

What Women With PCOS Should Know About Magnesium

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Magnesium is the fourth most abundant mineral in the body, and women with PCOS may not be getting enough of it. According to a study in the *Journal of Gynecology and Endocrinology*, women with a magnesium deficiency are 19 times more likely to have PCOS.

Magnesium plays a role as a co-factor in some major processes in the body. It's involved in insulin and glucose signaling and magnesium is needed to regulate heart contractions, just to name a few important functions. Having a deficiency of magnesium has been shown to increase your risk for developing type 2 diabetes and is associated with worse health outcomes. Here's what women with PCOS should know about magnesium and how to best maintain optimal levels.

Why Women With PCOS Need Magnesium

There are many benefits of having optimal levels of magnesium. Magnesium has been shown to reduce pain and inflammation, promote better sleep, and relieve PMS symptoms.

But the biggest benefits of magnesium for women with PCOS may be its possible ability to alleviate anxiety and reduce blood pressure and insulin sensitivity.

Reduces Anxiety

Anxiety (as well as depression) affects many women with PCOS. Having low levels of magnesium is believed to be an underlying cause of anxiety. A review of 18 studies published in *Nutrients*, showed suggests that magnesium does have has a beneficial

effect for people with anxiety, however the quality of the evidence was felt to be poor and better studies are needed to confirm if this is true or not."

Individuals who receive magnesium supplementation see reductions of common anxiety symptoms such as apathy, anxious behavior, anger, nervousness, insomnia, rapid pulse, or heart palpitations. It is believed that magnesium works to calm the excitability of the nervous system to help reduce anxiety.

Improves Insulin Resistance

When compared to women without PCOS, women with the syndrome have higher levels of insulin, with most women with PCOS having insulin resistance. An important role of magnesium is in glucose and insulin regulation to help glucose enter cells where it is used for energy. Insufficient amounts of magnesium, whether it be from poor diet, lifestyle or other factors, can prevent glucose from entering the cells in sufficient amounts.

As a result, individuals with insulin resistance tend to experience fatigue and difficulties regulating blood sugar. Sufficient levels of magnesium can therefore improve insulin resistance and reduce your risk for developing type 2 diabetes.

Lowers Blood Pressure

Some women with PCOS have high blood pressure, also called hypertension. High blood pressure is a risk factor for heart disease. A diet rich in fruits and vegetables (both excellent sources of magnesium) has been shown to be an effective way to reduce high blood pressure as well as other metabolic aspects in women with PCOS.

Magnesium supplementation may reduce blood pressure, although these changes may be too small to be significant (2-4 mmHg).

Why Most Women With PCOS Are Lacking Magnesium

Women with PCOS and those with other metabolic conditions such as insulin resistance, metabolic syndrome, and type 2 diabetes tend to be deficient in magnesium. One theory is that chronically elevated insulin levels lowers magnesium levels. While having these medical issues can have a direct effect on magnesium levels, there are many other factors that can affect levels of magnesium as well.

People who eat diets that are low in fruits, vegetables, and whole grains tend to fall short in magnesium. High amounts of alcohol or refined foods in the diet such as breads, crackers, some cereals, and baked goods do not contain sufficient amounts of magnesium. High protein diets or eating too many foods that contain oxalic acid (found in spinach and chard), or phytic acid (found in seeds and grains), can affect the absorption of magnesium too.

Sometimes other factors can affect the absorption of magnesium. Taking in too high amounts of certain nutrients such as calcium, iron, copper, and zinc, can affect the absorption of magnesium, as can certain medications such as birth control pills, diuretics, or certain types of antacids (proton pump inhibitors). That's a whole lot of factors that can affect magnesium, which is why it's important that women with PCOS get enough of this important mineral.

Checking for a Magnesium Deficiency

Unfortunately there isn't one good or easy test to measure the total amount of magnesium in the body, as most of it is in the bones, muscles and soft tissue, and a smaller amount of it is in the blood. levels of magnesium. However, blood magnesium levels are commonly used by healthcare providers to assess if someone has a deficiency of magnesium and are a helpful tool.

The body works in such a way that if blood levels of magnesium start to become low, magnesium gets pulled out of the bones to keep blood levels up. Read below to see if you have any of the following signs and symptoms that could indicate a magnesium deficiency.

Signs You May Have a Magnesium Deficiency

People with low levels of magnesium may not have any symptoms, but some may have symptoms including weakness, muscle spasms, headaches, or heart palpitations"

Recommended Amounts & Food Sources of Magnesium

The recommended daily amount (RDA) for magnesium in adult women is 320mg. Food sources such as chocolate, avocados, leafy greens, fruits, nuts, seeds, beans, and whole grains are good sources of magnesium, but may provide insufficient amounts if you are deficient.

There are many types of magnesium supplements. The ones that are best absorbed and are more bioavailable include magnesium aspartate, glycinate, citrate, lactate, and chloride forms. Magnesium oxide and magnesium sulfate are generally not absorbed as well. Oral and transdermal cream forms of magnesium are generally better absorbed than Epsom salts.

Since magnesium is water soluble, toxicity is rare, as excess amounts will be eliminated through the urine. Excessive consumption of magnesium (three to five grams daily), can result in side effects such as diarrhea, stomach upset, and dehydration.

Do not take magnesium supplements without speaking to your doctor first if you have kidney disease or heart issues, such as 'heart block' or 'bradycardia (a low heart rate).

9 Sources

Verywell Health uses only high-quality sources, including peer-reviewed studies, to support the facts within our articles. Read our editorial process to learn more about how we fact-check and keep our content accurate, reliable, and trustworthy.

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