What is 5-HTP?
5-HTP (5-hydroxytryptophan) is an amino acid that plays an important role in the production of serotonin, a neurotransmitter known to be associated with the feeling of well-being. In addition to supporting a healthy mental outlook and mood, studies have also shown serotonin to encourage deeper sleep and to support healthy appetite regulation. Unlike oral serotonin, 5-HTP is able to effectively cross the blood-brain barrier and increase synthesis of serotonin in the central nervous system. 5-HTP is extracted naturally from the seed of the African plant *Griffonia simplicifolia*.

Overview
Stressful lifestyles and poor diets often cause a depletion of serotonin levels. 5-HTP has been used for many years to replenish serotonin levels and support a healthy mood and sleep cycle regulation. Supplementation with 5-HTP has been shown to increase serotonin levels in the central nervous system. The essential amino acid, tryptophan is converted into 5-HTP by the enzyme tryptophan hydroxylase. Tryptophan hydroxylase can be inhibited by a number of factors including stress, insulin resistance, pyridoxine (vitamin B6) deficiency and insufficient magnesium levels. Supplementation with 5-HTP bypasses the conversion of tryptophan to 5-HTP and thus supports optimal levels of serotonin.[1][2] 5-HTP also readily crosses the blood-brain barrier (BBB) and bypasses competition with other amino acids, making it a more efficient precursor for serotonin production.[1][3]

CLINICAL APPLICATIONS
- Provides Support for Serotonin Production
- Promotes a Balanced and Positive Mood
- Supports Normal Appetite
- Promotes Healthy and Deeper Sleep

Mood and Comfort†
Adequate levels of serotonin are associated with a sense of calmness and relaxation.[1][4] Several studies have demonstrated that 5-HTP supports a healthy frame of mind, good energy levels, comfortable movement and restful sleep.[1][5][6][7] Published studies of doses between 100-600 mg/day have also shown 5-HTP to support occasional headaches.[8][10]

Sleep Support†
Clinical studies have shown 5-HTP helps to maintain healthy sleep cycle regulation. 5-HTP improves quality of sleep by extending the rapid eye movement (REM) phase as well as increasing the deep sleep stages of non-REM sleep without increasing total sleep time. In addition, 5-HTP promotes the release of melatonin by the pineal gland inside the brain and increases the length of REM.[3][11] In children, supplementation with 5-HTP may help support peaceful sleep[12] and decrease the incidence of night terrors.[13] 5-HTP has also been found to raise plasma cortisol levels, causing a transient increase in growth hormone (at 150 mg dose) and, in men only, to support healthy levels of thyroid stimulating hormone.[14][15]

Appetite Regulation‡
5-HTP has been found to assist with carbohydrate cravings. 5-HTP is known to support normal hypothalamic regulation, which includes appetite homeostasis.[16] In one study, sublingual 5-HTP administered 5 times per day for 8 weeks in adult overweight women significantly supported feelings of post-meal hunger satisfaction.[17] An additional double-blind study using 900 mg daily of 5-HTP was found to produce significant weight loss in obese women. Reduced carbohydrate cravings...
intake and improved satiety was observed following 5-HTP administration.\[^{18}\]

**Directions**

1 or more capsules per day or as recommended by your health care professional.

**Does Not Contain**

Gluten, corn, yeast, artificial colors and 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**

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>1 Capsule</th>
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<tbody>
<tr>
<td>Servings Per Container</td>
<td>90</td>
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<tr>
<td>5-HTP (5-Hydroxytryptophan)</td>
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* Daily Value not established

**References**


