TECHNICAL DATA SHEET



-NUTRITIONALS[®]-



SLEEP & STRESS MANAGEMENT ADRENAL B COMPLEXTM

Support for feelings of stress, energy, mental focus and acuity.

Adrenal B Complex is designed to optimize both nervous system and endocrine system function by providing adrenal specific botanicals that complement a full complex of B vitamins and essential nutritional factors for producing healthy nerve cells and reducing the feelings of stress. B vitamins play a major role in the metabolism of protein and fat as well as converting carbohydrates into energy. Rhodiola rosea and Panax ginseng extracts are premier adaptogens that promote physiological equilibrium and resistance to metabolic stress. We further focused on supporting adrenal function by adding ashwagandha and N-acetyl-I-tyrosine to help reduce and minimize the effects of stress and fatigue. Adrenal B Complex is formulated to support a healthy stress response and provide nutrients to support energy, mental focus and acuity.

Supplement Facts

Serving size: 1 capsule

Servings per container: 90			
Amount per serving			%DV
Vitamin C (as Ascorbic Acid and Calcium, Magnesium, Potassium Ascorbates)	75	mg	83%
Vitamin B1 (Thiamine HCI)	50	mg	4167%
Vitamin B2 (Riboflavin 5' Phosphate)	10	mg	769%
Vitamin B3 (Niacin) (as Inositol Hexanicotinate and Niacinamide)	83	mg	519%
Vitamin B6 (as Pyridoxine HCI and Pyridoxal-5-Phosphate)	50	mg	2941%
Folate (from 5-methyl folate, calcium salt) 475 mcg	792	mcg DFE	198%
Vitamin B12 (as Methylcobalamin)	500	mcg	20833%
Biotin	400	mcg	1333%
Vitamin B5 (Pantothenic Acid) (as D-Calcium Pantothenate)	100	mg	2000%
Adrenal B Complex Proprietary Blend: L-Tyrosine, Ashwagandha (root) (Withania Somnifera), Ginseng, Panax (root), N-Acetyl L-Tyrosine, Rhodiola rosea Extract (root)	385	mg	*
*Daily Value not established.			

Other ingredients: vegetarian capsules (hypromellose, purified water), I-Leucine, silicon dioxide

B Vitamins

When the body is working hard, both physically and mentally, B vitamins help provide the energy needed. Water soluble, B Complex vitamins are essential for many of our basic physiological functions, including support for healthy brain function and producing energy (1). They support proper enzyme function, help breakdown carbohydrates, and transport nutrients throughout the body (1).

INGREDIENTS:

B1 (Thiamine HCI)

Thiamine is required for carbohydrate metabolism. Every cell of the body requires thiamine to form adenosine triphosphate (ATP), the nucleotide compound occurring in all cells where it provides stores of energy (1). Human studies have shown that thiamin supplementation can support positive mood changes and feelings of being clearheaded, composed and energetic (1).

<u>B2(Riboflavin 5' Phosphate)</u>

Riboflavin is essential for tissue respiration, processing amino acids (proteins) and fats. It also activates vitamin B6 (pyridoxine) and plays an important role in cellular energy production (1, 13).

B3 (Niacin/Niacinamide (Inositol Hexanicotinate))

B3 is well absorbed and required for lipid metabolism, tissue respiration, and glycogenolysis. Niacin is converted in the body into the coenzyme nicotinamide adenine dinucleotide (NAD); NAD is required for more than 400 reactions in the body, including the conversion of energy from carbo-hydrates, fats and proteins into ATP (1,17). The niacin form of B3 helps support healthy cholesterol levels (2). Adrenal B Complex contains both inositol hexanicotinate and niacinamide to meet the various needs of consumers and reduce the risk of flushing.

B5 (D-Calcium Pantothenate)

B5 is required for intermediary metabolism of carbohydrates, proteins, and lipids. Pantothenic acid is a precursor of coenzyme A, which is required in the acetylation reactions in gluconeogenesis, in the release of energy from carbohydrates, and in the synthesis and degradation of fatty acids (3). Deficiency symptoms may include irritability, restlessness, fatigue or trouble sleeping (1,15).

