# CARDIO B





#### CLINICAL APPLICATIONS

- Supports Cardiovascular and Neurologic Health
- Supports Homocysteine Balance
- Supports Healthy Arterial Function
- Maintains Normal Inflammatory Balance

## CARDIOVASCULAR HEALTH

Cardio B contains targeted amounts of folic acid, B<sub>12</sub>, B<sub>6</sub> and betaine (trimethylglycine) to support methylation pathways in the body. It specifically supports homocysteine balance for optimal cardiovascular health and arterial function.

#### **Overview**

Methylation is a vitamin-requiring biochemical process in the body that is critical for maintaining mental and physical health. Methylation helps convert the problematic amino acid metabolite homocysteine into the amino acids methionine and cysteine. Consistent recycling of homocysteine is vital for supporting cardiovascular health. Proper methylation can be inhibited by nutrient deficiencies, especially of folic acid, B6 and B12. Certain medications such as acetaminophen, aspirin, ibuprofen and oral contraceptives can also deplete blood levels of these crucial B vitamins, reducing the body's vital methylation capacity.

#### **Folate<sup>†</sup>**

Adequate folate status is critical for maintaining optimal methylation, red blood cell balance, DNA and RNA synthesis and healthy cell division and replication. Folic acid is converted into its metabolically active form, 5-MTHF, by the enzyme methylenetetrahydrofolate reductase (5-MTHFR).<sup>1</sup> 5-MTHF donates its methyl group to vitamin B12 (cobalamin), forming methylcobalamin. Methylcobalamin helps convert the problematic amino acid metabolite homocysteine into the amino acid methionine.<sup>2</sup>

#### **B**12<sup>†</sup>

Vitamin B12 (methylcobalamin) works along with folic acid in many body processes, including the synthesis of DNA, red blood cells and supporting health of the myelin sheath, the insulating exterior that surrounds nerve cells.<sup>2</sup> B12 is found primarily in animal foods. Vegetarians and the elderly are at highest risk for B12 deficiency.<sup>2</sup> B12 is considered by many to be a vital nutrient required to balance homocysteine levels. Methylcobalamin is the biologically active form of B12 and supports up-regulation of methylation pathways.<sup>2</sup>

#### **B**6<sup>†</sup>

Vitamin B6 (pyridoxine) is a B vitamin that is required for more than 60 different enzymatic reactions that occur in the body.<sup>[2]</sup> Vitamin B6 works along with folic acid and B12 for in the recycling of homocysteine. B6 also supports a healthy cardiovascular system by promoting healthy platelet aggregation and aids in maintaining healthy blood pressure.<sup>3</sup> Vitamin B6 is required for the activation of lysyl oxidase, an enzyme responsible for the cross-linking of collagen, and elastin, which is crucial for maintaining normal circulation and arterial function.<sup>4</sup>

#### Trimethylglycine (Betaine)<sup>+</sup>

Trimethylglycine betaine functions in the body as a unique methyl donor, supporting liver function and detoxification pathways and the conversion of homocysteine to methionine.<sup>5,6</sup> Trimethylglycine also works alongside B6, B12 and folic acid in supporting homocysteine balance.



#### Directions

1 or more capsules per day or as recommended by your health care professional.

#### **Does Not Contain**

Wheat, gluten, yeast, soy, corn, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, artificial colors, artificial sweeteners or preservatives.

#### Cautions

If you are pregnant or nursing, consult your physician before taking this product.

### Supplement Facts

Serving Size 1 Capsule

Servings Per Container 60 & 120		
1 capsule contains	Amount Per Serving	% Daily Value
Vitamin B6 (as Pyridoxine Hydrochlor	50 mg ide USP)	2,941%
Folate	8,500 mcg DFE (5,000 mcg Folic	2,125% Acid)
Vitamin B12 (as Methylcobalamin)	1,000 mcg	41,667%
Betaine (Trimethylglycine)	500 mg	*
* Daily Value not establish	ned	

ID# 546060 60 Capsules ID# 546120 120 Capsules

#### References

- 1. 5-methyltetrahydofolate. Altern Med Review 2006; 11(4).
- 2. Murray MT. *Encyclopedia of Nutritional Supplements*. (1996);Prima Publishing: Rocklin, CA.
- 3. Ayback M. Effect of oral pyroxidine hydrochloride supplementation on arterial blood pressure in patients with essential hypertension. *Arzneim Forsh* 1995;45:1271-1273.
- Levene CI, Murray JC. The aetiological role of maternal B6 deficiency in the development of atherosclerosis. *Lancet* 1977;i:628-629.
- Junnila M, Barak AJ, Beckenhauer HC, Rahko T. Betaine reduces hepatic lipidosis induced by carbon tetracholoride in Sprague-Dawley rats. *Vet Hum Toxicol* 1998;40:263-6.
- 6. Kim SK, Kim YC, Kim YC. Effects of singly administered betaine on hepatotoxicity of chloroform in mice. *Food Chem Toxicol* 1998;36: 655- 61.

