B Activ™

B Complex with Benfotiamine and Quatrefolic®

Clinical Applications

» Supports Carbohydrate Metabolism*
» Supports Healthy Nervous System/Adrenal/Immune Function*
» Supports Cardiovascular Health*
» Supports Healthy Mental Function and Mood*

_B Activ™_ contains the entire spectrum of B vitamins to support adrenal and neurological functions. It features activated forms of vitamins B2, B6, and B12; benfotiamine, a fat soluble, more physiologically active form of thiamine; and folate as Quatrefolic®, which is proven to have greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF.*

**Discussion**

The water-soluble B vitamins have to be absorbed in the small intestine and then go to the liver where they are biotransformed into their active coenzyme forms. B Activ contains vitamins B1 (thiamine), B2 (riboflavin), B6 (pyridoxine), and B12 (cobalamin) in their physiologically-active form making them easier to absorb and “ready-for-use.” For example, in patients receiving pyridoxine HCl, only 33 percent responded with an increase in plasma pyridoxal-5’-phosphate (P5P); however, the level increased in all of the patients receiving P5P.[1]

Folate is provided as 5-methyltetrahydrofolate (5-MTHF), which bypasses metabolic steps to folate bioactivity. 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 may be the preferred form to replenish folate. This may be especially applicable to those with digestive challenges or genetic variations in folate metabolism.[2-4] In this formula, 5-MTHF is provided as Quatrefolic—the glucosamine salt of 5-MTHF. In vitro and in vivo studies have proven that Quatrefolic has greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF. Folate is stored in small amounts in red blood cells (RBC), and RBC folate has been shown to be higher after supplementation with 5-MTHF compared to folic acid and placebo. Likewise, patients given 5 mg of 5-MTHF experienced plasma levels of 5-MTHF 700% greater than patients given folic acid.[5]

Another unique ingredient in this formula is benfotiamine (S-benzoylthiamine O-monophosphate), a safe, fat-soluble analog of thiamine. One study showed that it not only raised blood and tissue levels of thiamine at least five times higher than the water-soluble salt, but it also remained bioavailable after oral administration up to 3.6 times longer than thiamine salt.[6] Benfotiamine is the most potent of a class of thiamine-derived compounds present in small quantities in members of the _Allium_ genus. The superiority of its biological activity compared to thiamine rests in its structure—a thiazole ring opens to allow easy diffusion through a membrane and then closes to become structurally active.*

Benfotiamine increases transketolase activity, thereby diverting from three natural, yet destructive metabolic pathways: 1) it decreases the glucose metabolites that lead to the buildup of certain types of detrimental advanced glycation end products (AGEs); 2) it normalizes protein kinase C activity; 3) it protects the retina by preventing the activation of NF-kappaB therein.[7] Research suggests it may also protect the kidneys and endothelial cells.[8] Benfotiamine is useful for replenishing thiamine, this may be especially true in individuals that use the vitamin at a higher rate or in those with lifestyle habits that deplete it.[9-11]
B Activ™ Supplement Facts

<table>
<thead>
<tr>
<th>Serving Size: 1 Capsule</th>
<th>Amount Per Serving</th>
<th>%Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiamin (20 mg as thiamine HCl and 20 mg as benfotiamine)</td>
<td>40 mg</td>
<td>2,667%</td>
</tr>
<tr>
<td>Riboflavin (as riboflavin-5'-phosphate)</td>
<td>20 mg</td>
<td>1,176%</td>
</tr>
<tr>
<td>Niacin (130 mg as niacinamide and 10 mg as niacin)</td>
<td>140 mg</td>
<td>700%</td>
</tr>
<tr>
<td>Vitamin B6 (as pyridoxal-5'-phosphate)</td>
<td>20 mg</td>
<td>1,000%</td>
</tr>
<tr>
<td>Folate (as 5-methyltetrahydrofolate†)</td>
<td>400 mcg</td>
<td>100%</td>
</tr>
<tr>
<td>Vitamin B12 (as methylcobalamin)</td>
<td>400 mcg</td>
<td>6,666%</td>
</tr>
<tr>
<td>Biotin</td>
<td>400 mcg</td>
<td>133%</td>
</tr>
<tr>
<td>Pantothenic Acid (as d-calcium pantothenate)</td>
<td>150 mg</td>
<td>1,500%</td>
</tr>
<tr>
<td>Choline (as choline dihydrogen citrate)</td>
<td>30 mg</td>
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</tbody>
</table>

** Daily Value not established.

[† Quatrefolic® is a registered trademark of Gnosis S.p.A. Patents Pending.]

DIRECTIONS: Take one capsule once or twice daily, or as directed by your healthcare practitioner.

DOES NOT CONTAIN: Wheat, gluten, corn protein, yeast, soy, animal or dairy products, artificial colors, sweeteners, or preservatives.

CAUTIONS: Consult your healthcare practitioner before use. Keep out of reach of children. Avoid if allergic to any ingredient.

STORAGE: Keep tightly closed in a cool, dry place.

References


Other Ingredients: Vegetable capsule (HPMC and water), cellulose, silicon dioxide, and magnesium stearate.

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additional references available upon request