

Star 5-MTHF



Clinical Applications

- Supports Healthy Serum Folate*
- Supports the Conversion of Homocysteine to Methionine*
- Supports Methylation*
- Supports Nervous System and Oral Health*
- Supports Normal Cellular Proliferation (including red blood cells)*
- Supports a Healthy Pregnancy Outcome*

*5-MTHF, provided as Quatrefolic[†], is the most biologically active form of the water-soluble B vitamin, folic acid. It is the preferred form of folate supplementation due to an array of conditions that can limit conversion or absorption of folic acid. Data indicate that supplementing with 5-MTHF increases plasma folate more effectively than folic acid.**

All Star Energetics Formulas Meet or Exceed cGMP Quality Standards

Discussion

Generically known as folate, 5-methyltetrahydrofolate (5-MTHF) is the most biologically active form of the water-soluble B vitamin, folic acid. It is the form into which the body must convert all other forms of folic acid before it can be used. Along with vitamin B12, 5-MTHF serves as a donor of methyl groups. The body utilizes methyl groups in many nervous system and metabolic processes, including the conversion of homocysteine to methionine, the synthesis of monoamine neurotransmitters (serotonin, dopamine, epinephrine), the production of melatonin, and the synthesis of DNA. In addition, sufficient folate is necessary for brain and nervous system functions. Inadequate intake of folate is likely to occur in a diet consisting primarily of processed and/or cooked foods, as processing or cooking destroys the vitamin. Besides insufficient dietary intake, poor absorption or poor utilization can result in folate depletion, as can excessive use of alcohol and other factors.*^[1]

Despite research showing that folic acid and 5-MTHF have equivalent bioavailability and that supplementation with large doses of folic acid can “force” its conversion to the more active form, 5-MTHF is often the preferred form to replenish folate. This is due, primarily, to the inadequacy of folic acid to raise plasma levels when certain conditions are present.^[2,3] In this formula, 5-MTHF is provided as Quatrefolic[®]—the glucosamine salt of 5-MTHF. Quatrefolic is proven to have greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF. Folate is stored in the red blood cells, where levels have been shown to be higher after supplementation with 5-MTHF compared to folic acid and placebo. For example, patients given 5 mg of 5-MTHF experienced plasma levels 700% greater than patients given folic acid.*^[4]

Good folate status is associated with a healthy mood.^[5] 5-MTHF might improve trimonoamine neurotransmitter synthesis and help maintain a sense of calmness and a healthy outlook.^[6] In non-smoking adults, higher folate levels are indicative of gum tissue strength, and a range of vitamins including folate appear to act in support of oral health mechanisms.*^[7,8]

Folate intake is especially important for women of child-bearing age. Studies indicate that supplementing during pregnancy supports a healthy outcome.^[9] In a 2010 study, researchers concluded that if a woman exhibits certain genetic variations during pregnancy, it will lead to reduced methylation capacity and subsequent DNA hypomethylation.*^[10]

***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.**

Manufactured for: Star Energetics, Inc
8701 E. Vista Bonita Dr., Suite 110
Scottsdale, AZ 85255
1-888-908-0780

Star 5-MTHF



Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 30

	Amount Per Serving	%Daily Value
Folate	2000 mcg	500%
(as 6(S)-5-methyltetrahydrofolic acid, glucosamine salt†)		

Other Ingredients: Microcrystalline cellulose, HPMC (capsule), stearic acid, magnesium stearate, and silica.



Quatrefolic

† Quatrefolic® is a registered trademark of Gnosis S.p.A. Patents pending.

Directions

Take one to two capsules daily, or as directed by your healthcare practitioner.

Children and pregnant or lactating women should consult their healthcare practitioner prior to use. Do not use if tamper seal is damaged.

References

- Venn BJ, Green TJ, Moser R, et al. 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]
- Yakut M, Ustün Y, Kabaçam G, et al. Serum vitamin B12 and folate status in patients with inflammatory bowel diseases. *Eur J Intern Med.* 2010 Aug;21(4):320-3. [PMID: 20603044]
- Halsted CH, Villanueva JA, Devlin AM, et al. Folate deficiency, methionine metabolism, and alcoholic liver disease. *Alcohol.* 2002 Jul;27(3):169-72. [PMID: 12163145]
- Willems FF, Boers GH, Blom HJ, et al. Pharmacokinetic study on the utilisation of 5-methyltetrahydrofolate and folic acid in patients with coronary artery disease. *Br J Pharmacol.* 2004 Mar;141(5):825-30. [PMID: 14769778]
- Reynolds EH. Benefits and risks of folic acid to the nervous system. *J Neurol Neurosurg Psychiatry.* 2002 May;72(5):567-71. [PMID: 11971038]
- Stahl, SM. *Depression and bipolar disorder.* 3rd ed. New York: Cambridge University Press; 2008:175-178.
- Esaki M, Morita M, Akhter R, et al. Relationship between folic acid intake and gingival health in non-smoking adults in Japan. *Oral Dis.* 2010 Jan;16(1):96-101. [PMID: 19732352]
- Thomas DM, Mirowski GW. Nutrition and oral mucosal diseases. *Clin Dermatol.* 2010 Jul-Aug;28(4):426-31. [PMID: 20620760]
- Mosley BS, Cleves MA, Siega-Riz AM, et al. Neural tube defects and maternal folate intake among pregnancies conceived after folic acid fortification in the United States. *Am J Epidemiol.* 2009 Jan 1;169(1):9-17. [PMID: 18953063]
- James SJ, Melnyk S, Jernigan S, et al. A functional polymorphism in the reduced folate carrier gene and DNA hypomethylation in mothers of children with autism. *Am J Med Genet B Neuropsychiatr Genet.* 2010 Sep;153B(6):1209-20. [PMID: 20468076]

Does Not Contain

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

***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.**

