

# HOMOCYSTEINE REDUX

**Ingredients:** Trimethylglycine 300mg, Pyridoxal 5 Phosphate (enteric coated) 5mg, Vitamin B-12 200mcg, Dimethyl Glycine 25mg, Niacinamide 20mg, Cysteine 15mg, Molybdenum Chelate 30mcg, Selenium Chelate 15mcg, Vitamin B-6 (enteric coated) 15mg, Folic Acid 275mcg, Vitamin E Succinate 10i.u, Red Beet Root 25mg, Choline Bitartrate 10mg, Magnesium Chelate 100mg, Zinc Chelate 10mg.

**Supportive Function:** Homocysteine is a toxic substance, and is slowly reaching the ranks with cholesterol as a household word associated with risk for heart disease. Faulty pathways are suspect, and Homocysteine Redux was formulated to totally support every aspect of the biochemical reactions in the pathway. When the homocysteine pathway is facilitated and functioning correctly, SAM (S-adenosyl methionine) is produced to methylate brain neurotransmitters. Natural sulfur is also produced at the end of the pathway, providing a building block for joint/connective tissue.

**When are homocysteine nutrients helpful?** Clinical applications include decreasing risk for heart disease; atherosclerosis (hardening of the arteries), thrombosis (clots), etc., vascular, ocular, and skeletal complications, osteoporosis, depression, Fibromyalgia, alcoholism, depression, diabetic complications, Parkinson's, Alzheimer's, multiple sclerosis, rheumatoid arthritis, schizophrenia, spontaneous abortion, and all complications of impaired sulfation pathways, i.e. sluggish liver detoxification, adrenal problems, joint cartilage degeneration.

**Clinical Applications/Research: B vitamins:** Many studies have now shown that supplementation of particular B vitamins, most notably folate, B-6, B-12, and niacinamide, can protect the heart by lowering homocysteine levels. These B vitamins have major roles in the pathway of homocysteine metabolism, and supplementation seems to facilitate the clearance of this potentially harmful substance. Many studies have shown decreased homocysteine levels and decreased risk for heart disease with the consumption of these B vitamins (Science News 1998; 153:105; Rosenberg IH. Colloquium on Homocysteine, Vitamins, and Arterial Occlusive Diseases. Experimental Biology Conference, Atlanta, Ga. 1995).

**Vitamin E:** Vitamin E is associated with lower risk for heart disease. It is a powerful free radical scavenger that prevents oxidative damage, such as that caused by homocysteine damage.

**Trimethylglycine and Dimethylglycine:** Trimethylglycine (betaine) can help facilitate the pathway so that homocysteine is metabolized correctly. It serves as a methyl donor, which means that it gives up some of its functioning groups to help another substance needing the methyl group for biological function, such as phosphatidylserine. Dimethylglycine also works to facilitate the pathway in the same manner.

**Cysteine:** Cysteine is one of the by-products that should naturally be produced by homocysteine. It is an important amino acid, which needs to be in balance, and faulty pathways can compromise levels of this important amino acid.

**Red BeetRoot:** Red beetroot contains high amounts of betaine, which has proven to be successful in lowering homocysteine levels. Betaine stimulates one of the key enzymes

in the pathway that makes homocysteine non-toxic. Red beets are liver cleansing and are high in proanthocyanidins.

**Molybdenum:** Molybdenum is an essential trace element that plays a role in three human enzymes. A decrease in the first two enzymes has no known clinical consequences, however the third enzyme is involved in sulfur reactions such as those in the homocysteine pathway, and consequences of a decrease in enzyme concentration can be very harmful. When MSM is supplemented long-term, it depletes the body of necessary molybdenum.

**Magnesium:** Magnesium is needed for many various enzyme reactions (it's a cofactor in > 80% of the enzyme reactions in the body), including those of the homocysteine pathway. On its own, magnesium has been shown to lower blood pressure, relax smooth muscle, and improve heart/muscle function.

**Testimonials/Nutrient Tidbits: Arthritis and joint pain...** I have seen this formula do amazing things for my arthritis and joint patients. I have given as many as 10 per day for several weeks and then bring them down to a standard dose (3 per day) and they really respond well. Their pain really decreases. Also, this product is wonderful support for diabetes type 2 patients (A. Hare, D.C.).

**Miscarriages...** The sulfur produced in the homocysteine pathway is a necessary building block for fibro-connective tissue, such as that comprising arteries, veins, and capillaries. "Dr. John Brimhall worked on my uterus prolapse when I was at one of his seminars (I was trying to get pregnant). I was prone to miscarriages. He gave me Homocysteine Redux as a supplement, and within months, I became pregnant and carried to term (Cheryl Lipton, D.C., Dallas, Texas).

**Suggested Dosage:** 1-2 tablets 3 times daily or as directed

**Size:** 60 or 180 tablets

**Vegetarian:** Yes

**Contraindication:** None known.

# Homocysteine Redux vs. MSM

