

Neurotransmitter Support

5-HTP

100 mg

Description

This formulation is designed to provide neurotransmitter support in the brain. 5-hydroxytryptophan, also known as 5-HTP, is the immediate precursor to the neurotransmitter serotonin, which influences mood, sleep and appetite. Through its ability to pass the blood-brain-barrier, 5-HTP helps to support healthy serotonin levels.

Features & Benefits

- 5-HTP is the intermediate precursor in the natural synthesis of serotonin
- 5-HTP readily crosses the blood-brain barrier
- Clinical studies suggest that 5-HTP can support healthy serotonin level, promoting a positive (emotional) outlook
- 5-HTP helps promote restful sleep and supports proper sleep patterns
- 5-HTP helps regulate a normal appetite
- 5-HTP helps promote healthy blood sugar levels already in normal range

Suggested Usage

As a dietary supplement, take 1 Vcap® daily, preferably on an empty stomach at bedtime. For intensive use, take up to 3 Vcaps® daily, in divided doses, or as directed by a qualified healthcare practitioner. If GI discomfort is experienced, lower the dose, take with a meal or discontinue use.

Allergen Checklist

Contains no sugar, salt, wheat, gluten, corn, soy, milk, egg, shellfish or preservatives. Vegetarian/Vegan Product.

Cautions / Interactions

See page 2



Technical Summary

In dietary supplement form, 5-HTP is derived from seeds of the African plant *Griffonia simplicifolia*. 5-HTP has been successfully used in clinical trials for over 30 years: the primary areas of research involved persons with mild to moderate emotional disturbances,^{4,5,21,22,23,24,25,26,27,28} difficulty sleeping,^{10,11,29,30} those desiring weight management,^{7-9,31} and subjects experiencing occasional headaches.^{32,33,34,35,36,37} Especially with regard to mood alterations, positive results with oral 5-HTP preparations have been reported by the majority of investigators (please see ref. 24 for the most recent meta-analysis). Research in other areas, such as its efficacy for weight or temporary pain management, and promoting normal blood sugar levels also appears promising.

Mechanisms of Action

5-HTP primarily acts by increasing serotonin levels within the Central Nervous System (CNS); once 5-HTP levels rise, it is converted into serotonin. Serotonin in turn – when released into the synaptic clefts – affects mood, appetite, pain sensations, and through its conversion into melatonin, promotes sleep.^{1-11,38,39} Additionally, concentrations of other neurotransmitters, such as dopamine, norepinephrine, and beta-endorphin, may be influenced by the oral administration of 5-HTP.¹ Emerging science suggests that 5-HTP might also influence leptin levels,⁴⁰ which would explain its observed effects on appetite,⁴¹ reduced calorie intakes,⁷⁻⁹ and healthy blood sugar levels.⁷ Of note is the fact that serotonin itself cannot pass the blood-brain-barrier, whereas tryptophan (Trp) and 5-HTP are able to cross it.^{1,13,29,42} However, only about 3% of dietary Trp may be transported into the CNS,⁴³ while pharmacokinetic studies found that the oral bioavailability of 5-HTP in humans is approximately 70%.^{44,45}

Clinical Applications

As a dietary supplement, 5-HTP has primarily been advocated to promote positive mood and lift emotional outlook, assist with restful sleeping pattern, as well as to support a normal appetite and healthy body weight when combined with a healthy diet and exercise. Based on the currently available research, the oral application of 5-HTP may also be of value for occasional tension headaches, affecting sleep quality, cognitive performance,^{46,47} occasional nervousness with agitation,^{2,25,48,49,50} and diet adherence,^{7-9,31} as well as for assisting with already healthy blood sugar levels.⁷ The majority of clinical research studies employed doses between 50mg - 300mg taken two to three times daily. In the case of dysregulated sleep, a one-time dose ranging from 200mg to 600mg has been employed. While no significant adverse effects were reported in clinical trials, mild digestive distress, such as nausea with and without emesis has been observed after the ingestion of one-time doses of 150mg,⁴⁵ 200mg,⁴⁶ and 300mg⁹ oral 5-HTP in a small percentage of the subjects. Since the symptoms were transitory in nature and only recognized in a few instances during the gradual build-up of increasing steady state levels of 5-HTP, the importance of a slow initiation of therapeutic dosing should be emphasized.⁴⁶

