

5-HTP

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5-HTP Help on accessing alternative formats, such as Portable Document Format (PDF), Microsoft Word and PowerPoint (PPT) files, can be obtained in the alternate format help section. (PDF Version - 80 KB) This monograph is intended to serve as a guide to industry for the preparation of Product Licence Applications (PLAs) and labels for natural health product market authorization. It is not intended to be a comprehensive review of the medicinal ingredient. Notes Text in parentheses is additional optional information which can be included on the label at the applicant's discretion. The solidus (/) indicates that the terms and/or statements are synonymous. Either term or statement may be selected by the applicant on the label. Date August 28, 2024

Proper name(s)	Common name(s)	Source information
Proper name(s)	Common name(s)	Source information
Proper name(s)	Common name(s)	Source ingredient(s)
Proper name(s)	Common name(s)	Source material(s)
Part(s)	5-Hydroxy-L-tryptophan	L-5-Hydroxytryptophan
L-5-HTP	L-5-Hydroxytryptophan	N/A
Griffonia simplicifolia Seed	L-5-HTP	1
N/A	N/A	N/A
Escherichia coli	Whole cell for biosynthesis	N/A
Saccharomyces cerevisiae	Whole cell for biosynthesis	References: Proper names: RSC 2023; Common names: RSC 2023; Source information: Lemaire and Adosraku 2002, Fellows and Bell 1970. 1 Synthetic Route of Administration

Oral Dosage Form(s) This monograph excludes foods or food-like dosage forms as indicated in the Compendium of Monographs Guidance Document. Acceptable dosage forms for oral use are indicated in the dosage form drop-down list of the web-based Product Licence Application form for Compendial applications. Use(s) or Purpose(s) Helps (to) promote healthy mood balance (Pöldinger et al. 1991; Zmilacher et al. 1988; Nakajima et al. 1978). Helps (to) relieve sleep disturbances associated with mood imbalance (Sutanto et al. 2024; Poldinger et al. 1991; Soulairac and Lambinet 1988) Helps (to) relieve symptoms of fibromyalgia (Nicolodi and Sicuteri 1996; Sarzi Puttini and Caruso 1992; Caruso et al. 1990). Helps (to) reduce the severity and duration of migraine headaches when taken as a preventative (prophylactic) (Titus et al. 1986; Bono et al. 1984; Sicuteri 1973). To be used with a program of reduced intake of dietary calories and increased physical activity (if possible) to help in weight management by reducing carbohydrate cravings (Cangiano et al.1998; Cangiano et al. 1992; Ceci et al. 1989). Restrictions when this monograph is combined with other monographs (Class II and III applications): If a weight management claim is made: Weight management is a long-term process and must therefore, be associated with a long-term intervention. Medicinal ingredient with diuretic properties may be included in weight management products, however no diuretic claim can be applied as it is associated with a short-term duration of use (occasional use only). Stimulant laxatives cannot be present at therapeutic dose in weight management products as their short term duration of use is not compatible with the duration of use for weight management. Dose(s) Subpopulation(s) Adults 18 years and older Quantity(ies) Healthy mood balance 150 - 300 milligrams of 5-HTP, per day (Pöldinger et al. 1991; Nakajima et al. 1978). Fibromyalgia symptoms 300 - 400 milligrams of 5-HTP, per day; Not to exceed 300 milligrams per single dose (Nicolodi and Sicuteri 1996; Caruso et al. 1990). Migraine prophylaxis 200 - 600 milligrams of 5-HTP, per day; Not to exceed 300 milligrams per single dose (Titus et al. 1986; Sicuteri 1973). Weight management 750 - 900 milligrams of 5-HTP, per day; Not to exceed 300 milligrams per single dose (Cangiano et al. 1998; Cangiano et al. 1992; Ceci et al. 1989). Sleep disturbances 100 - 200 milligrams of 5-HTP, per day (Sutanto et al. 2024; Soulairac and Lambinet 1988; Soulairac and Lambinet 1977; Wyatt et al. 1971). Direction(s) for use All uses To minimize the risk of gastrointestinal side effects, start at lower dose and slowly increase to effective dose over 2-week period (Birdsall 1998). All uses (excluding weight management) Take with food (Pöldinger et al. 1991). Weight management Take 30 minutes before meals (Cangiano et al. 1998; Cangiano et al. 1992; Ceci et al. 1989). Duration(s) of Use Healthy mood balance; Fibromyalgia symptoms; Migraine prophylaxis; Sleep disturbances Use for at least 2 weeks to see beneficial effects (Jangid et al. 2013; Caruso et al. 1990; Nakajima et al. 1978; Sicuteri 1973). Weight management (products providing over 600 mg 5-HTP, per day) Ask a health care practitioner/health care provider/health care professional/doctor/physician for use beyond 12 weeks (Cangiano et al. 1992). Risk Information Caution(s) and warning(s) All uses Ask a health care practitioner/health care provider/health care professional/doctor/physician before use if you are taking carbidopa or health products with serotonergic activity such as mood balance supplements, cough medication containing dextromethorphan, pain killers or medications for nausea or migraine (Mayo Clinic Staff 2022; Patel

