Fully Active B Complex
with Quatrefolic®

Optimized for Absorption and Utilization
The B vitamins are fundamental to life. Humans cannot make them, therefore we have to get them through the diet. Doctor’s Best Fully Active B Complex is a full-spectrum B vitamin supplement, carefully designed for optimal absorption and utilization. This formulation provides the B vitamins in their safest, best tolerated, and most biochemically active forms. It includes vitamin C for added stability. It is hypoallergenic, with no unhealthy colorants or additives.

This formulation contains only ORTHO nutrients, namely those vitamin forms (called “vitamers”) identical to those naturally built into the body’s chemistry, as first described by Nobel Prize winner Linus Pauling.1 ORTHO B vitamins are essential requirements for many enzymes, and without them these enzymes would be unable to function.2

INGREDIENTS AND BENEFITS
The breakthrough features of this formulation include:
• Supplies only the best-utilized B vitamin forms. Most B vitamin supplements use cheap forms that are not optimally utilized in the body. This formulation does not compromise—it provides generous amounts of the most active B vitamers.
• Substitutes naturally fully active folate for synthetic folic acid. Folic acid is an artificial folate that is difficult for the body to assimilate.
• Provides sufficient, fully active vitamin B12. Very few supplements provide sufficient amounts of active vitamin B12.

Thiamin (“Vitamin B1”) is fundamental to human metabolism because it is essential for the metabolism of oxygen.3,4 The microscopic “power plants” of our cells (mitochondria) require thiamin to generate energy, but elsewhere in the cells it is also required for energy generation.6 Thiamin is important for metabolizing amino acids, the building blocks of proteins,4 but is especially important for managing sugar and other carbohydrates, and can be depleted by high-carbohydrate diets.5 Thiamine even helps support the delicate blood vessels of the retina and other tissues in the presence of high levels of circulating blood sugar.7

This vitamin is absorbed only as thiamin (not as other thiamin vitamers) in the upper small intestine.4 Alcohol can impair the proteins that transport thiamin, and high alcohol consumption is linked to thiamine deficiency.3,6 The body’s thiamine stores also can be depleted by diuretic medications.8

The brain and other nervous tissues have especially high thiamin requirements.6 Other organs with high oxygen requirements, such as the heart, also have high demand for thiamine.4 The liver, which is also sensitive to alcohol, uses thiamine to help manage glyoxals, metabolic byproducts that can cause tissue damage.5

Riboflavin (“Vitamin B2”) is a cofactor for various mitochondrial enzymes and therefore essential for the body to make energy.10 Riboflavin is involved in a wide variety of energy transfer reactions—up to 4% of all known human enzymes may use riboflavin or molecules derived from it. Riboflavin is a necessary cofactor for the metabolism of homocysteine, a normal product of metabolism that can become toxic as it accumulates; and for the utilization of glutathione, a major antioxidant.2 Riboflavin also supports important enzymes that recycle folate and activate vitamin B6.10

The C677T mutation is one of the most common mutations in humans, and impairs the body’s ability to process the folate B vitamin. Riboflavin is an essential cofactor for the enzyme involved (MTHFR, methylene tetrahydrofolate reductase), and the mutation impairs riboflavin binding to the enzyme.2 In a clinical trial, riboflavin supplementation markedly countered the negative effects of this mutation.10

Niacin and Niacinamide (“Vitamin B3”).4 This vitamin is fundamentally essential for numerous enzymes that make and use energy. Both the niacin and niacinamide vitamers are readily activated to the cofactors that power these enzymes. Some of these enzymes have mutations that impair their binding with B3, and increased B3 intake often will improve their performance.2

