

SUPPLEMENTS

Living with a chronic illness takes a toll on your body. Poor sleep, heightened pain levels, inflammation in the body, it all adds up. We can do our best to keep our body in the best shape possible by switching to an anti-inflammatory diet, getting as much rest and restorative sleep as possible and exercising to the best of our ability.

There are some common supplements that people with CRPS benefit from that can help us improve our pain levels and reduce our symptoms. Over-supplementation is not advised. Supplements should generally only be taken if you have a documented deficiency.

Please note that you should always consult with your medical professionals before taking any supplements and check any drug interactions between supplements and medications that you are taking with your pharmacist.

Vitamin C

High dose vitamin C is recommended for new patients who have been diagnosed with CRPS. 500 – 1000mg per day for 3 months. No benefit has been shown in continuing to take vitamin C after this time.

Vitamin C has been shown to significantly reduce the incidence of CRPS, for anyone who has a distal (wrist or ankle) radius fracture or surgery. The recommended dose is a minimum of 500mg per day for at least 50 days.¹

It is also recommended that people living with CRPS who have a planned surgery take vitamin C for 50 days before and 50 days after the procedure or if they have an accident resulting in an injury such as a fracture or a sprain that they commence on a course of vitamin C for 50 days to help prevent spread from occurring.

NB: If you have a planned surgical procedure you should also speak to your surgeon and anaesthetist about using ketamine perioperatively and for at least 24 hours after the procedure to help prevent spread of your CRPS.

Magnesium

Most people do not achieve the recommended daily intake of magnesium (320-420 mg) through their diet. Supplementing your diet with additional magnesium can have many benefits for people living with CRPS, especially if you experience any sort of contractures, cramping, tremors, dystonia or restless leg syndrome.

There are many magnesium containing nutritional products available, so which to choose?

500 – 1000mg per day in divided doses of the glycinate or malate forms are preferred for CRPS, but other forms are available that may be of assistance, so we have given brief information on those also.

Magnesium glycinate: sleep; cardiovascular health; muscle cramping; twitching; tremors; sore or aching muscles

Glycine is complexed with magnesium to form the amino acid chelate magnesium glycinate. Glycine has interesting effects in the central nervous system where it augments N-methyl-D-aspartate (NMDA) receptor-mediated neurotransmission and functions as an inhibitory neurotransmitter via the glycine receptor.² These effects may result in a calming, relaxant effect and could explain why glycine helps people sleep better.

Glycine may be useful for insomnia. Two human clinical studies have shown that 3 grams of glycine taken before bed can improve sleep and reduce daytime drowsiness.³ A typical tablet or capsule of magnesium glycinate will usually provide 100 mg of magnesium and 900 mg of glycine so try 3 taken an hour before bed.

The glycinate form helps to improve your cardiovascular health, it supports your heart and gets into the muscles where it's needed.

Magnesium malate: pain relief; healthy nerve function; bone health; produces energy; assists bowel health

Malic acid, bound to magnesium to form magnesium malate, is an intermediary in the Krebs cycle and involved in energy metabolism. Dr Gee Abraham first hypothesised that fibromyalgia syndrome may be due to a defect in cellular metabolism characterised by low ATP production (leading to the characteristic symptoms of fatigue) and a build-up of organic acids (explaining the diffuse muscle pain). Supplementation with magnesium malate may be able to improve energy metabolism and relieve fibromyalgia, he theorized.

In an open label study to test this hypothesis Abraham et al (1992) reported that oral treatment with magnesium malate (300-600 mg magnesium and 1200-2400 mg malate daily) for 8 weeks improved fibromyalgia pain.⁴

Magnesium threonate: healthy brain; nervous system health; stress relief; cognitive function; memory

Magnesium l-threonate is a synthesized form of magnesium that can boost cognitive abilities. It's particularly important for a healthy brain and nervous system. It exhibits anti-stress, anti-anxiety, anti-depressive and neuroprotective properties.

There's only one clinical trial that's been published in a peer-reviewed medical journal. Study participants were older adults (ages 50 through 70) who reported concerns with memory, concentration, anxiety, and sleep.⁵ They were evaluated for four aspects of cognitive ability — working memory, episodic memory, attention, and executive function. When retested, all participants performed significantly better in all four cognitive areas. Magnesium l-threonate also significantly reduced their biological brain age. On average, these seniors' brains functioned as if they were 9.4 years younger than when the study began, according to standard tests.

Magnesium Citrate: cramping; fatigue; cardiovascular health; anti-stress; immune health;

Magnesium chloride is a supplement version of magnesium, a mineral found naturally in the body. The mineral is essential for muscle and nerve functions, as well as heart and bone health. Taking magnesium chloride for magnesium deficiency might help prevent related complications such as low blood calcium and low potassium.

It's a powerful anti-stress remedy that also helps to fight off depression, dizziness and fatigue. It also strengthens the immune system, helping to prevent and fight off colds, phlegm and infections.

Magnesium Citrate: occasional constipation relief; healthy bones; bowel regularity

Magnesium citrate is a magnesium preparation in salt form with citric acid in a 1:1 ratio. Magnesium citrate belongs to group of drugs known as saline laxatives, which work by pulling more water into the colon in order to help the colon empty its contents.

Omega 3 (EFA) Fish Oil

High Strength Omega 3 Fatty Acid Fish Oil is known for it's anti-inflammatory and joint health properties. 1500 – 3000mg per can be taken.

NB: High doses of fish oil can increase the risk of bleeding with blood-thinning medications and should not be taken in the week before any surgery.

¹ Salahadin www.uptodate.com Complex regional pain syndrome in adults: Prevention and management 2017

² Rajendra S, Lynch JW, Schofield PR. The glycine receptor. *Pharmacol Ther.* 1997;73:121–146

³ Bannai M, Kawai N. New therapeutic strategy for amino acid medicine: glycine improves the quality of sleep. *J Pharmacol Sci.* 2012;118(2):145-8.

⁴ Abraham GE, Flechas JD. Hypothesis: Management of fibromyalgia: rationale for the use of magnesium and malic acid. *J Nutr Med* 1992;3:49-59.

⁵ Efficacy and Safety of MMFS-01, a Synapse Density Enhancer, for Treating Cognitive Impairment in Older Adults: A Randomized, Double-Blind, Placebo-Controlled Trial

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