions in the body and helps maintain good health, and the daily intake is 400mg.

Subclinical magnesium deficiency is common in the general population and could be considered a public health crisis.

There are essential minerals including- calcium, phosphorus, potassium, sodium, chloride, iron, zinc, iodine, chromium, copper, fluoride, molybdenum, manganese, and selenium, but magnesium is considered as the ‘Master Mineral’.

The body needs all these minerals, and hence defined as essential macro-minerals, and others as trace microminerals.

Magnesium is found in our bones, needed for making proteins, for muscle contractions, nerve transmissions, your immune health system and many more. If you lack magnesium in your muscles, you will not be able to get up in the morning for the day’s activities. That is how much magnesium is essential for survival. Most minerals including magnesium is needed to activate enzymes- molecules with important jobs in our bodies.

Magnesium is a co-factor in more than 300 enzyme systems that regulate diverse biochemical reactions in the body, including protein syntheses, muscle and nerve function, blood sugar control, and blood pressure regulation. Magnesium is required for energy production, oxidative phosphorylation, and glycolysis.

Glycolysis means breakdown of stored glycogen in the liver into glucose.

### **How does magnesium help to control blood sugar?**

Magnesium deficiency is seen in most diabetics. A deficiency can occur with both type 1 and type 2 diabetes, though more prevalent in type 2.

Diabetics having insulin sensitivity or insulin resistance lose magnesium in their urine, contributing to low levels of this nutrient in the body.

So, if you are a diabetic your doctor will check the magnesium blood levels frequently.

Taking a magnesium supplement is recommended for diabetics, to improve blood sugar and possibly prevent type 2 diabetes.

There are various types of magnesium supplements. According to the National Institute of Health (NIH), some studies have found that magnesium aspartate, citrate, lactate and chloride have better absorption rates, when compared to other forms.

There are injectable forms, or capsules, liquid, or powder form.

In a balanced meal you need to focus on the mineral target, as we do not make them in our body. They come from rocks, soil, and water, and they are absorbed through the plants for our consumption.

Some drugs, like diuretics given to treat high blood pressure, cause excretion of precious magnesium in the urine.

Magnesium is lacking in people who get recurrent diarrheas.

You need to take 420 mg of magnesium per day for men, and 320 mg per day for women.

Magnesium is rich in almonds, green veggies such as spinach and broccoli, soybeans, peanut butter, sunflower and other seeds, halibut, whole-meal bread, and milk. Foods containing natural magnesium are: Dark Chocolate, banana, cocoa, nuts, avocados, broccoli, almonds. Legumes like dhal, Tofu, seeds, whole grain like wheat, oats, barley, and rice

White processed rice has no magnesium. Brown rice in ½ cup provides around 11 % of your daily serving of cooked brown rice.

The foods that have the highest amount of magnesium includes:

Pumpkin seed - kernels: Serving Size 1 oz, 168 mg.

Almonds, dry roasted: Serving Size 1 oz, 80 mg.

Spinach, boiled: Serving Size ½ cup, 78 mg.

Cashews, dry roasted: Serving Size 1 oz, 74 mg.

Pumpkin seeds in shell: Serving Size 1 oz, 74 mg.

Peanuts, oil roasted: Serving Size ¼ cup, 63 mg.

Caffeine in coffee and sugar depletes the body's magnesium levels.

You need to be careful not to take too much of any mineral in supplement form as that could be harmful.

What is the 1<sup>st</sup> sign of a magnesium deficiency?

You could be tired when you start exercising.

You could have blood pressure issues.

Irritable whilst sleeping

Irregular heart beats

Cramping in the feet or the calf. You could get tetany, which is a form of twitching, or tremors.

Drinking too much of alcohol may have a magnesium deficiency.

Vitamin D deficiency, because vitamin D stimulate the absorption of magnesium, or magnesium may be required to absorb vitamin D.

Chronic diarrhea, taking antacids and antibiotics and malabsorption all create magnesium deficiency.

Calcification of arteries

When your magnesium levels are low, one of the earliest symptoms to appear is calcification of the arteries.

As a result, you can develop coronary problems, like heart attack, heart failure and heart disease.

Lets discuss the important part played by magnesium in Anxiety & depression

Magnesium is an important mineral to the brain, and with magnesium loss or deficiency you could get increased stress, and to improve the stress response, recovery and repair and further to prevent depression you may have to take magnesium in supplement form. Although the association between magnesium and depression is well documented the mechanism is unknown.

Low magnesium levels can affect the synapse between two neurones. It prevents the activation at these synapses. It plays in many pathways, enzymes, hormones and neurotransmitters involved in mood regulation.

High Blood Pressure / Hypertension

A Harvard study with over 70,000 people found that those with the highest magnesium intake had the healthiest blood pressure numbers.

So, now you will realise that magnesium is a vital nutrient that is often not taken enough due to the lack of knowledge of its important part played in your daily wellbeing. Healthy magnesium levels protect metabolic health, stabilize mood as mentioned earlier, keep stress in check, promotes better sleep and contribute to heart and bone health.

Summarizing.

10 Evidence-Based Health Benefits of Magnesium

Magnesium Is Involved in Hundreds of Biochemical Reactions in Your Body. ...

It May Boost Exercise Performance. ...

Magnesium Fights Depression. ...

It Has Benefits Against Type 2 Diabetes. ...

Magnesium Can Lower Blood Pressure. ...

It Has Anti-Inflammatory Benefits. ...

Magnesium Can Help Prevent Migraines. ...

It Reduces Insulin Resistance.

Hope this video talk was useful. It is advised that you take Magnesium and vitamin D as supplements daily.

Stay safe Goodbye for now.

In Sri Lanka studies have found that among the social segments, School Children aging between 14-18 years (320 mg / day) and Managerial level employees (302 mg / day) elicited significantly low levels of daily Magnesium intakes, which sounds an alarm of severe health disorders in future.

Change of lifestyles which have led to consume more fast food and unawareness of how to balance nutrients in a diet, have resulted in lower intakes of Magnesium by several social segments in Sri Lanka, which may influence higher rates of several non-communicable diseases in the society if continued in the same fashion.

(Studies by K.W.M.A Jayasinghe<sup>1</sup>, K.K.D.S. Ranaweera<sup>2</sup>, R.M.P.P. Gunawardene<sup>3</sup>, R.M.G.B Rajanayake<sup>4</sup>,<sup>1,2</sup>Department of Food science and Technology, University of Sri Jayewardenepura, Sri Lanka.)