



Secure Your Mental Edge With Premium Brain Support™

The Better Way to Beat “Brain Fog”

- Natural nutritional support for the brain to benefit mood, memory, focus and energy
- Strategic design that works with your body’s chemistry
- The only form of Vitamin B-12 (methylcobalamin) absorbed by the brain
- Secure supply of chemically stable and biologically active folate (calcium folinate)
- Multi-faceted nutritional management of homocysteine metabolism
- A must-have product for vegetarians and vegans to head-off the hazards of high homocysteine
- Nutritional support using trimethylglycine (betaine) to maximize the absorption of nutrients from food

Do you want to enjoy the benefits of better memory, mood, focus and ultimately a better life?

Believe it or not, it is easier than ever to achieve these things when armed with the right information and tools.

How?

With **Premium Brain Support™** from **MEND SOLUTIONS™**.

Drawing on the latest scientific research, Premium Brain Support was designed to meet your brain’s nutritional needs with its carefully formulated selection of ingredients shown to benefit brain health.

Premium Brain Support is NOT simply an “everything but the kitchen sink” collection of ingredients thrown together without consideration for your body’s chemistry.

Rather, Premium Brain Support is a nutritional system rooted in the body’s chemical processes that ensures the production, repair and development of the brain and other high energy organs of the body.

One key process that Premium Brain Support helps facilitate to improve mood,



Supplement Facts

Serving Size 2 Capsules
Servings Per Container 60

Amount Per Serving		%DV
Folic Acid (as Calcium Folate)	400 mcg	100%
Vitamin B-12 (as Methylcobalamin)	500 mcg	8,333%
Biotin	3 mg	1000%
Methylsulfonylmethane	500 mg	*
Trimethylglycine	300 mg	*

*Daily Value not established.

Other ingredients: Cellulose, vegetable stearate and silica.

memory, energy and focus is methylation.

Methylation is a metabolic reaction where a “methyl group” is added to another molecule, driving the production of biochemicals that fuel the brain.

Without methylation the body could not control critical neurotransmitters like serotonin, norepinephrine and dopamine that affect mood and focus.

SAME (S-adenosylmethionine) is a well-known biochemical tied to most of the body’s methylation reactions.

Many people spend large amounts of money on SAME supplements hoping to improve cognitive function and mood.

When a person takes a SAME supplement, it is consumed in a methylation reaction and leaves behind the amino acid, homocysteine, a potentially toxic byproduct of methylation.

Research studies have shown that elevated homocysteine appears to increase the risk of developing dementia and depression.

If the body is methylating effectively, homocysteine is recycled back into methionine and then SAME (**See-The MEND Homocysteine Solution, p. 2**).

If it is not metabolized, homocysteine builds up producing major negative health consequences.

In this case, taking SAME does not address the fundamental biochemical problem - **under-methylation**.

The hazards and prohibitive cost of SAME played a major role in the creation of Premium Brain Support eight years ago.

Premium Brain Support contains natural ingredients like **coenzyme Vitamin B-12, calcium folinate, biotin and trimethylglycine**, which all support methylation by way of different key metabolic pathways.

By “encouraging” methylation, these ingredients allow the body to recycle homocysteine into methionine. Once methionine is converted back into the SAME, a plethora of methylated compounds are produced (**See-The Methionine Cycle, p. 3**).

