

# METHYL SUPPORT™



## Clinical Applications

- Support Healthy Homocysteine Levels
- Support Healthy Methylation of Estrogen, Dopamine, Epinephrine, Heavy Metals, Environmental Toxins
- Repletion of Nutrients Potentially Depleted by Use of Oral Contraceptives

*Methyl Support™ is a comprehensive formula featuring significant amounts of five nutrients that support optimal methylation and help maintain healthy homocysteine levels in the blood.*

All 3rd Opinion Inc.® Formulas Meet or Exceed cGMP quality Standards

## DISCUSSION

**Folic Acid (as folic acid)** in the amount of 2000 mcgs is five times the content of many non-prescription supplements on the market. A number of studies have found no benefit of methyltetrahydrofolate (MTHF) supplementation over regular folate for lowering plasma homocysteine.<sup>[1,2,3]</sup> Although lower doses of folic acid are usually efficacious, “many individuals with cardiovascular disease and kidney disease are refractory to these lower levels and require significantly higher levels of folic acid supplementation.”<sup>[4]</sup> Nearly all large intervention trials that combined folic acid with other vitamins used at least 2 mg of folic acid per day.<sup>[4]</sup> Larger doses of folate increase nitric oxide production by the endothelium.<sup>[5]</sup> Besides cardiovascular support, folic acid has important roles in detoxification, nervous system function, breast tissue health, and prenatal development.

**Trimethylglycine (as anhydrous betaine)**, found in several tissues in humans, acts as an alternative methyl donor in homocysteine metabolism. Betaine is synergistic with folic acid and also supports healthy fasting plasma homocysteine. Betaine may also be a preventive agent against the activation of NF-kappaB induced during inflammation and aging.<sup>[6]</sup>

**Vitamin B12 (as methylcobalamin)** is another methyl donor. Cyanocobalamin, the form of B12 present in many supplements, has to be converted in the liver to methylcobalamin. The important enzyme, methyltetrahydrofolate reductase that converts folic acid to a form of methyltetrahydrofolate is vitamin B12 dependent demonstrating the synergism of this formula. Addition of B12 to a folate regimen lowered homocysteine an extra 7%.<sup>[7]</sup>

**Vitamin B6 (as pyridoxal 5' phosphate)**, the coenzyme form of vitamin B6 is the primary bioactive form. It is a coenzyme in approximately 100 enzymatic reactions.<sup>[8]</sup> The Framingham Study population showed an inverse association between homocysteine and vitamin B6 (as well as B12 and folate).<sup>[9]</sup>

**Vitamin B2 (as riboflavin 5'phosphate)** is the principal coenzyme form of riboflavin used in many oxidative reactions. Folate and riboflavin interact to lower plasma homocysteine, possibly by maximizing the catalytic activity of MTHFR. The effect may be unrelated to MTHFR genotype.<sup>[10]</sup>





## Supplement Facts

Serving Size: 1 Capsule  
Servings Per Container: 60

	Amount Per Serving	%Daily Value
Vitamin B2 (as riboflavin 5 phosphate)	25 mg	1471%
Vitamin B6 (as pyridoxal 5 phosphate)	10 mg	500%
Folate (as folic acid / calcium folinate)	2000 mcg	500%
Vitamin B12 (as methylcobalamin)	1000 mcg	16667%
Trimethylglycine (as anhydrous betaine)	500 mg	**

\*\* Daily Value not established.

**Other Ingredients:** HPMC, stearic acid, silica and magnesium stearate.

## DOSING:

Take one capsule daily or as directed by your healthcare practitioner.

## REFERENCES

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3. Venn BJ, Comparison of the effect of low-dose supplementation with L-5-methyltetrahydrofolate or folic acid on plasma homocysteine: a randomized placebo-controlled study. *Am J Clin Nutr.* 2003 Mar;77 (3): 658-62 [PMID:12600857]
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5. Hanneke W. Wilmink; Erik S. G. Stroes; Willem D. Erkelens; Arteriosclerosis, Thrombosis, and Vascular Biology. 2000;20:185
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7. Venn BK, Green TJ, Moser R, McKenzie JE, Skeaff CM, Mann J Increases in blood folate indices are similar in women of childbearing age supplemented with [6S]-5-methyltetrahydrofolate and folic acid. *J Nutr* 2002 Nov; 132(11): 3353-5.
8. Strain JJ, Dowe L, Ward M, Pentieva K, McNulty H. B-vitamins, homocysteine metabolism and CVD. *Proc Nutr Soc.* 2004 Nov;63(4):597-603. [PMID: 15831132]
9. Selhub, J. 2006. The many facets of hyperhomocysteinemia: studies from the framingham cohorts. *Journal of Nutrition.* 136(6 Suppl):1726S-1730S.
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## PRECAUTION:

Folic acid and/or vitamin B6 may have significant interactions with drugs such as Phenytoin, Phenobarbital, Methotrexate, Pymethamine, Levodopa and Amiodarone and possibly others. Please consult a drug interaction reference guide. Methyl Support™ has not been clinically tested in pregnant or lactating women or in children.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.