

TOTAL 5 HTP

Ingredients: Each tablet supplies: 5-Hydroxy-Tryptophan 50mg, Pyridoxal 5 Phosphate 3 mg, Melatonin 1mg, DL Phenylalanine 12mg, Pregnenolone 5mg. Suggested use: 1 tablet one half to 2 hours before bedtime; or one hour prior to a protein meal; tryptophan uptake can be enhanced when combined with a carbohydrate meal.

Supportive Function: This formula provides nutritional support for increasing tryptophan and serotonin levels in the body.

When is 5 HTP support helpful? Poor sleep, insomnia, drowsiness during the day, restless leg biochemical imbalances of serotonin, weight loss, and poor mental health.

Clinical Applications/Research: 5-Hydroxy-Tryptophan is produced from the essential amino acid tryptophan by the action of tryptophan hydroxylase and is the immediate precursor to serotonin. Serotonin is responsible for normal, healthy sleep. Tryptophan has been successfully used in the treatment of obesity, sleep disorders, and depression. When taken before a meal, it helps change food choices to a lower-carbohydrate higher-protein meal that is less caloric. Tryptophan helps trigger the release of cholecystokinin, which helps induce a feeling of satiety and helps control appetite. Taken before bedtime, tryptophan shortens the time it takes to fall asleep and improves the quality of sleep. As more serotonin is released into the brain by taking tryptophan, a more relaxed state is experienced and symptoms of tension, anxiety and depression are relieved (*J of Nutri* 1982; 112:2001; *Reviews of Clin Nutri*; 53(3): 169). Tryptophan intake helps reduce the severity and number of emotional complaints and may help alleviate depression, especially in those who do not respond to tyrosine. It helps stabilize moods, control hyperactivity in children, and alleviate stress. In a Finnish study, tryptophan helped reduce pain levels and increase pain tolerance (Chaitow 1988: 66-70; 58-9; Balch & Balch 1997:42).

Pyridoxal 5 phosphate, a form of vitamin B-6, helps convert tryptophan into niacin (B-3), alleviate nervousness, and reduces muscle spasms at night. B-6 is necessary for tryptophan metabolism, and together with vitamin C, enhance tryptophan uptake by the brain. B-6 helps enhance the effects of tryptophan in shortening the time it takes for sleep onset, improve the quality of sleep, and induce a more relaxed waking state (Mindell 1985:33-4; Chaitow 1988: 63-70).

Melatonin helps facilitate sleep in young adults, shorten the time needed to get to sleep, reduce night awakenings, and improve sleep quality. Melatonin levels decline with aging, and melatonin supplements improve sleep in the elderly. Melatonin is a natural hormone that regulates the biological clock and helps benefit people subject to jet lag and night shifts. It also is known to reduce ocular pressure, but studies with glaucoma may not yet have been attempted (Lininger, et al, 1998: 185-6; Zhandanova IV, et al, "Sleep inducing effects of melatonin ingested in the evening," *Clin Pharmacol Ther* 1995; 57:552-8; Haimov I, et al, "Sleep disorders and melatonin rhythms in the elderly," *BMJ* 1994;309:167; Petrie K, et al, "A double blind trial of melatonin as a treatment for jet lag in an international cabin crew," *Bio Psych* 1993; 33(7):222-6). **Cautions:** Melatonin may produce unwanted grogginess, sleepwalking, and disorientation in some individuals.

DL Phenylalanine like tryptophan helps act as an appetite suppressant by triggering the release of cholecystokinin when taken before meals. Taken before bedtime, it may help

in weight reduction and is known to reduce body fat. The D-portion of phenylalanine helps produce pain relief by inhibiting the breakdown of the body's own painkillers, the endorphins. Patients with chronic pain have been found to have lower levels of endorphin activity. DL Phenylalanine has helped restore endorphins to normal levels in people subject to chronic pain. The D-portion of phenylalanine also helps some individuals with Parkinson's disease and schizophrenia; it converts into phenylethylamine, a potential mood elevator. It also helps alleviate restless leg movements during sleep. Phenylalanine helps produce greater alertness, memory enhancement, increased sexual interest, and relieves depression usually within 24-48 hours. It converts into tyrosine, dopamine, norepinephrine, and epinephrine, important neurotransmitters involved in brain balance and the nervous system. Norepinephrine and dopamine regulate and elevate mood and promote alertness, and enhance memory and learning (Chaitow 1988:58-63; Heller B et al, "Therapeutic actions of D-phenylalanine in Parkinson's disease," *Arzneimittelforsch* 1076; 26:577-79).

Pregnenolone converts into DHEA, dehydroepiandrosterone, which helps generate the sex hormones estrogen, progesterone, and testosterone. DHEA helps decrease percentage of body fat and increase muscle mass. It helps produce a sense of well being, better ability to cope with stress, decreased pain, better mobility, and a higher quality of sleep (Balch & Balch 1997:544-5; Lininger et al, 1998:198-9).

Suggested Dosage: 1 tablet 3 times daily or as directed

Size: 90 tablets

Vegetarian: Yes

Contraindications: High doses of Tryptophan supplements should not be taken during pregnancy and should not be combined with MAO inhibitor drugs or taken by people subject to phenylketonuria.