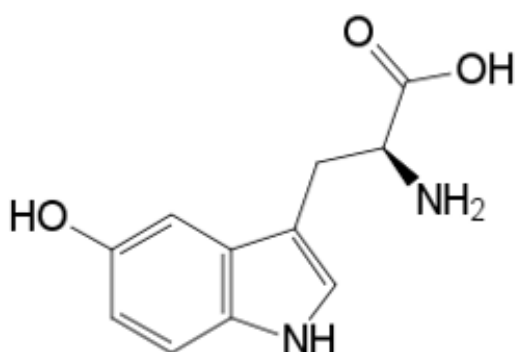


5-HTP 200 mg

TECHNICAL SUMMARY

5-HTP is the intermediate precursor in the natural synthesis of serotonin, a neurotransmitter that helps to regulate mood, appetite, and sleep/wake cycles.* 5-HTP readily crosses the blood-brain barrier and clinical studies suggest that 5-HTP can support healthy serotonin levels.* Serotonin is associated with a positive mood and provides a substrate for the production of melatonin.* This formula includes B-vitamins as cofactors, and is further enhanced with glycine, taurine, and inositol.

Structure Formula:



Chemical Name: L-2-Amino-3-(5-hydroxyindolyl) propionic acid

Allergen and Additive Disclosure: Not manufactured with wheat, gluten, soy, milk, egg, fish, shellfish, or tree nut ingredients. Produced in a GMP facility that processes other ingredients containing these allergens.

Delivery Form: Vegetable capsules

ROLE AS NUTRIENT/FUNCTION

The physiological role of 5-HTP is explained by its ability to cross the blood-brain barrier and promote healthy brain levels of serotonin.* In the central nervous system, 5-HTP can support normal levels of serotonin and therefore indirectly support a positive mood and regulate appetite and sleep/wake cycles.*

Pyridoxine (vitamin B-6) is involved in many biological functions, in the central nervous system, it is involved in the synthesis of dopamine from L-DOPA, serotonin from 5-HTP, and GABA from glutamate.* It is especially important for the regulation of GABA levels in the brain.* Pyridoxine is also known to facilitate the synthesis of myelin.*

In the brain, niacin is indirectly involved in the production of by inhibiting the action of the enzyme tryptophan 2,3-dioxygenase resulting in more tryptophan being available for serotonin production.*

Glycine is a non-essential amino acid, and endogenous glycine functions as an inhibitory neurotransmitter in the central nervous system.* In animal models, oral administration of glycine positively affects extracellular serotonin release in the rat prefrontal cortex.* This release of serotonin should indirectly support the glycine-mediated improvement in sleep quality.*

Supplement Facts

Serving Size 1 Veg Capsule

	Amount Per Serving	% Daily Value
Niacin (as Niacinamide) (Vitamin B-3)	20 mg	125%
Vitamin B-6 (from Pyridoxine HCl)	2 mg	118%
5-HTP (5-hydroxytryptophan) (from <i>Griffonia simplicifolia</i> Extract) (Seed)	200 mg	†
Glycine (Free-Form)	100 mg	†
Taurine (Free-Form)	100 mg	†
Inositol	100 mg	†

† Daily Value not established.

Other ingredients: Hypromellose (cellulose capsule), Ascorbyl Palmitate and Silicon Dioxide.

- Supports Positive Mood*
- With Glycine, Taurine & Inositol

SUGGESTED USAGE: Take 1 capsule 1 to 2 times daily, preferably on an empty stomach before bedtime, or as directed by your healthcare practitioner.

