



SLEEP & STRESS MANAGEMENT TRANQUILITY™

Promotes a calm, relaxed mood. Supports brain health.

Feelings of stress, anxiety, and being overwhelmed and unsettled are quite common. Our new **Tranquility** formula contains specific amino acids, vitamins, magnesium, and botanical ingredients that may restore and optimize neurotransmitter function. GABA (Gamma Aminobutyric Acid) is an amino acid that functions as a neurotransmitter that may block impulses between nerve cells in the brain. Taurine is another powerful amino acid that functions as a neurotransmitter. 5-HTP boosts serotonin, while L-Theanine may reduce the levels of chemicals in the brain that can be associated with feelings of stress and anxiety. Also, included in our formulation are three powerful botanical ingredients for supporting positive feelings during times of stress and anxiety: Rhodiola, Magnolia, and ashwagandha. We also continue to include B6, B12, and folic acid to supply essential nutrients that help improve and stabilize serotonin levels and neurotransmission.

Supplement Facts

Serving size: 2 capsule
Servings per container: 45

Amount per serving		%DV
Vitamin B6 (as Pyridoxine HCl, Pyridoxal-5-Phosphate)	2.5 mg	147%
Folic Acid (Calcium Folate)	167 mcg DFE	42%
Vitamin B12 (Methylcobalamin)	100 mcg	4167%
Magnesium (as Magnesium Citrate)	30 mg	7%
Tranquility Proprietary Blend:	1255 mg	*
GABA (gamma-aminobutyric acid), Taurine, Ashwagandha extract (root) (Withania somnifera), Magnolia officinalis extract (bark), Rhodiola rosea extract (root), 5-HTP (5-Hydroxytryptophan), L-Theanine, Black Pepper extract (fruit) (Piper nigrum) (BioPerine®)		

* Daily Value not established.

Other Ingredients: vegetarian capsules (hypromellose, purified water)

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Recommended Use: 1-2 capsules, once or twice daily, or as directed.

INGREDIENTS:

GABA (Gamma-Aminobutyric Acid)

In the central nervous system, GABA is an amino acid that functions as the primary inhibitory neurotransmitter. Neurotransmitters function as chemical messengers. GABA is considered an inhibitory neurotransmitter because it may block certain brain signals and decrease activity in the nervous system. GABA may be useful when experiencing feelings of anxiety, stress, fear, and to support feelings of good mood and well-being (1).

Ashwagandha

Ashwagandha is an herb that has recently gained recognition as a support for feelings of anxiety and stress and is a revered Ayurvedic herb as a Rasayana (tonic). Many scientific studies have been carried out and its adaptogenic activities studied in detail. Trial studies indicated Ashwagandha plant constituents interact with the dopamine receptors in the corpus striatum of the brain (2).

5-HTP

5-HTP is a chemical by-product of the protein building block L-tryptophan. It is also produced commercially from the seeds of an African plant known as *Griffonia simplicifolia*. 5-HTP functions in the brain and central nervous system by increasing the production of the chemical serotonin. Serotonin can affect sleep, appetite, temperature, sexual behavior, and feelings of discomfort. Since 5-HTP can readily cross the blood-brain barrier, it may help increase central nervous system (CNS) synthesis of serotonin (3).

Magnesium

Magnesium status is highly associated with stress feeling levels, with both stress and hypomagnesemia potentiating each other's negative effects. Indeed, hypomagnesemia has been associated with stressful conditions. Research shows that magnesium is important in regulating neurotransmitters, which send messages throughout the brain and body (4). Magnesium increases GABA, which encourages relaxation and plays a key role in regulating the body's stress response system.

