



## **The Science of Magnesium Sulfate**

Magnesium is the second-most abundant element in human cells and the fourth-most important positively charged ion in the body, so it's little wonder this low-profile mineral is so vital to good health and well being. Magnesium, a major component of Epsom Salt, also helps to regulate the activity of more than 325 enzymes and performs a vital role in orchestrating many bodily functions, from muscle control and electrical impulses to energy production and the elimination of harmful toxins.

The National Academy of Sciences, however, reports that most Americans are magnesium deficient, helping to account for our society's high rate of heart disease, stroke, osteoporosis, arthritis and joint pain, digestive maladies and stress-related illnesses, chronic fatigue and a host of other ailments. The Academy estimates the average American male gets just 80% of the magnesium required for good health, while females get only 70% of their recommended levels. Nutritionists say Americans' magnesium levels have dropped more than 50% in the past century

### **Starved for magnesium**

A variety of factors contributes to the nation's magnesium deficiency. Intensive farming practices deplete magnesium from the soil, and magnesium is not a standard component in most fertilizers. Therefore, a diet that would have supplied enough magnesium a century ago may not supply enough today. At the same time, average Americans eat diets far less healthy than their ancestors ate. The typical modern diet, rich in fat, sugar, salt and protein, not only contains less magnesium than a balanced diet does; these same foods actually accelerate the depletion of magnesium from our systems. So, too, does our emphasis on calcium as an antidote for bone disease; calcium drains magnesium from the body, and calcium can only perform its role in the cells when sufficient magnesium is present. Studies indicate that taking a calcium supplement without ensuring the body also receives enough magnesium can therefore amplify the shortage of both nutrients. Researchers have found that most Americans have five times as much calcium as magnesium in their bodies; the proper ratio for optimum absorption of both minerals is about two to one.

### **Better health through soaking**

Magnesium can be ingested as a nutritional supplement, but studies show that a wide variety of factors - the presence of specific foods or drugs, certain medical conditions, even the individual chemistry of a person's stomach acid - can interfere with their effectiveness. But all of the subjects in a recent study

experienced increased magnesium levels from soaking in a bath enriched with magnesium sulfate crystals, commonly known as Epsom Salt.

Researchers and physicians report that raising your magnesium levels may:

- Improve heart and circulatory health, reducing irregular heartbeats, preventing hardening of the arteries, reducing blood clots and lowering blood pressure.
- Improve the body's ability to use insulin, reducing the incidence or severity of diabetes.
- Flush toxins and heavy metals from the cells, easing muscle pain and helping the body to eliminate harmful substances.
- Improve nerve function by regulating electrolytes. Also, calcium is the main conductor for electrical current in the body, and magnesium is necessary to maintain proper calcium levels in the blood.
- Relieve stress. Excess adrenaline and stress are believed to drain magnesium, a natural stress reliever, from the body. Magnesium is necessary for the body to bind adequate amounts of serotonin, a mood-elevating chemical within the brain that creates a feeling of well being and relaxation.

While increasing your magnesium levels, Epsom Salt also delivers sulfates, which are extremely difficult to get through food but which readily absorb through the skin. Sulfates serve a wide variety of functions in the body, playing a vital role in the formation of brain tissue, joint proteins and the mucin proteins that line the walls of the digestive tract. Sulfates also stimulate the pancreas to generate digestive enzymes and are believed to help detoxify the body's residue of medicines and environmental contaminants.

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