

## **Why is Magnesium so Important?**

Magnesium plays a fundamental role in many cell functions, including:

- Energy transfer, storage and use;
- Protein, carbohydrate, and fat metabolism;
- Maintenance of normal cell membrane function.

These fundamental actions mean magnesium can have vital roles in:

- Muscle activity (deficiency may manifest as cramps and spasms);
- Nerve function (deficiency is associated with headaches, anxiety, and other neurological disturbances).

## **Accessory Nutrients**

Magnesium seldom works alone when exerting its many actions. Other minerals such as **calcium**, **potassium** and **chromium**, and amino acids including **L-carnitine**, **taurine** and **L-glutamine**, may also play a role.

## **Magnesium Stores are Slow to Mobilise**

Specific membrane pumps keep 99% of our magnesium inside our cells. Bone, the principal reservoir of magnesium, does not readily exchange with circulating magnesium in the extracellular fluid. This inability to mobilise magnesium stores means that in states of functional magnesium deficiency, initial losses come from the extracellular reserves (only 1% of our total stores); equilibrium with bone stores does not begin for several weeks.

**Effectively this means our day-to-day supply of magnesium is dependent on the diet, and/or supplementation.**

## **Prevalence of Magnesium Deficiency**

Current research indicates that in most Western countries it is difficult to achieve an adequate magnesium supply.

A CSIRO study of Australian adults found the daily intake of magnesium was below the recommended daily intake (RDI) for 50% of all males tested, and for 39% of all females. In the United States deficiencies appear to be even

more common. Approximately 80 to 85% of the adult females and 50 to 65% of the adult males had intakes below the USA recommended levels.

#### Modern Lifestyles Need More Magnesium

It is not only decreased intake that is to blame for deficiency, modern lifestyles also increase our requirement for magnesium. Stress triggers the loss of magnesium through the actions of catecholamines, which mobilise cellular magnesium into the plasma, resulting in increased renal losses.

**When caffeine or alcohol are consumed the kidneys cannot retain minerals as they would normally.** So essentially your minerals including magnesium (as most lost in urine) goes down the toilet! By supplementing your magnesium it helps to keep stores up and you can enjoy the odd coffee etc....

Stress takes many forms, including: Psychogenic (worry, anxiety, fear), inflammatory (immune activation from autoimmunity, allergy, infection), toxic or hormonal. Any of these situations can potentially lead to or worsen a magnesium deficiency.

#### Everyone Needs Magnesium – But Some More Than Others

The list of conditions that may benefit from magnesium supplementation is enormous, and includes:

- High fat, sugar, salt intake (**Western diet**)
- **Fibromyalgia**
- **Chronic Fatigue Syndrome**
- **Stress**

“When you want an effective magnesium supplement”

**Magnesium diglycinate (Meta Mag™) is a significant advance in magnesium supplementation technology, enabling the administration of therapeutic levels of oral magnesium supplementation that will not cause gastrointestinal upset and diarrhoea. Metagenics has exclusive**

**rights in Australasia to the 100%-reacted diglycinate from Albion laboratories – Beware of imitations!**

**[See Products Page for fibroplex, cardio-X, or meta mag](#)**