

Positivity



CLINICAL APPLICATIONS

- Designed to Support Mood and Brighten Mental Outlook
- Supports the Production of the Neurotransmitters Serotonin, GABA, Dopamine, Norepinephrine and Epinephrine
- Supports Calming Alpha Brain Wave Activity
- Addresses Neurotransmitter Signaling Systems

ENDOCRINE HEALTH

Positivity is formulated to support a positive mental outlook and a relaxed, focused state. It includes amino acid precursors and bioactive nutrients that support healthy levels of neurotransmitters such as gamma-aminobutyric acid (GABA), serotonin, dopamine, norepinephrine and epinephrine. Maintaining adequate neurotransmitter production is vital for regulating mood, appetite, memory, focus, energy levels and a healthy sleep cycle.

Overview

Neurotransmitters are the chemical messengers that regulate mood, memory, the sleep cycle and daily stress. Adequate neurotransmitter production depends on an adequate supply of amino acids, vitamins and minerals in the diet. High levels of stress, dietary deficiencies, genetics, medications and toxins all play a role in neurotransmitter depletion. CereVive provides the nutrients required to help optimize neurotransmitter production.

L-Theanine[†]

L-theanine is an amino acid found abundantly in green tea. L-theanine has been shown to quickly improve stress perception and resilience. The stress-buffering mechanisms of L-theanine have been connected to its ability to increase serotonin and dopamine production in the brain.¹ L-theanine has also been shown to significantly increase alpha brain wave activity, which is critical for increasing attention as well as promoting

a sense of relaxation.² In a study on healthy volunteers, electroencephalograph (EEG) readings of participants were recorded following the ingestion of 50mg of L-theanine. The researchers found a greater increase in alpha brain wave activity versus placebo.² L-theanine has also been shown to have a protective effect on nerve cells that are overstimulated by the excitatory neurotransmitter, glutamate.³

PharmaGABA^{®†}

Gamma-amino butyric acid (GABA) is one of the major inhibitory neurotransmitters in the brain. GABA provides a calming effect and is a primary component of the body's stress fighting mechanisms. GABA is also available as a dietary supplement. Most commercially available forms of GABA utilize synthetically-produced GABA, manufactured from pyrrolidone, a compound not allowed for use in Japan. Positivity includes a patented, naturally-sourced, non-synthetic form of GABA called PharmaGABA[®]. It is produced naturally by the friendly bacteria, *Lactobacillus hilgardii*. In contrast to synthetic GABA sources, PharmaGABA[®] has been shown in published research studies to promote relaxation effects in the central nervous system (CNS). In a double-blind study using healthy volunteers, EEG readings were obtained after 100 mg of PharmaGABA[®] was administered. PharmaGABA[®] produced a highly significant increase in alpha waves, as well as a significant decrease in beta waves, when

[†] 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.

compared to the control group.⁴ Alpha brain waves are associated with relaxed and effortless focus, while beta waves are associated with stress, restlessness and scattered thoughts. Therefore, an increase in alpha to beta waves is associated with improved concentration and a state of centered relaxation.

Inositol[†]

Inositol is a B vitamin that is an important component of cell membrane signaling. As part of the cellular signaling system of the CNS, inositol is crucial for the release of neurotransmitters from within the nerve cells. A deficiency of inositol can affect brain signaling, resulting in inadequate neurotransmitter release causing irritability, worry and restlessness.⁵

5-HTP[†]

5-Hydroxytryptophan (5-HTP) is an amino acid intermediate that is directly converted into the mood-regulating neurotransmitter, serotonin. Maintaining a healthy serotonin level is important in regulating appetite and sleep cycle and for supporting a sense of calmness.⁹ As a dietary supplement, 5-HTP is produced naturally from the seeds of the African plant, *Griffonia simplicifolia*. In contrast to L-tryptophan, 5-HTP provides efficient conversion into serotonin because it does not need prior conversion by tryptophan hydroxylase.⁸

L-Tyrosine[†]

L-tyrosine is an amino acid precursor to the neurotransmitters dopamine, norepinephrine and epinephrine. These neurotransmitters help regulate mood, memory and concentration. L-tyrosine is able to cross the blood-brain barrier by the large neutral amino acid (LNAA) carrier system that is present in brain capillaries. Supplementation with L-tyrosine helps to increase the concentration of available tyrosine and reduce competition among similar amino acids.⁸ Once taken up by nerve cells, tyrosine is converted to L-dopa, then to dopamine. Dopamine is either used as a neurotransmitter or as a precursor to produce norepinephrine and epinephrine.⁸

Mucuna pruriens[†]

Mucuna pruriens, commonly known as Velvet bean, contains standardized doses of L-dopa. L-dopa is the direct precursor to the neurotransmitter dopamine, which helps maintain a positive mental outlook, and motivation. It is also important for supporting cognitive function. Supplementation with *M. pruriens* has been shown to support neurotransmitter production. In a study of 75 men, *M. pruriens* supplementation significantly improved dopamine, norepinephrine and epinephrine levels compared to the control group.⁹

