

5-HTP

The Serotonin Solution

by Margy Squires

The body is a wonderful machine which regulates itself by a sophisticated messenger network known as the nervous system, comprised of three integrated parts: central, peripheral and autonomic. It's the central nervous system which is responsible for issuing and processing nerve impulses and the subsequent data, channeled through the intricate pathways of the spinal cord, and ultimately overseen by the brain.

Within the central nervous system, neurons or nerve cells communicate messages between the brain and spinal cord to all other parts of the body. Simply put, neurons relay messages from one cell to another by releasing a protein-like substance called a neurotransmitter which carries the message, sometimes even "jumping" the space between cells. Receptor sites in the next cell receive the relay. Once the message reaches its final destination, the neurotransmitter is reabsorbed until another message needs to be sent.

The brain contains over a billion neurons, making it one complex mechanism. One of the brain's many neurotransmitters is serotonin, critical in the regulation of endocrine and brain activity, and responsible for mood, appetite and the wake/sleep/wake cycles. Deficiencies in serotonin can cause irritability, depression, food cravings (especially carbohydrates) and weight gain, sleep disturbances, and have been linked to many disorders including alcoholism, chronic fatigue, depression, fibromyalgia, and obesity.

In the market today, drugs with the ability to alter serotonin levels are a multi-billion dollar industry. Known as selective serotonin reuptake inhibitors (SSRIs), you know them better as Prozac, Paxil, Zoloft and Effexor. By blocking the reuptake (reabsorption) of serotonin back into the neuron, more serotonin is left in circulation and available for use. Julian Whitaker, M.D., reports in his *Health & Healing* newsletter, however, that Prozac has a nasty side effect called *akathisia* in which "afflicted people often exhibit uncharacteristic outbursts of temper and violence." Other side effects of SSRIs Whitaker mentions include "decreased libido, gastrointestinal problems, nervousness, and fatigue." He goes on to state that taking SSRIs may even lower your natural serotonin levels if taken over long periods of time since they only alter the supply and don't really help your body produce more serotonin. In disorders with serotonin deficiency, concentrating on enhancing the production of serotonin rather than interfering with the biochemical pathways might be a healthier alternative.



Several studies have shown that 5-Hydroxytryptophan (5-HTP) may be the serotonin solution and help with serotonin deficiency disorders.

Obesity

In a double-blind study in 1989, Ceci et al noted 5-HTP may be safely used to treat obesity. Subjects taking 5-HTP lost their craving for carbohydrates and still reported feeling satisfied while losing weight during two 6-week periods. In a second double-blind study in 1992, Ceci noted similar results even though dietary restrictions were not given. In both studies, there was no change in mood (i.e. the typical "crabby" dieter).

Sleep & Depression

Boveir and Dick reviewed several studies in which 5-HTP was used for sleep disorders and depression with positive results. They also noted, "the absence of weight gain, for which we are unable to offer any credible explanation". Given Ceci's study, 5-HTP appears not to cause the weight gain SSRIs may produce.

Depression

5-HTP was tested against SSRI fluoxetine in a 1991 Italian double blind study (Poeldinger et al). Patients were given either 100 mg of 5-HTP or 50 mg of fluoxetine three times per day. 5-HTP was better tolerated and had fewer side effects and "strongly confirms the efficacy of 5-HTP as an antidepressant."

FMS

Pottni and Caruso did an open 90-day study in 50 patients with fibromyalgia, and nearly 50% improved, even with such a short study time. They concluded 5-HTP was "effective in improving the symptoms (number of tender points, anxiety, pain intensity, quality of sleep, fatigue) in primary

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5-HTP *continued*

FMS.” Murray and Pizzorno, in the *New Encyclopedia of Natural Medicine*, recommend combining 5-HTP (100 mg) with St. John’s Wort (300 mg, 0.3% hypericin content), and magnesium (150-250 mg) three times per day as an effective FMS treatment over 5-HTP alone.

The 5-HTP Connection

How does 5-HTP fit in the serotonin picture? It’s part of the chemical building block in making serotonin. One of the essential amino acids, tryptophan (found in brown rice, cottage cheese, and turkey) is converted through an enzyme reaction first to 5-Hydroxytryptophan (5-HTP) and then in a second enzyme reaction to serotonin. Although it’s not quite as simple as that, the point is 5-HTP is made right inside your own body. As a natural building block to serotonin, 5-HTP is a step in the production, rather than an interference, of the serotonin pathways. Michael Murray ND explains that 5-HTP “offers significant advantage over tryptophan”; one, because of safety (see below) and two, “while only 3% of an oral dose of tryptophan actually gets converted to serotonin, over 70% of oral 5-HTP is converted to serotonin.” Supplemental tryptophan has been banned in the U.S. since 1989; however, you can enhance serotonin levels by supplementing with 5-HTP. With regards to sleep, serotonin is the precursor for melatonin (part of the wake-sleep cycle). 5-HTP also increases REM sleep by as much as 25%, increasing Stage 3 and 4 deep sleep cycles. In the case of fibromyalgia where a known serotonin deficiency exists (along with Stage 4 sleep disruption), this is a key factor in considering 5-HTP therapy. If you suspect you have a serotonin deficiency problem, speak with your health care professional. 5-HTP may just be the building block you need to improve mood, sleep, appetite, and alleviate other symptoms related to low serotonin.

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Source

5-HTP is naturally extracted from Griffonia seed from a tree native to Ghana and the Ivory Coast in Africa.

Suggested Doses

Daily doses varied from 200-450 mg (in divided doses) for anxiety, depression, and migraines, the usual dose being 25-50 mg. For appetite control, doses of 50-100 mg are advised one hour before meals. Taken one hour before bedtime on an empty stomach (and at least a couple of hours after a protein meal), 50-100 mg of 5-HTP has been shown to enhance sleep. Carbohydrates or fruit juice combined with 5-HTP enhances absorption.

Safety

Murray states 5-HTP is “inherently safer because it is extracted from the seed of an African plant rather than being synthesized with the help of bacteria.” Even in the studies using 900 mg per day, nausea was a temporary side effect. Drowsiness with initial use may occur so you may want to start your dose at night. 5-HTP is not recommended for pregnant women. Anyone already on anti-depressants, diet pills or SSRIs should not take 5-HTP without medical supervision. At the recommended daily doses of 50-150 mg, 5-HTP appears to have no obvious side effects.

Resources:

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