Supplement Facts

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>1 veggie capsule</th>
<th>Servings per container</th>
<th>30 servings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount per serving</td>
<td>% Daily Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin C (as ascorbic acid)</td>
<td>40 mg</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>Vitamin B1 (Thiamin, as hydrochloride)</td>
<td>60 mg</td>
<td>4000%</td>
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<tr>
<td>Vitamin B2 (as riboflavin and riboflavin-5-phosphate)</td>
<td>75 mg</td>
<td>4412%</td>
<td></td>
</tr>
<tr>
<td>Vitamin B3 (as niacin and niacinamide)</td>
<td>50 mg</td>
<td>250%</td>
<td></td>
</tr>
<tr>
<td>Vitamin B6 (as pyridoxine hydrochloride and pyridoxal-5-phosphate)</td>
<td>50 mg</td>
<td>2500%</td>
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</tr>
<tr>
<td>Folate (6S)-5-methyltetrahydrofolate (MTHF)</td>
<td>400 mcg</td>
<td>100%</td>
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<tr>
<td>(as 6S)-5-methyltetrahydrofolic acid, glucosamine salt from Quatrefolic®)</td>
<td></td>
<td></td>
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<tr>
<td>Vitamin B12 (as methylcobalamin)</td>
<td>1000 mcg</td>
<td>16667%</td>
<td></td>
</tr>
<tr>
<td>Biotin</td>
<td>600 mcg</td>
<td>200%</td>
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</tr>
<tr>
<td>Pantothenic acid (as calcium pantothenate)</td>
<td>100 mg</td>
<td>1000%</td>
<td></td>
</tr>
</tbody>
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* Daily Value not established.

Other Ingredients: Modified cellulose (vegetarian capsule), microcrystalline cellulose, ascorbyl palmitate, silicon dioxide.

Suggested Adult Use: Take 1 capsule daily, with food, or as recommended by a nutritionally-informed physician.

Non-GMO / Gluten Free / Soy Free / Vegan
Store in a cool dry place.

* 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.
Vitamin B3 helps the liver maintain healthy cholesterol levels, as verified by multiple clinical trials. It is also essential for detoxifying alcohol and is readily depleted by excessive alcohol intake or by smoking. This formulation provides more niacinamide and less niacin, in order to avoid the troublesome skin flushing that niacin can cause. Niacinamide does not cause flushing.

B Vitamins Work Together for Energy and Coping with Stress*

Many of the enzyme systems that manage energy generation, methyl group transfers, antioxidant defense, and numerous other metabolic pathways require more than one B vitamin in order to function. As examples, two key energy enzymes (pyruvate dehydrogenase and ketoglutarate dehydrogenase) require vitamins B1, B2, B3 and B5 to do their jobs. The methyl transfer enzyme that recycles homocysteine (methionine synthase) must have both fully active folate and fully active vitamin B12 available, in order to carry out its pivotal function. The mitochondria, which generate over 90 percent of our life energy, need all the B vitamins to make energy. They also need the B vitamins to assist their antioxidant defenses, which protect them from self-destruction by the oxygen free radicals they generate as byproducts.

The B vitamins’ fundamental importance to metabolism helps explain their importance to the body’s defenses against stress. Clinically, they can help the individual cope with emotional stress. Lifestyle stressors such as smoking and excessive alcohol consumption tend to deplete them from the body. So does physical work and intensive exercise.

Help Maintain Brain Health and Wellbeing Across the Lifespan*

B vitamins are indispensable for healthy management maintenance of healthy memory, mood and other brain functions, across the lifespan. In a 2-year clinical trial with subjects aged over 70 years, a B vitamin combination (folate, B6 and B12) showed benefit for memory and other cognitive functions as compared against placebo. The simpler combination of folate and B12 improved memory in a trial with subjects aged 60 to 74 years. Folate’s fundamental importance for mood management is well established.

Overall, the importance of the B vitamins for energy and for coping with stress, as well as for the brain, heart, circulation, immune response, and whole-body wellbeing is fully established. Doctor’s Best Fully Active B Complex is based on the most advanced clinical and basic science research on these vitamins and their most fully active vitamers. This supplement is fully optimized for safety and efficacy, and is an excellent means to ensure that the body’s needs for B vitamins are being satisfied.

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SCIENTIFIC REFERENCES


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