Micronutrients[†]

Positivity contains several nutrients that are required in synthesis pathways for the neurotransmitters serotonin, GABA, dopamine, norepinephrine and epinephrine. This includes 5-methyltetrahydrofolate (5-MTHF), vitamin B6, vitamin C, zinc and magnesium.¹⁰ 5-MTHF is the biologically active form of the B vitamin folic acid, which is vital to supporting proper mood regulation.¹¹ 5-MTHF works together with B12 as methyl group donor. Methyl (CH₃) group donation is important for maintaining neurotransmitter synthesis. Magnesium is a mineral that calms the nervous system by binding to glutamate receptors, which reduces excitatory neurotransmitter activity.¹² The combination of the minerals zinc and magnesium helps reduce glutamate to non-toxic levels, providing significant neuroprotection.¹²

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Directions

4 capsules taken 1-2 times per day, morning or early afternoon on an empty stomach, or as recommended by your health care professional.

Does Not Contain

Gluten, artificial colors or flavors.

Cautions

Do not consume this product if you are pregnant or nursing. Consult your physician for further information.

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Supplement Facts [†]		
Serving Size 4 Capsules Servings Per Container 15 & 30		
4 capsules contain	Amount Per Serving	% Daily Value
Vitamin C (as Ascorbic Acid USP)	50 mg	56%
Niacin (as Niacinamide USP)	10 mg	63%
Vitamin B6 (as Pyridoxal-5'-Phosphate)	10 mg	588%
Folate (from 400 mcg as Quatrefolic [®] (6S)-5-Methyltetrahydrofolic acid glucosamine salt)	680 mcg DFE	170%
Vitamin B12 (as Methylcobalamin)	200 mcg	8,333%
Magnesium (as DiMagnesium Malate)	75 mg	18%
Zinc (as TRAACS [®] Zinc Bisglycinate Chelate)	5 mg	45%
Inositol NF	1 g	*
L-Tyrosine USP	400 mg	*
Mucuna Pruriens Extract (Standardized to contain 10% L-Dopa)	400 mg	*
5-HTP (5-Hydroxytryptophan) (from <i>Griffonia simplicifolia</i> (Seed))	150 mg	*
L-Theanine (Suntheanine [®])	100 mg	*
Gamma Aminobutyric Acid (PharmaGABA [™])	100 mg	*

* Daily Value not established

References

1. Yokogoshi H, Kobayashi M, Mochizuki M, Terashima T. Effect of theanine, r-glutamylethylamide, on brain monoamines and striatal dopamine release in conscious rats. *NeuroChem Res* 1998; 23(5):667-73.
2. Nobre AC, Rao A, Owen GN. L-theanine, a natural constituent in tea, and its effect of mental state. *Asia Pac J Clin Nutr* 2008; 17 Suppl 1:167-8.
3. Kakuda T, Hinoi E, Abe A, et al. Theanine, an ingredient of green tea, inhibits [3H]glutamine transport in neurons and astroglia in rat brain. *J Neurosci Res* 2008;86(8):1846-56.
4. Abdoua AM, Higashiguchi S, Horie K, et al. Relaxation and immunity enhancement effects of γ -Aminobutyric acid (GABA) administration in humans. *BioFactors* 2006;26:201-208.
5. Colodny L, Hoffman RL. Inositol- Clinical Applications for Exogenous Use. *Altern Med Review* 1998; 3(6):432-447.
6. O'Neil MF, Moore NA. Animal models of depression: are there any? *Human Psychopharmacology* 2003; 18:239-254.

7. Birdsall TC. 5-Hydroxytryptophan: a clinically-effective serotonin precursor. *Altern Med Review* 1998; (3)4: 271-1998.
8. Fernstrom JD, Fernstrom MH. Tyrosine, phenylalanine, and catecholamine synthesis and function in the brain. *J Nutr* 2007;137;1539S-1547S; discussion 1548S.
9. Shukla KK, Mahdi AA, Ahmad MK, Shankhwar SN, Rajender S, Jaiswar SP. Mucuna pruriens improves male fertility by its action on the hypothalamus-pituitarygonadal axis. *Fertil Steril* 2009; 92(6):1934-40.
10. Kaplan, Bonnie J, Crawford, et al. Vitamin, minerals, and mood. *Psychological Bulletin* 2007; Vol 133(5):747-760.
11. Miller AL. The methylation, neurotransmitter, and antioxidant connections between folate and depression. *Altern Med Review* 2008;13(3):216-226.
12. Prior PL, Galduroz JC. Glutaminergic hyperfunctioning during alcohol withdrawal syndrome: therapeutic perspective with zinc and magnesium. *Med Hypothesis* 2011 77(3):368-70.