METHYLATED B-COMPLEX

High Potency, Balanced Comprehensive B-Complex*

Methylated B-complex vitamin contains 8 essential B vitamins in addition to choline, inositol, and folate, which is the biologically active form of folic acid and 100% 5-MTHF, for optimal methylation. Methylation is a biochemical process that converts homocysteine into both methionine and cysteine and is vital in the support of both the cardiovascular and nervous systems.

DEMOGRAPHIC & CLINICAL APPLICATIONS

MEN & WOMEN

PATIENTS REQUIRING

- Cardiometabolic Protocols
- Support for Heightened Energy Levels
- Hormone Support
- Mood & Neurological Support
- Sleep & Stress Management

GLUTEN FREE

SOY FREE

DAIRY FREE

NON GMO

BENEFITS

Supports Healthy Methylation & Carbohydrate Metabolism

Promotes Nervous System, Immune & Adrenal Health

Supports Neurotransmitter Production For A Positive Mood

Protects Against Stress-Induced Nutrient Depletion

DIRECTIONS:
Take 1 capsule daily or as directed by your healthcare practitioner.

SUPPLEMENT FACTS

Serving Size: 1 Capsule | Servings Per Container: 90

	Amount Per Serving	%DV
Vitamin B1 *(as Thiamine HCL)*	50mg	4,167%
Vitamin B2 *(as Riboflavin)*	50mg	3,846%
Niacin *(as Niacinamide)*	50mg	313%
Vitamin B6 *(as Pyridoxine HCL)*	50mg	2,941%
Folate *(as 5-Methyltetrahydrofolic Acid)*	680mcg	170%
Vitamin B12 *(as Methylcobalamin)*	500mcg	20,833%
Biotin	75mcg	250%
Pantothenic Acid *(as D-Calcium Pantothenate)*	50mg	1,000%
Choline *(as Choline Bitartrate)*	19mg	3%
Inositol	50mg	*

* Daily Value Not Established

Other Ingredients: Hydroxypropyl Methycellulose, Magnesium Stearate, Silicon Dioxide, Vegetable Capsule (Hypromellose)

OVERVIEW

A diverse and intricate range of B vitamins is crucial for the body's ability to transform food into energy at the cellular level. These water-soluable vitamins are initially absorbed in the small intestine and then transported to the liver, where they undergo biotransformation into their coenzyme forms. One of the primary functions of B vitamins is to act as essential coenzymes in the Kreb's cycle, a biochemical pathway responsible for sustaining energy production in the form of adenosine triphosphate (ATP), which is vital for cellular energy. Additionally, B vitamins, particularly folate, B6, and B12, play a significant role in proper methylation, a biochemical process that facilitates the conversion of the problematic amino acid metabolite, homocysteine, into the amino acids methionine and cysteine. Adequate methylation is crucial for supporting various aspects of mental and physical health, including the regulation of gene expression and DNA repair.

FUNCTIONS OF EACH ESSENTIAL B VITAMIN

Thiamine (Vitamin B1)

In the present day, many commonly consumed over-processed grains lack the natural abundance of thiamine, which is found in whole grains. Thiamine is a vital co-factor involved in the production of ATP in the cells' Kreb's cycle, and it is also necessary for the metabolism of fats, proteins, and carbohydrates. Recent research conducted through a randomized double-blind, placebo- controlled trial showed that supplementation with high-dose thiamine additionally promotes the balance of blood sugar levels.[1]

Riboflavin (Vitamin B2)

Riboflavin serves as a precursor to flavin adenine dinucleotide (FAD) and flavin mononucleotide (FMN), which play crucial roles in energy production, intermediary metabolism, and function as potent antioxidants. When cells lack sufficient riboflavin, they exhibit signs of oxidative stress and impaired energy generation. Furthermore, research indicates that maintaining an optimal riboflavin status can contribute to healthy blood pressure levels, especially in individuals with specific genetic predispositions.[2]

Niacin

Niacin acts as a cofactor in the mitochondrial respiratory chain responsible for ATP production. Within the body, niacin undergoes transformation into nicotinamide adenine dinucleotide (NAD) and nicotinamide adenine dinucleotide phosphate (NADP), both of which contribute to oxidation reduction reactions in cells. Niacin, also known as nicotinic acid, has a well-established track record in promoting cardiovascular health, as evidenced by numerous studies demonstrating its ability to support healthy cholesterol levels.[3]

Vitamin B6

Vitamin B6 plays a crucial role in more than 100 enzymatic reactions within the body, and it is indispensable for various functions such as lipid metabolism, the formation of neurotransmitters, immune health, and hormone regulation. A comprehensive and forward-looking study revealed that women who consumed an average of 4.6 mg of vitamin B6 daily exhibited significantly better indicators of cardiovascular health compared to those who consumed only 1.1 mg daily. Furthermore, vitamin B6 has been observed to enhance the immune system in older adults by increasing the activity of lymphocytes, which support optimal immune function.[4,5]