and Marzella 2017; Turner et al 2006). When using this product exercise caution while driving or using machinery, as you may experience drowsiness (Berardi et al. 2002). Ask a health care practitioner/health care provider/health care professional/doctor/physician if symptoms persist or worsen. All uses (excluding weight management) Ask a health care practitioner/health care provider/health care professional/doctor/physician before use if you are pregnant or breastfeeding. Weight management Ask a health care practitioner/health care provider/health care professional/doctor/physician before use if you are breastfeeding. Healthy mood balance; Fibromyalgia symptoms Ask a health care practitioner/health care provider/health care professional/doctor/physician before use if you have a psychological disorder such as anxiety or depression. Contraindication(s) All uses Do not use if you have scleroderma (Lampert et al. 1992; Sternberg et al. 1980). Do not use if you are taking antidepressants (Mayo Clinic Staff 2022; Patel and Marzella 2017). Weight management Do not use if you are pregnant (HC 2010). Known adverse reaction(s) When using this product you may experience gastrointestinal discomfort/disturbances (Turner et al. 2006; Byerley et al. 1987). Stop use and ask a health care practitioner/health care provider/health care professional/doctor/physician if you experience skin hardening, pain or stiffness of muscles or joints, tremors, agitation/confusion, or an increased heart rate (Boyer 2023; Varga 2023; Mayo Clinic Staff 2022; Patel and Marzella 2017; Das et al. 2004; Erner et al. 2003; Lampert et al. 1992; Sternberg et al. 1980). Non-medicinal ingredients Must be chosen from the current Natural Health Products Ingredients Database (NHPID) and must meet the limitations outlined in the database. Storage conditions Must be established in accordance with the requirements described in the Natural Health Products Regulations. Specifications The finished product specifications must be established in accordance with the requirements described in the Natural and Non-prescription Health Products Directorate (NNHPD) Quality of Natural Health Products Guide. The medicinal ingredient must comply with the requirements outlined in the NHPID. EXAMPLE OF PRODUCT FACTS: Consult the Guidance Document, Labelling of Natural Health Products for more details. References Cited Berardi RR, DeSimone EM, Newton GD, Oszko MA, Popovich NG, Rollings CJ, Shimp LA, Tietze KJ, editors. Handbook of Nonprescription Drugs: An Interactive Approach to Self-Care, 13 th edition. Washington (DC): American Pharmaceutical Association; 2002. Birdsall TC. 5-Hydroxytryptophan: a clinically-effective serotonin precursor. *Alternative Medicine Review* 1998;3(4):271-280. Bono G, Micieli G, Sances G, Calvani M, Nappi G. L-5HTP treatment in primary headaches: an attempt at clinical identification of responsive patients. *Cephalalgia* 1984;4(3):159-165. Byerley WF, Judd LL, Reimherr FW, Grosser BI. 5-Hydroxytryptophan: a review of its antidepressant efficacy and adverse effects. *Journal of Clinical Psychopharmacology* 1987;7(3):127-137. Boyer EW. Serotonin syndrome (serotonin toxicity). UpToDate 2023 [Accessed 2023 October 18]. Available from: <https://www.uptodate.com/>. Cangiano C, Ceci F, Cascino A, Del Ben M, Laviano A, Muscaritoli M, Antonucci F, RossiFanelli F. Eating behavior and adherence to dietary prescriptions in obese adult subjects treated with 5-hydroxytryptophan. *American Journal of Clinical Nutrition* 1992;56(5):863-867. Cangiano C, Laviano A, Del Ben M, Preziosa I, Angelico F, Cascino A, Rossi-Fanelli F. Effects of oral 5-hydroxy-tryptophan on energy intake and macronutrient selection in non-insulin dependent diabetic patients. *International Journal of Obesity and Related Metabolic Disorders* 1998;22(7):648-654. Caruso I, Sarzi Puttini P, Cazzola M, Azzolini V. Double-blind study of 5-hydroxytryptophan versus placebo in the treatment of primary fibromyalgia syndrome. *Journal of International Medical Research* 1990;18(3):201-209. Ceci F, Cangiano C, Cairella M, Cascino A, Del Ben M, Muscaritoli M, Sibilia L, Rossi Fanelli F. The effects of oral 5-hydroxytryptophan administration on feeding behavior in obese adult female subjects. *Journal of Neural Transmission* 1989;76(2):109-117. Das YT, Bagchi M, Bagchi D, Preuss HG. Safety of 5-hydroxy-L-tryptophan. *Toxicology Letters* 2004;150(1):111-122. Dipiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM. *Pharmacotherapy: a pathophysiologic approach*, 5 th edition. New York (NY): The McGraw-Hill Companies, Inc.; 2002. Erner RA, Meglathery SB, Van Decker WA, Gallagher RM. Serotonin Syndrome and Other Serotonergic Disorders. *Pain Medicine* 2003;4(1):63-74. Fellows LE, Bell EA. 5-hydroxy-L-tryptophan, 5-hydroxytryptamine and L-tryptophan-5hydroxylase in *Griffonia simplicifolia*. *Phytochemistry* 1970;9(11):2389-2396. HC 2010: Health Canada: Prenatal Nutrition Guidelines for health Professionals: Gestational weight gain [Accessed 2024 April 7]. Available from: https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/fn-an/alt_formats/pdf/nutrition/prenatal/ewba-mbsa-eng.pdf Jangid P, Malik P, Singh P, Sharma M, Gulia AK. Comparative study of efficacy of l-5-hydroxytryptophan and fluoxetine in patients presenting with first depressive episode. *Asian J Psychiatr*. 2013 Feb;6(1):29-34. Lampert A, Joly P, Thomine E, Ortolì JC, Lauret P. [Scleroderma-like syndrome with bullous morphea during treatment with 5-hydroxytryptophan, carbidopa and flunitrazepam]. *Annales de Dermatologie et de Vénéréologie* 1992;119(3):209-211 (in French). Lemaire PA, Adosraku RK. An HPLC method for the direct assay of the serotonin precursor, 5hydroxytryptophan, in seeds of *Griffonia simplicifolia*. *Phytochemical Analysis* 2002;13(6):333-337. Mayo Clinic Staff. Serotonin Syndrome. Rochester (MN): Mayo Foundation for Medical Education and Research; 2022. [Accessed 2023 March 07]. Available from: <https://www.mayoclinic.org/diseases-conditions/serotonin-syndrome/symptoms-causes/syc-20354758>. Nakajima T, Kudo Y, Kaneko Z. Clinical evaluation of 5-hydroxy-L-tryptophan as an antidepressant drug. *Folia*

