



# 5-HTP Liposome Spray



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**Wholistic Dermatology™**  
*Treating the body as a whole*

## Physica Energetics

## Enhances Serotonin, Mood, Sleep

### Indications:

- Enhances serotonin/melatonin/endorphins
- Insomnia/Improves mood/PMS
- Bipolar/Depression
- Carbohydrate cravings/Weight loss/Excessive appetite/Blood Sugar

### Directions:

4 sprays 2x daily

Please consult with your Physician at all times before taking any supplementation.

*Liposome greatly increases absorption & assimilation and protects from stomach & duodenal acids. Oral 5-HTP products can often cause digestive disturbance. This patented nanosphere liposome is fast acting and calming and does not create digestive distress.*

For more than 30 years, the natural dietary supplement 5-Hydroxytryptophan, better known as 5-HTP, has been helping to **encourage the body's ability to frankly, feel good!**

5-Hydroxytryptophan (5-HTP) is a precursor and metabolic intermediate in the biosynthesis of the neurotransmitters, serotonin and melatonin (see diagram on reverse). The naturally occurring essential amino acid tryptophan, when acted upon by the enzyme tryptophan hydroxylase, converts to 5-HTP. 5-HTP is then decarboxylated to serotonin, thereby elevating extracellular serum serotonin levels. This occurs both in the nervous tissue and in the liver.

There is a large body of evidence suggesting that low serum serotonin levels are a common consequence of "modern living".

Lifestyles and dietary practices of many people living in this stress-filled era contribute to lowered levels of serotonin within the brain. As a result, many people are overweight, crave sugar and other carbohydrates, experience bouts of depression, get frequent headaches, and have vague muscle aches and pain. All of these and much more may be correctable by raising brain serotonin levels.

Medical studies, journals and reviews all report that 5-HTP and its role in serotonin stability and production,

positively affect a number of health-related circumstances. The drug free ability to feel good gives patients an edge in dealing with pain and illness. A naturally created sense of wellbeing helps to alleviate symptoms of other medical conditions, making the serotonin support what 5-HTP offers, a significant healing advantage.

Beyond its application for antidepressant use in managing mood disorders, 5-HTP has been shown to help to support nutritional benefits for symptoms of eating disorders, migraine headache pain and premenstrual syndrome. For insomnia, 5-HTP has been linked to the pineal gland in the promotion of melatonin production.

When serotonin levels are out of balance or deficient, anxiety, panic attacks, depression and insomnia are more likely to occur.

### 2 sprays contain:

5-Hydroxytryptophan (concentrated Griffonia simplicifolia extract) 25 mg  
Vitamin B6 (as pyridoxal-5-phosphate) 7.5 mg

*Proprietary nano-liposome greatly increases absorption and assimilation rates equivalent to @5 times the listed dose amount.*

Target specific liposomal phospholipids are from SUNFLOWER lecithin.





# 5-HTP Liposome Spray

## Synergistically Formulated Ingredients

**5-Hydroxytryptophan 25 mg:** 5-HTP is recommended to support serotonin production. It is supplied in a sublingual liposomal formula that allows for faster absorption when a rapid increase in serotonin levels is desired. It is used as a supplement (rather than tryptophan) to increase serotonin levels as tryptophan can be diverted into niacin production or protein construction whereas 5-HTP has the sole fate of serotonin synthesis. 5-HTP also crosses the blood brain barrier easily. The fat-soluble nanosphere liposomal preparation enhances the absorption of 5-HTP, the precursor of serotonin, through the lipid bi-layer cell membranes of the endothelial cells of the blood-brain barrier. These target specific, nanosphere liposomes insure that the remedy is unaffected by digestive enzymes and the first pass of the liver.