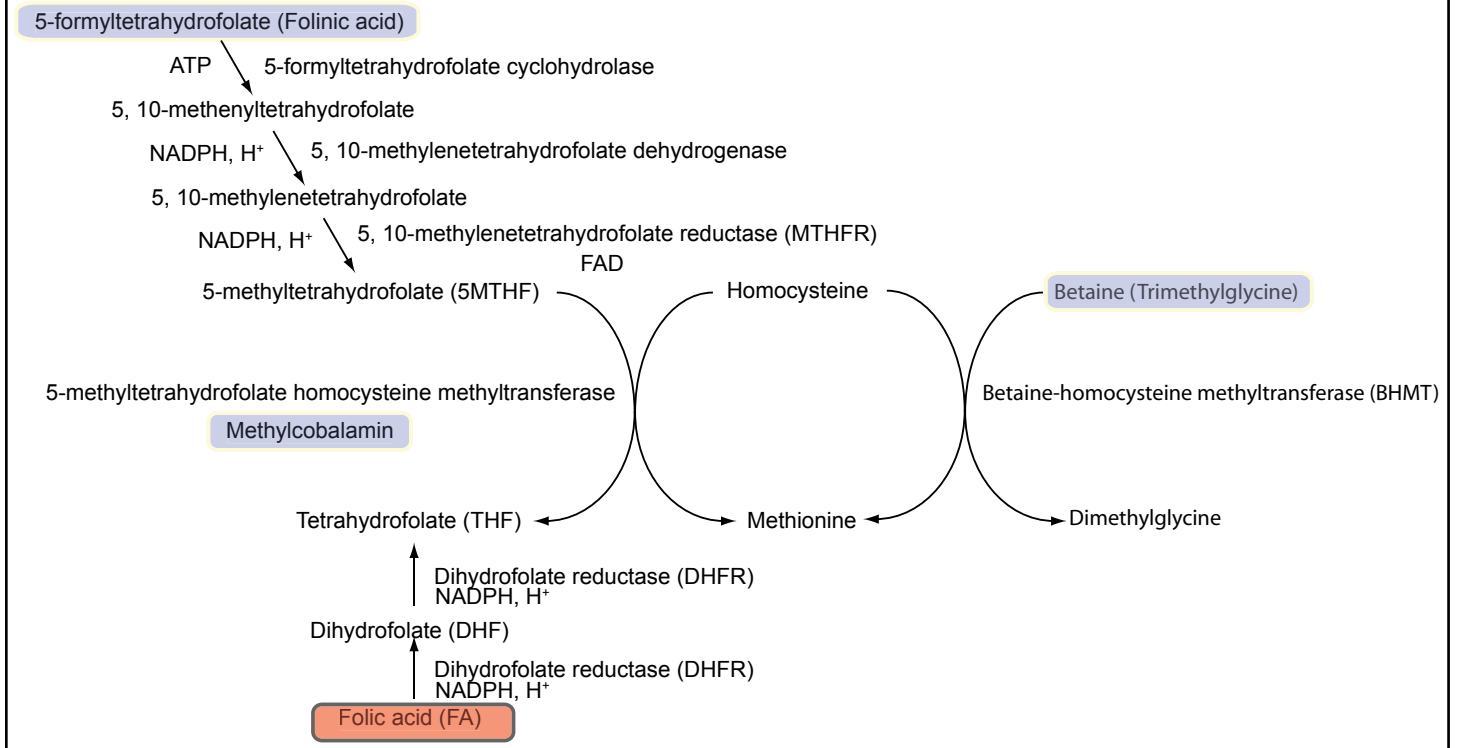
This strategy bolsters the body’s ability to rid itself of toxic quantities of homocysteine while producing the SAME it needs on its own.

Meanwhile, you reap the benefits of better mood, memory, energy and focus.

The coenzyme form of Vitamin B-12, **methylcobalamin**, found in Premium Brain Support, is crucial to its effectiveness because it is the only form of Vitamin B-12 that is directly absorbed by the brain.

Research published in the journal **Neurology** during 2008 revealed that individuals with lower Vitamin B-12 levels experienced greater brain atrophy with age. As the brain decreases in size, the risk of dementia also increases.

The MEND Homocysteine Solution



If you are taking a Vitamin B-12 supplement or multivitamin, chances are that it contains cyanocobalamin, a cheaper, inactive form of Vitamin B-12.

In contrast, Premium Brain Support offers the brain-boosting benefits of premium quality coenzyme Vitamin B-12.

Premium Brain Support also contains a highly stable and easily absorbed form of folate known as calcium folinate.

Most people only think of folic acid when it comes to the folate family of vitamins. Folic acid that is found in nearly all other supplements must be converted into biologically active folate (coenzymes).

Only coenzyme folates, like calcium folinate, can be used directly in the body's chemical pathways and help sustain proper brain function.

In 2007, a series of articles appeared in the *Journal of Clinical Psychiatry* that recognized the potential importance of bio-active folate in combatting depression and dementia.

