



PATIENT & CAREGIVER EDUCATION

5-HTP

This information describes the common uses of 5-HTP, how it works, and its possible side effects.

Tell your healthcare providers about any dietary supplements you're taking, such as herbs, vitamins, minerals, and natural or home remedies. This will help them manage your care and keep you safe.

What is it?

5-HTP may be useful for some conditions in which serotonin levels may be low, such as depression, but additional studies are needed.

5-HTP, or 5-Hydroxytryptophan, is generated during the production of melatonin and serotonin from the amino acid tryptophan. Lower levels of serotonin, a neurotransmitter that relays signals to nerve cells, have been associated with disorders such as depression, anxiety, fibromyalgia, insomnia, chronic headaches, and weight gain.

Some studies suggest 5-HTP may be useful for these conditions because it can boost serotonin levels. More studies are needed however, because results were limited or trials were too small to draw definite conclusions. In addition, 5-HTP may interact with medications or herbs that also affect serotonin levels, or cause certain lab test results to be inaccurate. Therefore, patients should consult with their physician before taking this supplement.

What are the potential uses and benefits?

- **To treat anxiety**

There is limited evidence to suggest 5-HTP may be helpful for anxiety, but it may also interact with other drugs. Additional studies are needed to confirm safety and effectiveness.

- **To treat depression**

There is limited evidence to suggest 5-HTP may be helpful for some types of depression, but it may also interact with other drugs. Additional studies are needed to confirm safety and effectiveness.

- **To treat fibromyalgia**

Initial findings suggest 5-HTP may benefit patients with fibromyalgia. Additional studies are needed.

- **To treat hot flashes**

Initial studies suggest 5-HTP is not helpful for hot flashes.

- **To treat insomnia**

Studies evaluating 5-HTP for insomnia are lacking.

- **To treat migraines**

A few studies did not find 5-HTP helpful for migraines or chronic tension headaches.

- **To treat obesity**

Initial findings suggest 5-HTP may help decrease appetite and food intake, and increase weight loss and feelings of fullness. Additional studies are needed.

What are the side effects?

Common: GI disturbances such as nausea, vomiting, or diarrhea

Less common: Headache, insomnia, rapid or irregular heartbeat

Case reports

Mania: Following combined use of an MAOI and 5-HTP in a patient without history of bipolar disorder.

Excess serotonin in the body: Caused by an interaction between linezolid and 5-HTP. Symptoms can include rapid or irregular heartbeat, poor coordination, agitation, confusion, headache, shivering, fever, and seizures.

Hardening/tightening of skin/tissues: Pain, swelling of hands and feet, skin rash, and weight loss in a 70-year-old patient receiving combination therapy with carbidopa and 5-HTP.

Flu-like neurological condition: Linked to a 5-HTP product that contained impurities which was used by a family. Symptoms resolved after the product was replaced with one that did not have these impurities.

What else do I need to know?

Patient Warnings:

Patients taking selective serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, or other drugs that affect serotonin levels should avoid taking 5-HTP without the supervision of a physician due to the theoretical potential for serotonin syndrome, a serious condition, or other side effects.

Use of this supplement should also be avoided if taking other supplements such as [St John's wort](#) or [SAM-e](#) because these products may also affect serotonin levels.

Do Not Take if:

You are having a 5-HIAA urine test to diagnose/monitor carcinoid tumors:
Taking 5-HTP supplements could cause test results to be inaccurate.

You are taking antidepressants or anxiolytics (including tricyclics, MAOIs, and SSRIs): Because many of these drugs also affect serotonin levels, there is an increased risk for side effects or toxicities if you also take 5-HTP. Discuss any use of this supplement with your treating physician.

You are taking monoamine oxidase inhibitors: There is a case report of mania

following use of an MAOI with 5-HTP in a patient without personal or family history of bipolar disorder.

You are taking **linezolid (Zyvox, an antibiotic MAOI)**: There is a case report of an interaction with 5-HTP causing serotonin syndrome, a serious condition.

You are taking **carbidopa (Lodosyn, a dopamine promoter)**: There is a case report of pain and swelling of the hands and feet, as well as skin rash and weight loss in a patient treated with carbidopa and 5-HTP.

You are taking **St John's wort**: Because SJW may also affect serotonin levels, the use of multiple herbs that do this should be avoided to reduce risks for excess serotonin in the body, a serious condition.

You are taking **SAM-e**: Because SAME-e may also affect serotonin levels, the use of multiple herbs that do this should be avoided to reduce risks for excess serotonin in the body, a serious condition.

Special Point:

5-HTP should not be confused with 5-hydroxytryptamine (5-HT), the chemical name for the neurotransmitter serotonin.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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