Serotonin provides another interesting argument supporting the gut-over-brain theory. 95% of this key neurotransmitter essential to our well-being, is stored in the ENS where it is synthesized. Among other actions, serotonin acts as a go between, keeping the brain "up to date" with what is happening in the gut. Contrary to earlier assumptions, it has been found that **90 percent of the fibers in the vagus nerve carry information from the gut to the brain, and not the other way around.**

Serotonin release is triggered by a carbohydrate load and it is thought that's why we often crave carbohydrates under stress as we want to stimulate this serotonin release. When the brain produces serotonin, tension is eased.

Conversely when the brain produces dopamine or nor-epinephrine (nor-adrenaline), we tend to think and act more quickly and are generally more alert. Therefore eating carbohydrates seems to have a calming effect, while proteins increase alertness.

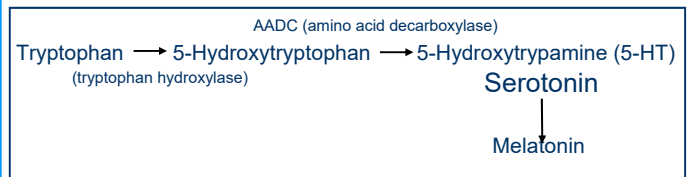
5-HTP may stop this craving for fats and carbohydrates, as well as providing the body with the means to control those functions listed above, including anger, appetite and sleep.

It has been observed that a 2-spray dose of 5-HTP Liposome significantly elevated urinary serotonin levels within 30 minutes of administration. The average percentage increase 30 minutes post dose was 151%, suggesting that the 5-HTP Liposome Spray is capable of delivering rapid results.

**Vitamin B6 (as Pyridoxal-5'-Phosphate) 7.5 mg:** Pyridoxal 5'-Phosphate, the active form of vitamin B6, is a necessary cofactor for the conversion of 5-HTP to serotonin. It is involved in the process of serotonin formation. The potential benefit from taking vitamin B6 along with 5-HTP is that B6 can help 5-HTP be converted into serotonin more efficiently. This is good when it's done in the brain where we want more serotonin, but we also want to **minimize the conversion of 5-HTP to serotonin in the bloodstream.** We want the 5-HTP to make it to the **brain before being converted into serotonin.**

Note that the enzyme dopamine decarboxylase (aromatic L-amino acid decarboxylase) mediates the conversion of 5-HTP into serotonin. This enzyme is expressed in stomach tissue. Inhibition of this enzyme in the stomach during 5-HTP ingestion is thought to promote the concentration of 5-HTP that reaches neural tissue, which is supported by a study using 100-200mg Carbidopa (pharmaceutical inhibitor) alongside 5-HTP to increase radioactivity of 5-HTP (indicative of neural accumulation) in humans.

This of course, is less of a concern in an ionic, target directed, ligand nanosphere liposome concentration as it by passes the *first pass of the liver* and is not compromised by digestive enzymes which ensures that the neural brain tissues receive the highest 5-HTP concentration for serotonin conversion. However, to cover all bases we added the correct ratio and proportion to the formula.



Suggestions from the research literature:

*Healthy mood balance:*

50 mg (*Nakajima et al. 1978*)  
100 mg (*Pöldinger et al. 1991*)  
3 times per day

*Relief of symptoms of fibromyalgia:*

100 mg, 3 - 4 times per day  
(*Nicolodi and Sicuteri 1996; Caruso et al. 1990*)

*Migraine prophylaxis:*

100 - 200 mg, 2 - 3 times per day  
(*Titus et al. 1986; Sicuteri 1973*)

*Weight management:*

250 - 300 mg, 3 times per day  
(*Cangiano et al. 1998; Cangiano et al. 1992; Ceci et al. 1989*)

*Sleep aid:*

100 - 200 mg per day  
(*Soulairac and Lambinet 1988; Soulairac and Lambinet 1977; Wyatt et al. 1971*)

POSSIBLE CONTRAINDICATIONS:

People on anti-depressants, or with liver disease, pregnancy, and women who are breastfeeding should not take 5-HTP.

## Further Research

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- J. Robertson and T. Monte. *Natural Prozac-Learning to Release Your Body's Own Anti-Depressants.* San Francisco: Harper; 1997.
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