

# Adrenal B5



## Clinical Applications

- Supports Adrenal Hormone Synthesis\*
- Supports Adrenal Physiological Functions\*
- Supports Energy Production\*

*Adrenal B5 is formulated to support the body's efforts in adrenal hormone production and energy generation. It provides activated B vitamins, vitamin C, and L-carnitine, as well as BioPerine® to support nutrient absorption. The Quatrefolic® form of 5-methyltetrahydrofolate (5-MTHF) is present for optimal folate bioavailability. L-carnitine enhances activation of pantothenate kinase—the first, most critical enzyme involved in the metabolic conversion of pantothenic acid to coenzyme A.\**

All 3rd Opinion Inc Formulas Meet or Exceed cGMP Quality Standards

## Discussion

**Pantothenic Acid (as d-calcium pantothenate)** Pantothenic acid, a B complex vitamin also known as vitamin B5, occurs as an unstable oil. Its water-soluble salt, d-calcium pantothenate, is the form most commonly used in supplements. D-calcium pantothenate is composed of 91.5% pantothenic acid and 7.5% calcium. Among its many physiological functions, pantothenic acid is a precursor to the synthesis of coenzyme A (CoA), is an essential cofactor for ATP production, and is essential to the adrenal cortex for production of glucocorticoids.\*

**Vitamin B6 (as pyridoxal 5'-phosphate and pyridoxine HCl)** Adrenal B5 provides vitamin B6 as both pyridoxine HCl and activated pyridoxal 5'-phosphate, the form in which B6 is transported in the blood. Physiologically, vitamin B6 influences the adrenal glucocorticoid receptor, stimulates the secretion of adrenal catecholamines, and aids in sodium and potassium balance.\*

**Vitamin C (as magnesium ascorbate)** The release of adrenocorticotrophic hormone (ACTH) from the pituitary gland in tandem with the body's physiological response to stress will deplete the relatively large amount of vitamin C typically stored in the adrenal cortex.<sup>[1]</sup> This vitamin is essential for the synthesis of epinephrine, the hormone secreted by the adrenal medulla in response to stress. Epinephrine, in turn, plays a role in the synthesis of aldosterone, the hormone that regulates blood pressure, volume, and pH.\*

**Folate (as calcium folinate and 5-MTHF)** Adrenal B5 provides the activated form of folic acid—5-MTHF as Quatrefolic<sup>[2]</sup>—to ensure superior bioavailability. Folic acid is important for building and repairing protein that may be broken down by stress hormones. It is also key to the synthesis of serotonin, a neurotransmitter that affects mood, appetite, and sleep,<sup>[3, 4]</sup> all of which are often negatively affected by stress.\*

**L- Carnitine (as tartrate)** This conditionally essential nutrient derived from lysine is needed for the “carnitine shuttle.” It transports long-chain fatty acyl CoA from the outside to the inside of the mitochondria, making it a key nutrient in the production of energy.\*

**BioPerine®** This patented extract of black pepper (*Piper nigrum*) has been shown to significantly enhance the availability of vitamin C and vitamin B6.\*<sup>[5]</sup>



Distributed by:  
The 3rd Opinion Inc.  
P.O. Box 10  
Chattanooga, OK 73528  
1-800-431-7902

Adrenal B5



# Supplement Facts

Serving Size: 1 Capsule  
Servings Per Container: 120

	Amount Per Serving	%Daily Value
Vitamin C (as magnesium ascorbate)	37.5 mg	63%
Vitamin B6 (as pyridoxine HCl and pyridoxal 5'-phosphate)	37.5 mg	1875%
Folate (100 mcg as calcium folinate and 100 mcg as Quatrefolic® (6S)-5-methyltetrahydrofolic acid, glucosamine salt)	200 mcg	50%
Pantothenic Acid (as d-calcium pantothenate)	375 mg	3750%
Calcium (as d-calcium pantothenate)	30 mg	3%
L-Carnitine (as L-carnitine L-tartrate)	75 mg	**
Black Pepper Extract ( <i>Piper nigrum</i> )(fruit)(95% piperine)(BioPerine®)	1.5 mg	**

\*\*Daily Value not established

**Other Ingredients:** HPMC (capsule), microcrystalline cellulose, stearic acid, magnesium stearate, and silica.

BioPerine is a registered trademark of Sabinsa Corp. BioPerine is protected by US patents 5,536,506; 5,744,161; 5,972,382; and 6,054,585.

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

## Directions

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

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged.

## References

1. Murray RK, Granner DK, Mayes PA, et al. *Harper's Biochemistry*. 25 ed. Stamford, CT: Appleton & Lange; 2000.
2. Quatrefolic® - The fourth generation folate. [www.quatrefolic.com](http://www.quatrefolic.com). Accessed July 12, 2011.
3. Miller AL. The methylation, neurotransmitter, and antioxidant connections between folate and depression. *Altern Med Rev*. 2008 Sep;13(3):216-26. [PMID: 18950248]
4. Trivedi MH. The link between depression and physical symptoms. *Prim Care Companion J Clin Psychiatry*. 2004;6(Suppl 1):12-6. [PMID: 16001092]
5. BioPerine® - An Ingredient of Sabinsa. [www.bioperine.com](http://www.bioperine.com). Updated April 20, 2010. Accessed July 12, 2011.

## Does Not Contain

Wheat, gluten, corn, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.

**\*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.**