One article, that examined a connection between folate deficiency and depression, concluded it "may lead to poor treatment outcomes in patients by reducing treatment responses (to antidepressants), slowing clinical improvement and increasing relapse."

In addition to high quality, bioavailable Vitamin B-12 and folate, Premium Brain Support contains **biotin**.

This much overlooked B vitamin is a brain-building powerhouse that plays a key role in building brain cell membranes, driving energy production and supporting sugar and protein metabolism.

And that is not all...

Here are just a few of the other ways Premium Brain Support works with your body's chemistry to provide you with a variety of "good health" advantages:

- supports amino acid metabolism
- helps produce normal lipids with an even number of carbon atoms. These lipids are needed to play a major role in the electrical and signal behavior of brain cell membranes
- aids the sustained operation of the hydroxylation pathways that are so important in the production of tyrosine, dopamine, norepinephrine, serotonin, etc.
- protects against free radical damage
- delivers Vitamin B-12 without the risk associated with exposure to Vitamin C and minerals that can damage Vitamin B-12 and produce compounds that shut down enzymes involved with methylation.

What are the combined benefits of all this?

- **better memory**
- **better mood**
- **better energy**
- **better focus**

So how much does Premium Brain Support cost?

A two month supply of Premium Brain Support costs only \$49.95. That breaks down to about 83 cents a day.

In light of the information above, it becomes clear that for a small daily investment of less than 90 cents you can take practical steps to enhance your mind, which could enable you to live a longer and more productive life.

This price is especially low when compared with the amount many pay for SAME, a supplement which is not only less effective than Premium Brain Support, but also potentially harmful.

"Reputable" SAME products are roughly **FOUR TIMES MORE EXPENSIVE** and lack the advantage of the strategic design of Premium Brain Support.

In the past we have routinely seen people spend \$600 to \$1000 a month on SAME and other supplements. Still, some are skeptical about paying

\$49.95 for a two month supply of Premium Brain Support.

In response to these objections we constructed a price-product analysis looking at dozens of products using our available product databases.

In an apples to apples comparison, Premium Brain Support comes out twenty cents **LESS** than what someone would pay if they went out and were able to buy the **IDENTICAL** high quality ingredients used in Premium Brain Support.

Looking at products with a variety of ingredients, many were well above a dollar a day, had significant design flaws and contained ingredients that did not belong together because of their mutual chemical reactivity.

Others use a mixture of ingredients of varying quality.

People have tried to create a “cheaper” alternative by buying the “ingredients” found in Premium Brain Support rather than buying the real product.

It’s just not the same.

We use a proprietary **Methyl Matrix™** system to protect the high quality ingredients in Premium Brain Support from damage by air, water, stomach acid and other factors.

This Methyl-Matrix also ensures the ingredients in Premium Brain Support operate in concert with your body’s chemistry to provide the optimal brain benefit.

When it comes to Premium Brain Support, the age old adage that maintains “the whole is more than the sum of its parts” remains truer than ever.

Enhance Your Mind, Enhance Your Life

You may be amazed by how well you feel after taking Premium Brain Support. Just imagine, no more “brain-fog.”

