



Presents for your consideration:

5-HTP

- ◆ **Nutritionally supplies the immediate metabolic precursor to Serotonin**
- ◆ **Dietary supplementation may enhance levels of:**
 1. Serotonin
 2. Melatonin
 3. Catecholamines
 4. Endorphins
- ◆ **May positively enhance mood**
- ◆ **May enhance the sleep cycle**
- ◆ **May reduce discomfort in patients with chronic pain**
- ◆ **May regulate feeding patterns and have positive bariatric (weight management) effects**

5-Hydroxytryptophan (5-HTP) is the immediate precursor in the biosynthesis of the neurotransmitter 5-hydroxytryptamine (5-HT or serotonin). 5-HT is synthesized from the amino acid L-tryptophan. 5-HTP has replaced the use of L-tryptophan in the United States. In 1989 patients taking L-tryptophan developed a negative and debilitating reaction called eosinophilia-myalgia syndrome. Upon further study it was determined that the culprit was not the L-tryptophan but a bacterial contaminant in the formula. All L-tryptophan products associated with the syndrome were found to come from genetically modified

bacterial recombinant production methods. Even though L-tryptophan was proven to be safe it never recovered from this incident. 5-HTP was created to fill the gap created by the removal of L-tryptophan from the marketplace.

Small amounts of 5-HTP, as well as serotonin, are found in bananas, tomatoes, plums, avocados, eggplant, walnuts and pineapples. A common commercial source of 5-HTP is *Griffonia simplicifolia*, a relative to carob.

5 – HTP	Amounts per serving
Serving Size	1 veggie capsule
Number of servings per container	120
5-Hydroxy L-Tryptophan	50 mg
Suggested Dose: As a dietary supplement, take 1-2 capsules twice daily between meals or as directed by your health care practitioner.	

Other ingredients: Cellulose capsule.

5-HTP's possible pain reduction benefit comes from its conversion to serotonin and to the observed effect of raising beta-endorphin and platelet met-enkephalin levels.

Serum leptin levels increased following 5-HTP injection in mice. This may explain 5-HTP's beneficial effect on weight management. Additionally, 5-HTP has been shown to reduce carbohydrate intake.

Contraindications:

1. Patients on MAOIs (approved 2 weeks after discontinuation)
2. Patients with carcinoid tumors
3. Should not be used concurrently with medications such as: SSRIs, tricyclic antidepressants, MAOIs.
4. Should not be used concurrently with serotonin 5-HT₁ receptor agonists including naratriptan, sumatriptan, and zolmitriptan.
5. Patients with ischemic heart disease (Hx of myocardial infarction, angina pectoris, documented silent ischemia)
6. Patients with Hx of coronary artery spasm
7. Uncontrolled hypertension
8. Pregnant women and nursing mothers

Side effects:

Due to excessive serotonin production could include: Nausea, diarrhea, loss of appetite, vomiting, difficult breathing, dilation of pupils, exaggerated reflexes, loss of muscle coordination, blurring of vision and cardiac dysrhythmias.

Note:

Carbidopa may increase 5-HTP transport across the blood brain barrier due to decreased peripheral 5-HTP metabolism.

Methyldopa inhibits conversion of 5-HTP to serotonin.

References:

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3. Cangiano C, Ceci F, Cascino A, et al. Eating behavior and adherence to dietary prescriptions in obese adult subjects treated with 5-hydroxytryptophan. *Am J Clin Nutr.* 1992; 56:863-867.
4. Caruso I, Sarzi Puttini P, Cazzola M, Azzolini V. Double-blind study of 5-hydroxytryptophan versus placebo in the treatment of primary fibromyalgia syndrome. *J Int med Res.* 1990; 18:201-209.
5. Ceci F, Cangiano C, Cairella M, et al. The effects of oral 5-hydroxytryptophan administration on feeding behavior in obese adult female subjects. *J Neural Transm.* 1989; 76:109-117.
6. Genazzani AR, Sandrini G, Facchinetti F, et al. Effects of L-5HTP with and without carbidopa on plasma beta-endorphin and pain perception. Possible implications in migraine prophylaxis. *Cephalgia.* 1986; 6:241-245.
7. Ribeiro CA. L-5-Hydroxytryptophan in the prophylaxis of chronic tension-type headache: a double-blind, randomized, placebo-controlled study. For the Portuguese Head Study. *Headache.* 2000; 40:451-456.
8. Yamada J, Ujikawa M, Sugimoto Y. Serum leptin levels after central and systemic injection of a serotonin precursor, 5-hydroxytryptophan, in mice. *Eur J Pharmacol.* 2000; 406:159-162.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

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