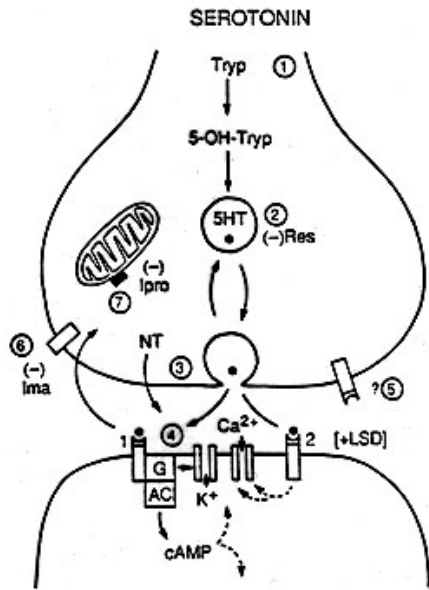


FIGURE 1 Tryptophan to 5-HTP to Serotonin conversion and biological action.

(<http://www.nature.com/nrd/journal/v4/n9/images/nrd1821-f1.jpg> accessed 11/17/2009)

1) tryptophan is transformed to 5-HTP (catalyzed by tryptophan hydroxylase) to 5-hydroxytryptamine (5HT, or serotonin) (catalyzed by 5-hydroxytryptophan decarboxylase); (2) transport and storage (blocked by reserpine, Res); (3) release of 5HT by exocytosis; corelease with a neuropeptide, e.g. neurotensin, NT; (4) binding to a 5HT1 postsynaptic receptor (coupled to G protein and cAMP), or to a 5HT2 receptor (LSD is an agonist/antagonist); (5) possible binding to presynaptic receptors; (6) reuptake terminates 5HT action (blocked by tricyclic antidepressant drugs such as imipramine, Ima); (7) degraded by MAO.

Complementary Products

Consider taking this product in combination with PROTOCOL Omega-3 (P1656), Simaluma® Plus (P1905), Adrenal Cortisol Support™ (P3344) or MetaboEnergetics™ (P3326).

Supplement Facts

Serving Size 1 Vcap®

P0105

Amount Per Serving

**5-HTP (5-hydroxytryptophan)
(from *Griffonia simplicifolia*) (Seed)**

200 mg

Other Ingredients: Rice Flour and Cellulose (capsule).

Contains no: sugar, salt, wheat, gluten, corn, soy, milk, egg, shellfish or preservatives. Vegetarian/Vegan Product. Vcaps® is a registered trademark of Capsugel. This bottle contains an Ageless® oxygen absorbing packet to ensure freshness. Do not eat packet.

Suggested Usage: As a dietary supplement, take 1 Vcap® daily, preferably on an empty stomach at bedtime. For intensive use, take up to 3 Vcaps® daily, in divided doses, or as directed by a qualified healthcare practitioner. If GI discomfort is experienced, lower the dose, take with a meal or discontinue use.

Caution: If you are pregnant/lactating or currently taking any antidepressant medications, please consult your healthcare practitioner prior to use.

Cautions/ Interactions

Although no reports have been published, it is possible that 5-HTP, when taken in combination with antidepressant drugs, such as Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), or MAO inhibitors as well as other serotonergic drugs (e.g. dextromethorphan, meperidine and triptans), may contribute to a condition known as serotonin syndrome.^{14,14-17} This syndrome is characterized by agitation, confusion, delirium, tachycardia, diaphoresis, and blood pressure fluctuations.^{14,15,19,20} In addition, 5-HTP could increase the therapeutic effects and risk for adverse events when consumed concomitantly with certain nutraceuticals, such as L-tryptophan, S-adenosylmethionine (SAMe), and St. John's Wort.¹⁵⁻¹⁷ Hence, their combined use should only occur under close medical supervision. Not recommended for pregnant or lactating women.

References on page 3

Formulated by doctors and clinical scientists exclusively for licensed healthcare practitioners. Manufactured in an A-rated Good Manufacturing (GMP) Certified facility.

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