B6 (Pyridoxine HCI / Pyridoxal-5-Phosphate)

B6 is required for amino acid metabolism. It is also involved in carbohydrate and lipid metabolism (2). Vitamin B6 deficiency symptoms may include mental confusion and low mood (1). Decreased pyridoxine concentrations are associated with increased plasma levels of C-reactive protein (CRP) (4). P-5-P is involved in the metabolism of GABA, a neurotransmitter involved in supporting healthy responses to anxiety, stress and fear (16). Replaces all previous versions: 11.17.22

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.

B12 (Methylcobalamin)

Vitamin B12 is a naturally occurring B-complex vitamin that is formed by microorganisms. Methylcobalamin is the metabolically active form of Vitamin B12 (18). B12 is required for nucleoprotein and myelin synthesis, cell reproduction, normal nerve cell activity, DNA replication, and normal erythropoiesis. Deficiency of B12 may result in fatigue, irritability, low mood, loss of concentration or memory loss (1,18).

Folate (as L-5-MTHF)

5-methyltetrahydrofolate (5-MTHF) is a naturally occurring form of folate and is the only form of folate that can cross the blood-brain barrier. It is used in Adrenal B Complex because approximately 10% of people are not able to convert folate into 5-MTHF. Folate is required for the production of DNA and RNA, the building blocks of cells. Folate is most effective when taken with Methyl B12 and Vitamin C. Folate is required for the synthesis of SAM-e, a neurotransmitter associated with normal moods. Low concentrations of folate have been associated with fatigue, poor cognitive function, difficulty concentrating, low mood and irritability (1,5).

<u>Biotin</u>

Biotin is an essential and water-soluble B vitamin that acts as a coenzyme during the metabolism of protein, fats, and carbohydrates. Biotin-containing enzymes are involved in gluconeogenesis, fatty acid synthesis, propionate metabolism and the catabolism of leucine in mammals. Biotin is involved in cellular energy production (1). Symptoms of Biotin deficiency may include low mood and lethargy (14).

N-Acetyl L-Tyrosine

Tyrosine is a non-essential amino acid that the body synthesizes from phenylalanine. Studies indicate that the brain is not able to synthesize enough tyrosine from phenylalanine under stressful conditions (6). Nacetyl I-tyrosine is more rapidly absorbed and has better bioavailability than L-tyrosine, which is less stable, not as biologically active, not as soluble in water and therefore less bioavailable. Acetylation increases the stability and solubility of L-tyrosine to support brain function and the natural synthesis of the catecholamines dopamine and norepinephrine.

<u>Ashwagandha</u>

Ashwagandha (Withania somnifera) has long been recognized as an "adaptogen" that supports resistance to environmental stress. Ashwagandha contains several active constituents including alkaloids (isopelletierine, anaferine), steroidal lactones (withanolides, withaferins), and saponins (7). Some of the withanolides are structurally similar to ginsenosides from ginseng (11).

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Panax Ginseng (Chinese)

Orally, Panax ginseng is used as an adaptogen to support resistance to environmental stress and as a general tonic for improving well-being. Panax ginseng contains several active constituents. The constituents thought to be of most importance are triterpenoid saponins, referred to collectively as ginsenosides (panaxosides). Numerous subtypes of ginsenosides have been identified. These ginsenosides have a wide range of activity and effects. Ginsenosides can promote the conversion of amino acids into carbohydrates and glycogen by the liver and can promote glycogen formation in the tissues, supporting optimal energy reserves.

Rhodiola Rosea

Rosavins are the active constituent in Rhodiola rosea and it also contains the phenylpropanoid glycoside called salidroside. Rosavins are thought to be responsible for rhodiola's adaptogenic actions and its ability to help manage feelings of stress (8). Rhodiola has a calming effect on the central nervous system and supports healthy thyroid, thymus, and adrenal gland function. Rhodiola helps moderate the effects of physical and emotional stress (9). Rosavins have demonstrated an adaptogenic quality in balancing adrenal gland function (10).

Vitamin C

Adrenal glands are well known for supporting healthy stress responses. They contain some of the highest concentrations of vitamin C in the body. Ascorbic acid is a cofactor for catecholamine adrenal steroid biosynthesis (12). Vitamin C is an essential nutrient that must be obtained from the diet; it is absorbed in the small intestine. Because it is water soluble, it is safe to take at high doses (1).

Patients: Consult with your healthcare professional for the proper use of this formula.

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