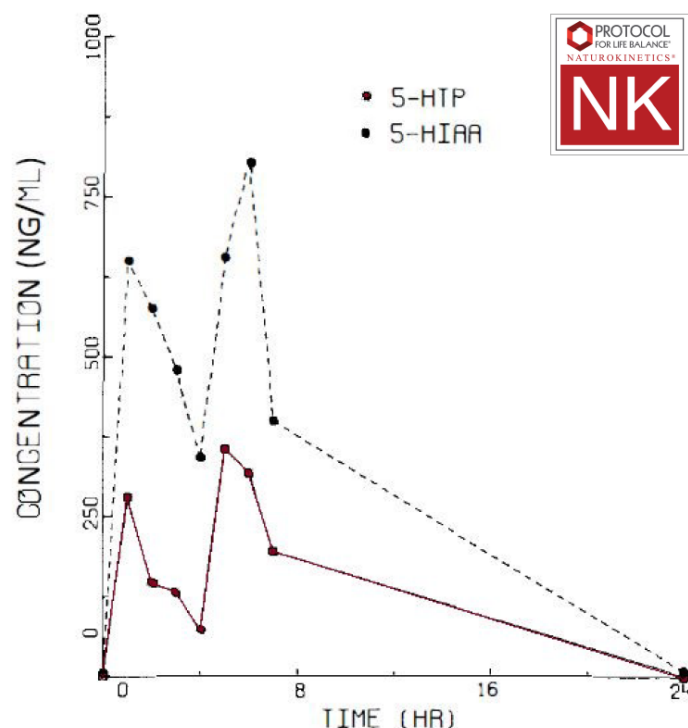


Figure 1. Plasma concentration-time curves of 5-HTP and 5-HIAA after oral administration of 200 mg of 5-HTP in a human volunteer.

In the brain, taurine is involved in the regulation of cell volume and cell osmolarity regulation.* Among other functions, taurine is able to interact with GABA_A, GABA_B, and glycine receptors in the central nervous system, which may explain the observed neuroprotective effect of taurine.*

Inositol is an isomer of glucose, is known as a second messenger precursor, and regulates numerous cellular functions.* Its function in the brain is not well defined, and it may be able to modify serotonergic 5HT2a and muscarinic receptor signaling.*

NATUROKINETICS®

Liberation: Dissolution of the vegetable capsule in water is investigated using a USP testing method and occurs between zero and 60 minutes.

Absorption: After oral administration, 5-HTP is absorbed within 2 to 6 hours, showing with a double peak concentration profile with a first T_{max} 2-3 h and a second T_{max} 5-6 h after ingestion. (Figure 1). The overall bioavailability of orally administered 5-HTP is 69.2%. Animal studies have shown that the absorption of 5-HTP occurs in the intestines via an active transport mechanism.

Distribution: 5-HTP easily crosses the blood-brain barrier, not requiring the presence of a transport molecule. Animal models show that 5-HTP is widely distributed in the body including in kidneys, gastric mucosa, pancreas, intestinal mucosa, and adrenal medulla.

Metabolism: The major metabolic pathway for 5-HTP is decarboxylation to 5-hydroxytryptamine (serotonin) by the enzyme, aromatic L-amino acid decarboxylase. This enzyme acts both in the periphery (kidney, liver, small intestine, gastric mucosa) and in the CNS. Serotonin is further metabolized to 5-hydroxyindoleacetaldehyde, which is rapidly converted to 5-hydroxyindoleacetic acid (5-HIAA).

Elimination: The half-life of 5-HTP is 4.3 ± 2.8 h with excretion in the urine.

CLINICAL VALIDATION

Sleep Support.* In a clinical trial with healthy volunteers, 5-HTP administration 30 minutes before bedtime at a dosage of 200 mg and after a phase a sleep deprivation resulted in a significant decrease of stage 1 sleep phase and an increase in REM sleep while the total sleep time remained unchanged as measured by EEG.*

SAFETY INFORMATION

Tolerability: At upper limit recommended intakes of 300 mg/day, adverse events are rare and may include occasional nausea, vomiting, and diarrhea. This may be due to peripheral conversion of 5-HTP to serotonin, which increases gut motility. To minimize GI discomfort, it is recommended to take, if possible, in divided doses throughout the day.

Caution: This product is intended for use in healthy adults. Caution should be exercised when used in combination with any serotonergic drug or herb, including SSRIs, MAOIs, and St. John's wort. Consultation with a healthcare practitioner is recommended for individuals taking any of these medications or supplements or for individuals with a history of cardiac conditions.

Contraindications: Not recommended for women who are pregnant or nursing.

INTERACTIONS

Drug Interactions: Combining selective serotonin reuptake inhibitors (SSRIs), carbidopa and monoamine oxidase inhibitors (MAOIs) with 5-HTP might increase the risk of serotonergic side effects.

Supplement Interactions: Theoretically, 5-HTP might increase the serotonergic effect of L-tryptophan, S-adenosylmethionine (SAME), and St. John's Wort.

Interaction with Lab Tests: 5-HTP increases urine 5-HIAA concentrations and can give false positive results in this test for carcinoid tumors.

STORAGE

Store in a cool, dry place.

*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.