Folate

Folic acid is commonly recognized for its importance in promoting the healthy development of neural tubes in infants during pregnancy. However, its role extends beyond that, encompassing various functions such as DNA synthesis. Similar to vitamin B6, folic acid serves as a significant methyl donor and assists in the regulation of mitochondrial enzymes and energy metabolism. 5-MTHF has superior bioavailability compared to folic acid. It can be readily absorbed and utilized by the body, ensuring optimal folate levels. In contrast, folic acid requires conversion by the enzyme dihydrofolate reductase (DHFR) to become active, and this conversion process may be inefficient in some individuals.

Vitamin B12

Vitamin B12, primarily obtained from organ meats, seafood, and egg yolks, frequently becomes deficient in vegan and vegetarian diets. This vitamin is vital for the metabolism of fats and carbohydrates, the synthesis of proteins, and it also contributes to the regulation of mitochondrial enzymes and energy metabolism. Furthermore, vitamin B12 plays a significant role in supporting neurological health, including mood.[6]

Biotin

Biotin, an essential B vitamin, is crucial for maintaining healthy metabolic function and plays a significant role in the metabolism of fats, carbohydrates, and proteins. It also contributes to the synthesis of important macromolecules involved in cellular processes. Additionally, biotin is known for its positive impact on hair health, as it supports the strength and growth of hair follicles.[6,7]

Pantothenic Acid

Pantothenic acid, along with its biologically active derivative CoA, plays a vital role in the synthesis of crucial fatty acids, membrane phospholipids, amino acids, steroid hormones, and energy production. Around 95% of CoA is located within the mitochondria. Furthermore, pantothenic acid has been demonstrated to have a regulatory effect on blood fats in animal studies, and research indicates its ability to support normal tissue repair and recovery.[8,9,10]

Choline Bitartrate

Choline is not a B vitamin, but it is associated with B vitamins. It's vital for the construction of cellular membranes and plasma lipoproteins. Choline synthesizes acetylcholine, a neurotransmitter that helps support brain and muscle function.

REFERENCES

1. *Alaei Shahmiri F, Soares MJ, Zhao Y, Sherriff J. High-dose thiamine supplementation improves glucose tolerance in hyperglycemic individuals: a randomized, double-blind cross-over trial. Eur J Nutr. 2013 Oct;52(7):1821-4. Epub 2013 May 29.*

2. *Wilson CP, Ward M, McNulty H, Strain JJ, Trouton TG,Horigan G, Purvis J, Scott JM. Riboflavin offers a targeted strategy for managing hypertension in patients with the MTHFR 677TT genotype: a 4-y follow-up. Am J Clin Nutr. 2012 Mar;95(3):766-72. Epub 2012 Jan 25.*

3. *Mason CM, Doneen AL. Niacin-a critical component to the management of atherosclerosis: contemporary management of dyslipidemia to prevent, reduce, or reverse atherosclerotic cardiovascular disease. J Cardiovasc Nurs. 2012 Jul-Aug;27(4):303-16.*

4. *Rimm EB, Willett WC, Hu FB, et al. Folate and vitamin B6 from diet and supplements in relation to risk of coronary heart disease among women. JAMA. 1998;279(5):359-364.*

5. *Meydani SN, Ribaya-Mercado JD, Russell RM, Sahyoun N, Morrow FD, Gershoff SN. Vitamin B-6 deficiency impairs interleukin 2 production and lymphocyte proliferation in elderly adults. Am J Clin Nutr. 1991;53(5):1275-1280.*

6. *Huskisson E, Maggini S, Ruf M. The role of vitamins and minerals in energy metabolism and well-being. J Int Med Res. May-Jun 2007;35(3):277-289.*

7. *Mock DM. Biotin. In: Ziegler E, Filer LJ, eds. Present Knowledge in Nutrition: International Life Sciences Institute; 1996:220-235.*

8. *Plesofsky-Vig N. Pantothenic Acid. In: Ziegler E, Filer LJ,eds. Present Knowledge in Nutrition: International Life Sciences Institute.; 1996:236-244.*

9. *Naruta E, Buko V. Hypolipidemic effect of pantothenic acid derivatives in mice with hypothalamic obesity induced by aurothioglucose. Exp Toxicol Pathol. 2001 Oct;53(5):393-8.*

10. *Ellinger S, Stehle P. Efficacy of vitamin supplementation in situations with wound healing disorders: results from clinical intervention studies. Curr Opin Clin Nutr Metab Care. 2009 Nov;12(6):588-95. Review.*