Vitamin B6 (Pyridoxine/Pyridoxal-5-Phosphate)

Pyridoxine is required for amino acid metabolism. In the body, pyridoxine is converted to coenzymes pyridoxal phosphate and pyridoxamine phosphate in a wide variety of metabolic reactions. These reactions include transamination of amino acids, conversion of tryptophan to niacin, synthesis of GABA in the central nervous system, metabolism of serotonin, nor-epinephrine and dopamine, metabolism of polyunsaturated fatty acids and phospholipids, and the synthesis of the heme group of hemoglobin (7). We use both forms of B6 to ensure absorption is achieved as a number of people cannot convert pyridoxine into the biologically active form of pyridoxal-5-phosphate.

Vitamin B12 (Methylcobalamin)

Methylcobalamin is the biologically active form of B12. Vitamin B12 is a naturally occurring B complex vitamin that is formed by microorganisms. Research indicates that low levels of B12 contribute to poor mood and feelings related to anxiety. Levels of neurotransmitters in the brain of B12 deficient rats indicated norepinephrine levels were significantly decreased in the deficient animals compared to controls (8).

Rhodiola

Rhodiola is an herb that grows in the cold, mountainous regions of Europe and Asia. Its roots are considered adaptogens, meaning they help the body adapt to stress when consumed. Its root contains more than 140 active ingredients, the two most potent of which are rosavin and salidroside. Consuming adaptogens during stressful times is thought to help one's ability to handle such situations better. Many of Rhodiola's mood, stress, and cognition results that have been reported may be attributed to effects on monoamines in the CNS. Animal investigation and molecular studies suggest Rhodiola to increase 5-hydroxytryptamine and serotonin receptor expression and to act as μ -opioid receptor and κ -opiate receptor agonists, promoting the release of β -endorphin.

L-Taurine

Taurine is a conditionally essential amino sulfonic acid present in high amounts in meat and fish. During prolonged times of insufficient intake, such as parenteral nutrition, the body cannot maintain adequate levels of taurine and supplementation becomes necessary (5). Taurine is important in metabolism, especially in the brain. It is essential in newborns, as they cannot synthesize it. Adults can produce taurine from cysteine with the additional help of pyridoxine (B6). Taurine functions in electrically active tissues such as the brain and heart to stabilize cell membranes. Taurine is an inhibitory neurotransmitter (6). Neurotransmitter transport systems have a common structure of 12 presumed transmembrane helices and includes carriers for GABA, noradrenaline/adrenaline, dopamine, serotonin, proline, glycine, betaine, and taurine.

Folinic Acid (as Calcium Folate)

Folinic acid is one active form in a group of vitamins known as folates. In the body, folinic acid may be converted into any of the other active forms of folate. Folinic acid may raise the tetrahydrobiopterin (BH4) levels, which is a critical cofactor for the manufacture of all mood-regulating neurotransmitters (9). Unlike regular folic acid supplements, up to 92% of folinic acid is absorbed from the gut following an oral dose. It remains in the body longer and the majority is converted to the active coenzyme. In this form, folinic acid can be taken up across the blood-brain barrier that ordinarily remains impermeable to dietary folates.

L-Theanine

L-Theanine is an amino acid, found traditionally in green tea, which supports feelings of anxiety through its neurotransmitting properties (5, 6, 10). L-theanine supports enhanced alpha brain wave activity and increased synthesis of GABA (7, 8). Increased GABA, in turn, may increase brain levels of dopamine and serotonin, resulting in general feelings of calm and well-being. A calming effect is possible within 30 to 40 minutes after L-theanine is taken at a dose of 50 to 200mg, and typically lasts 8 to 10 hours.

Magnolia

Honokiol and Magnolol are the major bioactive constituents of Magnolia bark. Honokiol is a polyphenolic compound that exerts neuroprotective properties through a variety of mechanisms. Honokiol results in neuronal protection through preservation of Na⁺/K⁺ ATPase, phosphorylation of pro-survival factors, preservation of mitochondria, and modulation of GABA. Honokiol further promotes neuronal health through prevention of glucose, reactive oxygen species, and cellular mediated effects.

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

For more information about this and other Condition Specific Formulas® please visit our website at:

mountainpeaknutritionals.com

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