5 MTHF ACTIVATED

MAY SUPPORT A HEALTHY METHYLATION CYCLE*

- May support healthy levels of homocysteine*
- Is seven times more bioavailable than folic acid*
- May support healthy levels of dopamine and serotonin*

5 MTHF ACTIVATED contains a bioactive and bioavailable form of folic acid known as 5-methyltetrahydrofolate. This form of folic acid is considered active because it is the form that is directly incorporated into the methylation cycle that converts homocysteine to methionine. It is also 7 times more bioavailable than regular folic acid. Without adequate 5 MTHF, the inflammatory compound homocysteine can build up in the blood vessels. Also, this methyl-group donation is vital to many bodily processes, including the synthesis of serotonin, melatonin and DNA.*

There are many reasons why folate deficiency is considered one of the most common nutritional deficiencies. These include deficiency in the food supply, defects in utilization as in alcoholics or those with liver disease, malabsorption, increased needs in pregnant and nursing women, metabolic interference by drugs, and deficiencies in enzymes or cofactors needed for the generation of active folic acid.*

In order for folate to be converted to its active form in the body, several enzymes, adequate liver and intestinal function, and sufficient amounts of riboflavin (B2), niacin (B3), pyridoxine (B6), zinc, vitamin C and serine need to be present. Significantly greater amounts of folate were found in the serum after 24 weeks of supplementation with 5 MTHF than with folic acid and placebo. This may be because at least 25% of the population may have an enzyme defect, or single nucleotide polymorphism (SNP), that leads to a decrease in the function of the methylenetetrahydrofolate reductase (5 MTHFR) enzyme, which is needed to convert folic acid into its active form, 5 MTHF.*

Signs and symptoms of folate deficiency include elevated homocysteine, macrocytic anemia, fatigue, irritability, peripheral neuropathy, hyper-reflexivity, restless legs syndrome, diarrhea, weight loss, insomnia, depression, dementia, cognitive disturbances, and psychiatric disorders.*

CARDIOVASCULAR DISEASE: High levels of homocysteine have been implicated in many different disorders of the cardiovascular system, including thrombosis, stroke, atherosclerosis, and myocardial infarction. As well as decreasing homocysteine levels in the blood, 5 MTHF also improves peripheral blood flow in the arteries by increasing
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Nitric oxide (NO) production in the vascular endothelium. Most of the risk factors for atherosclerosis are associated with poor vasodilation due to insufficient NO production. In a six-week, randomized, crossover study of 52 individuals with coronary artery disease, folic acid at a dose of 5 mg/day significantly improved flow-mediated dilation, a measurement of endothelial function. This was independent of the homocysteine level in the blood.*

INFLAMMATORY BOWEL DISEASE: Folate deficiency is common in those with inflammatory bowel disease, partly caused by the drug Sulfasalazine, which is known to inhibit folate absorption. Evidence from a study of patients with ulcerative colitis shows that folic acid supplementation lowers the risk of colonic neoplasia in a dose-dependent fashion. The relative risk of developing neoplasia was 0.76 for 400 mcg folate and 0.54 for 1 mg folate for at least six months compared to placebo.*

DEPRESSION: Low folate levels have been associated with depression, and might predict a poorer response to antidepressant medications. 5 MTHF helps form tetrahydrobiopterin, a compound necessary for the production of dopamine, serotonin and norepinephrine in the central nervous system. 5 MTHF, in addition to standard psychotropic medication, significantly improved clinical recovery in depressed patients with borderline or definite folate deficiency, and significantly reduced depressive symptoms in elderly patients with normal folate levels after 3 weeks of treatment.*

NEURAL TUBE DEFECTS: Pregnant women are at a higher risk of giving birth to a baby with a neural tube defect if their dietary intake of folic acid is low. Supplementation with folic acid significantly reduces the occurrence of neural tube defects. Research studies have shown that supplementation with 5 MTHF resulted in a higher RBC folate level than supplementation with folic acid in a group of women of childbearing age.*

Certain drugs can interfere with the absorption of folate, including cimetidine (Tagamet, an H2 blocker) and antacids. Sulfasalazine appears to block both the absorption of folic acid and the conversion to 5 MTHF. Acetaminophen, aspirin, ibuprofen and other non-steroidal anti-inflammatory drugs taken on a continuous basis appear to increase the body’s need for folate. Oral contraceptives and alcohol also produce low serum and tissue folate.*

High-dose folic acid supplements can mask vitamin B12 deficiency, thereby contributing to neurological damage. However, 5 MTHF does not mask an underlying B12 deficiency, as it is in a form of folic acid that cannot correct the macrocytic anemia caused by the B12 deficiency. Therefore, the blood tests remain abnormal and no masking of the B12 deficiency occurs.*

REFERENCES:

*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.