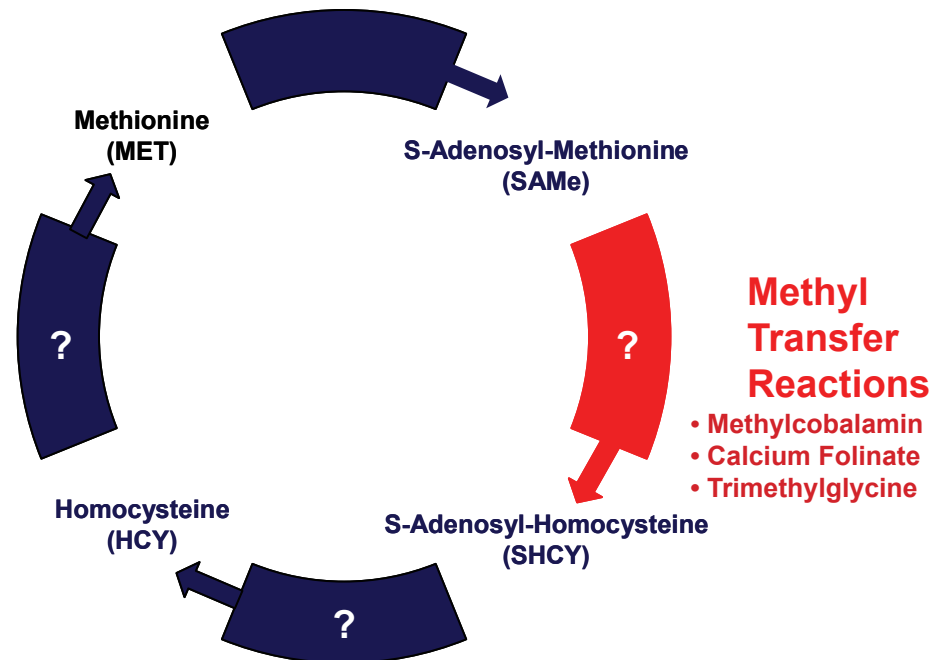
Some customers simply will not go without it. They quickly notice negative changes in their mental clarity, energy and enthusiasm when they run out.

In this stressful and demanding world we all strive to stay at the top of our mental game. Those who want an edge over the competition choose Premium Brain Support to increase productivity, sustain focus and bolster themselves against the mental decline associated with age and stress.

It’s no longer a secret, the answer is simple - **Premium Brain Support.***

***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.**

The Methionine Cycle



What are the products of methylation reactions using S-Adosylmethionine as the methylating agent?

N-acetyl-5-hydroxytryptamine to Melatonin

Carnosine to Anserine

Catecholestrogens to Methylcatecholestrogens

Cytosine to Methylcytosine

Epinephrine to Metanephrine

Guanidinoacetic acid to Creatine (KEY REACTION)

Histamine to N-methylhistamine

Lysine to ϵ -N-trimethyllysine (for carnitine synthesis)

Nicotinamide to N1-methylnicotinamide

Norepinephrine to Epinephrine

Phosphatidylethanolamine to Phosphatidylcholine

Protein methylation (methylation of free amino groups as in the mono-, di- and trimethyllysine groups of the histone proteins)

Disclaimer: This material is provided for informational purposes only and should not be construed as medical treatment, clinical recommendations or having any other purpose.

You may want to discuss this information with a knowledgeable health professional.

MEND Solutions, Premium Brain Support and Methyl-Matrix are trademarks of MEND.

Copyright©2008 by MEND, 4601 Excelsior Blvd, Suite 300 St. Louis Park, MN 55416. Phone: 952-920-8801 Toll-free: 800-431-4083. ALL RIGHTS RESERVED.

