# Why magnesium is good for you

Every cell in the body needs magnesium to produce energy. Magnesium is required to make more than 300 different enzymes and to send messages along the nerves.

* Magnesium makes the muscles relax and that ensures the heart is healthy and beats regularly. Magnesium is also needed to keep blood pressure down to normal levels.
* Magnesium is required so that the body can use other vitamins and minerals properly – vitamin C and calcium work better, for example, when there is sufficient magnesium in the body.
* Magnesium works very closely with calcium to help keep bones strong throughout life.

There is about 25 grams of magnesium in the body and most of it is in the bones and teeth, but there is also a lot in the muscles and blood. The amount in the blood is very important as it ensures there is correct balance in various body processes. In the same way calcium is needed to make the muscles contract (when the heart beats) magnesium is needed to make the muscles relax again. The levels of magnesium and calcium in the blood need to be steady and sufficient. If there are insufficient blood levels of calcium and magnesium, the body will pull it from the bones and send it to the blood, which can result in weakened bones.

## Important magnesium facts

Magnesium is starting to be a mainstream medication for people with migraines, asthma and diabetes.

## Groups at risk of magnesium deficiency

About 75% of the population do not get enough magnesium from their foods to meet the RDA. Even so, very few people are really deficient, as it would require intake very low amounts of magnesium over a long time to have any symptoms.

Magnesium deficiency occurs when there is <85mg intake of magnesium per day.

Deficiency of magnesium can occur if the following health problems are present:

**Alcoholics** – most heavy drinkers have poor diets that are too low in magnesium and other nutrients

**Diabetics** – may be excreting a lot of magnesium in the urine

**People with kidney disease** – the kidneys may not be handling magnesium very well. Your doctor will prescribe medications that prevent magnesium deficiency. People with kidney disease should NOT take magnesium supplements

**People that have been vomiting or have severe diarrhoea** – will be eliminating most of the magnesium (and other vital nutrients) when this happens

**People taking diuretic drugs** – diuretics make urine excreted more than normal and this may lower magnesium levels. This can pose a real problem if non-prescription or herbal diuretics (“water pills”) are used, without informing a medical professional if you are also taking other medications

## Symptoms of magnesium deficiency

If there is insufficient dietary magnesium, all the tissues in the body become affected, but mostly the heart, nerves and kidneys.

**Generally magnesium deficiency symptoms include**:

* Irritability
* Loss of appetite
* Muscle weakness or tremors
* Nausea

**Severe magnesium deficiency**

Can cause the heart to beat irregularly

Many doctors and nutritionists feel that breathing problems, such as asthma are cause in part by a magnesium deficiency.

## Magnesium and health

**Heart problems** – low levels of magnesium seem to be related to some types of heart problems. Because magnesium helps the heart muscles to relax, a short supply may cause a spasm in one of the coronary arteries. This spasm blocks flow and can cause a heart attack. Some doctors think a deficiency of magnesium is the cause of many sudden heart attacks, especially in people who don't have a history of heart disease. In fact, intravenous magnesium is used in emergency rooms in the USA as a treatment for heart attacks

**Blood clots** – magnesium also protects against heart attacks caused by blood clots. Magnesium helps keep the clots from forming by making platelets (tiny blood vessels that form clots) less “sticky”, and this makes them less likely to lump together into an artery-clogging clot

**Heart arrhythmia** – too little magnesium can cause cardiac arrhythmia. These are irregular heartbeats – an extra beat, a skipped one or just fast heart beat for no reason. If the problem is serious enough, the heartbeat doesn't return to normal and sudden death occurs. Studies suggest that people with low levels of magnesium are more likely to die suddenly from heart rhythm problems

**Magnesium manages blood pressure** – magnesium helps the muscles relax and if there is insufficient magnesium, the walls of the blood vessels tighten up, which raises blood pressure. Coincidentally, many people with high blood pressure don't get enough calcium either. Pregnant women sometimes get dangerously high blood pressure, especially in the last few months of pregnancy. Magnesium may help prevent this problem. Pregnant women are usually prescribed a multivitamin supplement that has magnesium in it – **DON'T** take extra magnesium supplements unless a medical professional has recommended it

