

# B Activ<sup>®</sup>

## B Complex with Benfotiamine and Quatrefolic<sup>®</sup>



Available in 30 capsules, 90 capsules, and 180 capsules

### 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 (methylcobalamin) 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.\*<sup>[1]</sup>

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.<sup>[2-4]</sup> 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.\*<sup>[5]</sup>

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.<sup>[6]</sup> 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

## Clinical Applications

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

*B Activ<sup>®</sup> 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<sup>®</sup>, which is proven to have greater stability, solubility, and bioavailability over calcium salt forms of 5-MTHF.\**

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.<sup>[7]</sup> Research suggests it may also protect the kidneys and endothelial cells.<sup>[8]</sup> 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.\*<sup>[9-11]</sup>

**B Activ® Supplement Facts**


Serving Size: 1 Capsule

	Amount Per Serving	%Daily Value
Thiamin (as thiamine HCl)	20 mg	1667%
Riboflavin (as riboflavin 5'-phosphate sodium)	20 mg	1538%
Niacin (as niacinamide and niacin)	140 mg	875%
Vitamin B6 (as pyridoxal 5'-phosphate)	20 mg	1176%
Folate (as (6S)-5-methyltetrahydrofolic acid, glucosamine salt) <sup>S1</sup>	680 mcg DFE	170%
Vitamin B12 (as methylcobalamin)	400 mcg	16,667%
Biotin	400 mcg	1333%
Pantothenic Acid (as d-calcium pantothenate)	150 mg	3000%
Choline (as choline dihydrogen citrate)	30 mg	5%
Benfotiamine	20 mg	**

\*\* Daily Value not established.

**Other Ingredients:** Capsule (hypromellose and water), stearic acid, magnesium stearate, and silica.**DIRECTIONS:** Take one capsule daily, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional.

**STORAGE:** Keep closed in a cool, dry place out of reach of children.**FORMULATED TO EXCLUDE:** Wheat, gluten, corn, yeast, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, ingredients derived from genetically modified organisms (GMOs), artificial colors, and artificial sweeteners.


<sup>S1</sup> Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under U.S. patent 7,947,662.

**References**

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All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

\*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.

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