References

- Bailey, L.B., and Gregory, J.F., III, Folate metabolism and requirements. *J. Nutr.*, 129: 779-782, 1999.
- Bottiglieri, T., Folate, vitamin B12 and neuropsychiatric disorders. *Nutr. Rev.*, 54: 382-390, 1997.
- Bottiglieri, T., et al., Cerebrospinal fluid S-adenosylmethionine in depression and dementia: effects of treatment with parenteral and oral S-adenosylmethionine. *J. Neurol. Neurosurg. Psychiatry*, 53: 1096-98, 1990.
- Brinker, F., *Herb Contraindications and Drug Interactions*. Sandy, OR: Eclectic Medical Publications, 1998.
- Brown, K.H., Diarrhea and malnutrition. *J. Nutr.*, 133(suppl.): 328S-332S, 2003.
- Carper, J., *Your Miracle Brain*. New York: Harper and Row, 2000.
- Caudill, M.A., et al., Folate status response to controlled folate intake in pregnant women. *J. Nutr.* 127: 2363-2370, 1997.
- Crellin, R., Bottiglieri, T., and Reynolds, E.H., Folates and psychiatric disorders. *Drugs*, 45: 623-636, 1995.
- Fava, M., Augmenting Antidepressants with folate: a clinical perspective. *J. Clin. Psychiatry*, 68 (suppl 10): 4-7, 2007.
- Fava, M., et al., Folate, B12, and homocysteine in major depression." *Am. J. Psychiatry*, 154: 426-428, 1997.
- Fairfield, K.M., and Fletcher, R.H., Vitamins for chronic disease prevention in adults. *JAMA*, 287: 3116-3126, 2002.
- Haddad, E.H., et al., Dietary intake and biochemical, hematologic, and immune status of vegans compared with nonvegetarians. *Am. J. Clin. Nutr.*, 70(suppl.): 586S-593S, 1999.
- Herrmann, C., et al., Total homocysteine, vitamin B12, and total antioxidant status in vegetarians. *Clin. Chem.*, 47:1094-1101, 2001.
- Klee, G.G., Cobalamin and folate evaluation: measurement of methylmalonic acid and homocysteine vs vitamin B-12 and folate. *Clin. Chem.*, 46:1277-1283, 2000.
- Kuzminski, A.M., et al. Effective treatment of cobalamin deficiency with oral cobalamin. *Blood*, 92: 1191-1198, 1998.
- Loehrer, F.M., et al., Low whole-blood S-adenosylmethionine and correlation with 5-methyltetrahydrofolate and homocysteine in coronary artery disease. *Arterioscler. Thrombosis Biol.*, 16: 727-733, 1996.
- Mischoulon, D., and Raab, M.F., The role of folate in depression and dementia. *J. Clin. Psychiatry*, 68 (suppl 10): 28-33, 2007.
- Ohta, T., et al., Treatment of persistent sleep-wake schedule disorder in adolescents with methylcobalamin." *Sleep*, 14: 414-418, 1991.
- Okawa, M. et al., Vitamin B12 treatment for sleep-wake rhythm disorders." *Sleep*, 13: 15-23, 1990.
- Ravaglia, G., et al., Homocysteine and cognitive function in healthy elderly community dwellers in Italy. *Am. J. Clin. Nutr.*, 77: 668-673, 2003.
- Rogers, L.M., et al., Predictors of cobalamin deficiency in Guatemalan school children: diet, *Helicobacter pylori*, or bacterial overgrowth? *J. Pediatr. Gastroenterol. Nutr.*, 36: 27-36, 2003.
- Rogers, L.M., et al., High prevalence of cobalamin deficiency in Guatemalan schoolchildren: association with low plasma holotranscobalamin II and elevated serum methylmalonic acid and plasma homocysteine concentrations. *Am. J. Clin. Nutr.*, 77: 433-440, 2003.
- Rosenberg, L.E., Disorders of propionate and methylmalonate metabolism, in *The Metabolic Basis of Inherited Disease*. Stansbury, J.B., et al., eds. New York: McGraw-Hill, 474-497, 1983.
- Rowe, P.B., Inherited disorders of folate metabolism, in *The Metabolic Basis of Inherited Disease*. Stansbury, J.B., et al., eds. New York: McGraw-Hill, 498-521, 1983.
- Sakane, T., et al., Effects of methyl B12 on in vitro immune functions of human T lymphocytes. *Experientia*, 48: 716-720, 1982.
- Sesdradri, A., et al., Plasma homocysteine as a risk factor for dementia and Alzheimer's disease. *N. Eng. J. Med.*, 346: 476-483, 2002.
- Segasothy, M., and Phillips, P.A., Vegetarian diet: panacea for modern lifestyle diseases? *QJM*, 92: 531-544, 1999.
- Tatro, D.S., ed., *Drug Interaction Facts*. St. Louis, MO: Facts and Comparisons, 2001.
- Venn, B.J., Green, T.J., Moser, R., and Mann, J.I., Comparison of the effects of low dose supplements with L-5-methyltetrahydrofolate or folic acid on plasma homocysteine: a randomized placebo-controlled study. *Am. J. Clin. Nutr.*, 77: 658-662, 2003.
- Wilson, J.D. Vitamin deficiencies and excess, in *Harrison's Principles of Internal Medicine*, Vol. I. Fauci, A.S., et al., eds. New York: McGraw-Hill, 480-489, 1998.
- Vogiatzoglou, A., et al., Vitamin B12 status and rate of brain volume loss in community-dwelling elderly. *Neurology*, 71: 826-832, 2008.