**Magnesium and asthma** – asthma causes the muscles lining the airways in your lungs contract become too narrow, so there is trouble breathing. Magnesium helps the muscles relax, so the airways open up and breathing is easier. In emergency rooms in the USA, intravenous magnesium is used to treat severe asthma. People with asthma may have it from a diet is low in magnesium, so getting more through supplements and magnesium-rich foods could help prevent attacks and make attacks less severe. **DON'T** try to treat an asthma attack on your own by taking magnesium supplements – it could be dangerous - always take asthma medicines prescribed

**Healthy bones** – not only is calcium required for healthy bones, but so is magnesium. Magnesium helps keep calcium levels in balance and makes sure enough Vitamin D is produced. Twice as much calcium as magnesium is required

**Diabetes** – high blood pressure is often a problem for people with diabetes – and people with diabetes often have low magnesium levels. Some doctors think there is a connection and recommend magnesium supplements for diabetic patients. Magnesium may also help diabetics control their blood glucose levels better and help prevent diabtese complications later on, like eye problems and heart disease. There is also some evidence that older people who are at risk for diabetes can prevent it by taking extra magnesium. People with diabetes, or at risk for it, should aim to get as much magnesium as possible from their diet and also consider taking a supplement. Talk to a medical professional about magnesium supplements **BEFORE** taking them, especially if there are kidney problems because of diabetes

**Migraines** – People who suffer with migraine headaches often have low magnesium levels. Migraine sufferers should consider magnesium supplementation to help reduce the number of attacks and the severity. One study showed that in about half the cases, intravenous magnesium stopped migraine headaches in their tracks. Unfortunately, once a migraine is in effect, just swallowing magnesium supplements doesn't have the same effect and it is better to take magnesium supplements on a continuous basis for them to take effect

**PMS** – Some women claim that magnesium supplements relieve uncontrollable PMS symptoms, especially breast tenderness, headaches and irritability. For severe PMS, try taking 300-500mg per day for the two weeks leading up to menstruation. If severe cramps are a problem at menstruation, keep taking magnesium during that time – it may help reduce cramping. Magnesium supplementation may help even more if it is combined with vitamin B6 (pyridoxine)

**Kidney stones** – Magnesium supplements seem to keep calcium kidney stones from coming back. Only about 100-300mg a day is required and seems to work better if 10mg of vitamin B6 (pyridoxine) is taken with it. People with kidney stones should talk to a medical professional about magnesium supplements **BEFORE** taking them

## Magnesium in food

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| FOOD | AMOUNT | magnesium (mg) |
| Black Beans | 1 cup | 121 |
| Tofu | ½ cup | 188 |
| White Beans | 1 cup | 113 |
| Almonds, dry roasted | 30g | 84 |
| Lima beans | 1 cup | 82 |
| Kidney beans | 1 cup | 80 |
| Spinach, cooked | ½ cup | 79 |
| Chickpeas | 1 cup | 78 |
| Swiss chard | ½ cup | 76 |
| Cashews, dry roasted | 30g | 72 |
| Lentils | 1 cup | 71 |
| Wheat germ | ¼ cup | 69 |
| Pinto beans, canned | 1 cup | 64 |
| Oatmeal, cooked | 1 cup | 56 |
| Potato, baked with skin | 1 medium | 55 |
| Peanuts | 30g | 52 |
| Peanut butter | 2 Tbsp | 51 |
| Flounder | 85g | 50 |
| Walnuts | 30g | 48 |
| Okra | ½ cup | 46 |
| Soy milk | 1 cup | 45 |
| Yoghurt | 1 cup | 40 |
| Milk, low-fat | 1 cup | 34 |
| Banana | 1 medium | 33 |
| Peas | ½ cup | 31 |
| Prawns (shrimp) | 85g | 29 |
| Bread, whole wheat | 1 slice | 23 |
| Broccoli, cooked | ½ cup | 19 |
| Bread, white | 1 slice | 5 |