



Available in 90 vegetarian capsules

- Vitamin supplement
- A factor in the maintenance of good health
- Helps the body to metabolize carbohydrates, fats, and proteins
- Helps normal growth and development
- Helps in tissue formation
- Helps to form red blood cells
- Helps to support liver function
- Helps to prevent folate deficiency in men and non-pregnant and non-breastfeeding women

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.*^[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

Medicinal Ingredients (per vegetarian capsule)

Vitamin B1 (Thiamine hydrochloride).....	20 mg
Vitamin B2 (Riboflavin 5'-phosphate sodium).....	20 mg
Niacinamide	130 mg
Folate (Quatrefolic® (6S)-5-methyltetrahydrofolic acid, glucosamine salt).....	400 mcg
Vitamin B6 (Pyridoxal 5-Phosphate)	20 mg
Vitamin B12 (Methylcobalamin).....	400 mcg
Biotin	400 mcg
Vitamin B5 (Calcium D-pantothenate)	150 mg
Benfotiamine	20 mg
Choline (Choline dihydrogen citrate).....	30 mg
Niacin	10 mg

Non-Medicinal Ingredients

Hypromellose, stearic acid, magnesium stearate, silica.

Recommended Dose

Adults: Take 1 capsule daily with food, or as directed by a healthcare practitioner.

Consult a healthcare practitioner for use beyond 12 weeks. Do not use if pregnant or breastfeeding. Persons with thiamine hypersensitivity should not take product.

People sensitive to nicotinic acid may experience flushing of the skin that is generally mild and transient.



Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under US patent 7,947,662.



References

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Additional references available upon request

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