



Nutritional support for maintaining homocysteine levels already within normal range

APPLICATIONS / BENEFITS

- Promotes overall cardiovascular health
- Modulates homocysteine's metabolic pathways
- Supports homocysteine conversion into methionine and cysteine

OVERVIEW

Patient One Homocysteine Cardioplex supplies evidence-backed, broad-spectrum nutritional support for maintaining homocysteine levels already within normal range. Plasma homocysteine can be a serious cardiovascular, endothelial and renal risk factor. Certain B vitamins promote healthy homocysteine; however, B vitamin absorption can decline significantly with age and some patients do not respond to B-6 supplementation. Further, some patients may have genetic enzyme deficiencies that may impair homocysteine metabolism. Homocysteine Cardioplex overcomes these challenges by supplying highly absorbable and bioavailable forms of key B vitamins along with diverse methyl donor nutrients. As it opens multiple pathways for catalyzing homocysteine remethylation to methionine, this formula balances plasma homocysteine levels and promotes overall cardiovascular wellness.

KEY INGREDIENTS

A reduced and active form of folate (vitamin B-9), **Quatrefolic®**, the advanced 5-methyltetrahydrofolate (5 MTHF) form, is bound with natural glucosamine salt to promote easy and complete absorption. Considered the "Fourth Generation" folate, Quatrefolic is significantly more stable and bioavailable than 5 MTHF that is bound to calcium salt. Because Quatrefolic is active when it enters the body, it is better able to influence pathways for homocysteine metabolism. Quatrefolic's pre-converted status may be especially beneficial for patients with a genetic defect of the folate-converting enzyme methyltetrahydrofolate reductase.

Supplying **vitamins B-6** (as pyridoxal-5-phosphate) and **B-12** (as Dibenzoide, Co-Enzyme B-12), Homocysteine Cardioplex provides two extensively researched clinical standards for nutritional homocysteine management. B-6 modulates homocysteine's conversion into cystathione, a key step in its excretion. B-12 is an important donor for enabling homocysteine to be remethylated into methionine. B-12 also works in concert with the coenzyme methionine synthase, creating a primary pathway of remethylation of homocysteine.

N-Acetyl L-Cysteine (NAC) is a free-form amino acid and precursor to glutathione, the body's most powerful antioxidant. It is believed to hinder formation of homocysteine at plasma protein binding sites while encouraging efficient elimination of homocysteine via urinary excretion. As it works to promote healthy endothelial function, NAC offers further support for overall cardiovascular wellness.

Trimethylglycine, also known as *betaine*, is considered a key player in homocysteine metabolism and has long been administered as a methyl donor for remethylating homocysteine back into methionine. Trimethylglycine (TMG) betaine is a necessary cofactor in the secondary pathway of homocysteine metabolism. Betaine is typically administered to patients who are not responsive to pyridoxine (B-6) and other B vitamins.

The Real Amino Acid Chelate System, also known as *TRAACS®*, is a patented range of proprietary mineral amino acid chelates. **TRAACS magnesium** (*Magnesium Glycinate Chelate Buffered Powder*) is an organic mineral form known for its safety and ease of

absorption. Featuring a biological advantage in assimilation, TRAACS requires no conversion: It is an active cofactor for promoting efficient homocysteine-to-methionine conversion. Early research also suggests magnesium may support arterial health and play a role in modulating production of the destructive MMP-2 enzyme, which has been linked with homocysteine issues and collagen degradation.

RESEARCH

- A meta-analysis of 12 randomized trials that included 1,114 study subjects found that dietary folic acid appeared to reduce blood homocysteine levels by 25%, while vitamin B-12 was associated with another 7% reduction. Researchers concluded that daily supplementation with 0.5-5 mg folic acid and .5 mg vitamin B-12 might be able to reduce blood homocysteine concentrations by 25%-33%.
- In one placebo-controlled study, subjects took betaine, folic acid with placebo, or just a placebo every day for six weeks and were then evaluated for their homocysteine levels. At the study's end, researchers concluded that betaine reduced fasting plasma homocysteine concentration by ~11%, leading researchers to suggest betaine appears to be highly effective in blocking a rise in plasma homocysteine levels after methionine intake.
- In another study, 60 patients with renal problems undergoing dialysis were given NAC 600 mg, folic acid 5 mg or placebo every day, intravenously, for eight weeks. At study's end, researchers reported that NAC was associated with significant improvements; homocysteine levels dropped 88.3% in the NAC group versus 23.7% in the placebo group.

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Supplement Facts

| Serving Size: 3 Capsules | | Servings Per Container: 30 |
|--|--------------|----------------------------|
| Amount Per Serving | | % DV* |
| Vitamin B-6 (as pyridoxal-5-phosphate) | 100 mg | 5882% |
| Folate [as Quatrefolic® (6S)-5-Methyltetrahydrofolic acid equivalent to 1600 mcg of (6S)-5-Methyltetrahydrofolic acid, Glucosamine Salt] | 1333 mcg DFE | 333% |
| Vitamin B-12 (as methylcobalamin) | 500 mcg | 20833% |
| Magnesium (as TRAACS® Magnesium Glycinate Chelate Buffered with Magnesium Oxide) | 150 mg | 38% |
| N-Acetyl-L-Cysteine | 600 mg | ** |
| Trimethylglycine (as betaine anhydrous) | 500 mg | ** |

* % Daily Values are based on a 2,000 calorie diet
 ** Daily Value not established

Other Ingredients: vegetable cellulose (capsule), leucine, rice flour

Free of: milk, egg, fish, peanuts, crustacean shellfish, soy, tree nuts, wheat, yeast and gluten. Free of ingredients derived from GMOs.

Suggested Use: Take 3 capsules daily, in divided doses with meals, as a dietary supplement or as directed by your health practitioner. Store in a cool, dry place.

Caution: If you are pregnant, nursing, or taking any medications, consult your health practitioner before use. Discontinue use and consult your health practitioner if any adverse reactions occur. **Keep out of reach of children.**

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Vegetarian

Gluten Free

Non-GMO

Vegetable Caps

The statements in this document have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.

(631) 390-9669 info@patientoneformulas.com patientoneformulas.com

415 Oser Avenue, Suite Q1, Hauppauge, NY 11788



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