

## 5-HTP SR

Sustained Release

5-Hydroxytryptophan



Brain Health +  
Mood Support\*

### What Is It?\*

5-HTP SR features 5-Hydroxytryptophan in a SmartMatrix™ sustained-release tablet, resulting in a slow, steady release of 5-HTP over several hours for optimal absorption and tissue retention.

### How Does It Work?\*

5-HTP (5-Hydroxytryptophan) is an amino acid that serves as a direct precursor to serotonin, a neurotransmitter linked to mood and sleep. It is naturally extracted from the seeds of the African plant *Griffonia simplicifolia*.<sup>1</sup>

Unlike serotonin, which is unable to cross the blood-brain barrier, oral 5-HTP can readily enter the brain and serve as a precursor for serotonin synthesis in the central nervous system. However, 5-HTP has a short half-life—about 4 hours on average and rapidly reaches peak blood levels within 1–2 hours after dosing.<sup>2</sup> This pharmacokinetic profile can be a challenge for patient compliance.

SmartMatrix™ sustained-release tablets overcome this challenge by providing a slow steady release of 5-HTP over several hours. This reduces the need for frequent dosing and helps keep plasma levels steady, avoiding the sharp peaks and drops that can cause digestive upset and other side effects.

### Product Availability

Bottle Size(s):

- 75mg, 90 tablets
- 150mg, 90 tablets
- 225mg, 90 tablets

**Suggested Use:** As a dietary supplement for adults, take one (1) tablet daily with food or as directed by your healthcare professional. Do not exceed recommended dose without consulting your healthcare professional.

#### Supplement Facts

Serving Size 1 Tablet

Amount Per Serving	% DV
5-Hydroxytryptophan (from <i>Griffonia simplicifolia</i> Extract)(Seed)	75 mg *

\* Daily Value (DV) not established.

#### Supplement Facts

Serving Size 1 Tablet

Amount Per Serving	% DV
5-Hydroxytryptophan (from <i>Griffonia simplicifolia</i> Extract)(Seed)	150 mg *

\* Daily Value (DV) not established.

**Other Ingredients:** Vegetable wax (rice bran and/or carnauba), stearic acid (vegetable), magnesium stearate (vegetable), and silica.

This information is for healthcare professionals only to inform patient treatment and is not intended for consumer use.

\*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.

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## RESEARCH HIGHLIGHTS

Based on an extensive review of animal and human studies, oral supplementation of 5-HTP has a positive effect on mood and sleep quality in healthy adults.<sup>1</sup>



### Positive Mood

Typical Dosage 200-300 mg/day

The mood-supporting benefits of 5-HTP are attributed to its ability to increase serotonin activity in the brain, which is important for emotional balance. Controlled clinical trials indicate 5-HTP supplementation is better than placebo for supporting positive mood with typical dosages in the range of 200-300 mg/day, taken in divided doses.<sup>2</sup>



### Sleep Quality

Typical Dosage: 100 mg/day

Serotonin derived from 5-HTP can be converted into melatonin in the pineal gland, helping regulate the sleepwake cycle and sleep quality. In one randomized controlled clinical trial involving older adults, 5-HTP (100 mg/day for 12 weeks) significantly improved sleep quality, especially among poor sleepers, compared to no supplement (control).<sup>3</sup>

## 5-HTP Supplementation & Serotonin Production

The biochemical pathway from 5-HTP to serotonin and melatonin is well-defined, with each step dependent on specific enzymes and cofactors.<sup>4</sup>

Step	Enzyme	Enzyme Cofactor
5-HTP → Serotonin	AAAD	Pyridoxal L-Phosphate (active form of vitamin B6)
N-Acetylserotonin → Melatonin	ASMT	S-adenosylmethionine (SAME) (as a methyl group donor)

AAAD indicates aromatic amino acid decarboxylase; AANAT, arylalkylamine N-acetyltransferase; ASMT, acetylserotonin O-methyltransferase.

SmartMatrix™ is a trademark of Innovite, Inc.

## References

1. Maffei ME. Int J Mol Sci. 2020;22(1):181.
2. Turner EH, et al. Pharmacol Ther. 2006;109(3):325-338.
3. Sutanto CN, et al. Clin Nutr. 2024;43(3):593-602.
4. Xie X, et al. Synth Syst Biotechnol. 2022;7(1):544-553.

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