Psychiatria et Neurologica Japonica 1978;32(2):223-230. Nicolodi M, Sicuteri F. Fibromyalgia and migraine, two faces of the same mechanism. Serotonin as the common clue for pathogenesis and therapy. *Advances in Experimental Medicine and Biology* 1996;398:373-379. Patel YA, Marzella N. Dietary supplement-drug interaction-induced serotonin syndrome progressing to acute compartment syndrome. *American Journal of Case Reports* 2017; 18:926-930. Pizzorno JE, Murray MT, editors. *Textbook of Natural Medicine*, Volume 1, 3rd edition. St. Louis (MO): Churchill Livingstone Elsevier; 2006. Pödingner W, Calanchini B, Schwarz W. A functional-dimensional approach to depression: serotonin deficiency as a target syndrome in a comparison of 5-hydroxytryptophan and fluvoxamine. *Psychopathology* 1991;24(2):53-81. RSC 2023: Royal Society of Chemistry: The Merck Index Online [Accessed 2023 August 14]. Available from: <https://merckindex.rsc.org/> Sarzi Puttini P, Caruso I. Primary fibromyalgia syndrome and 5-hydroxy-L-tryptophan: a 90-day open study. *Journal of International Medical Research* 1992;20(2):182-189. Sicuteri F. The ingestion of serotonin precursors (L-5-hydroxytryptophan and L-tryptophan) improves migraine headache. *Headache* 1973;13(1):19-22. Soulaïrac A, Lambinet H. [Clinical studies of the effect of the serotonin precursor, L-5hydroxytryptophan, on sleep disorders]. *Schweizerische Rundschau für Medizin Praxis* 1988;77(34a):19-23 (in French). Soulaïrac A, Lambinet H. [Effect of 5-hydroxytryptophan, a serotonin precursor, on sleep disorders]. *Annales Médico-Psychologiques* 1977;1(5):792-798 (in French). Sternberg EM, Van Woert MH, Young SN, Magnussen I, Baker H, Gauthier S, Osterland CK. Development of a scleroderma-like illness during therapy with L-5-hydroxytryptophan and carbidopa. *New England Journal of Medicine* 1980;303(14):782-787. Sutanto CN, Xia X, Heng CW, Tan YS, Shan Lee DP, Fam J, Kim JE 2024. The impact of 5-hydroxytryptophan supplementation on sleep quality and gut microbiota composition in older adults: a randomized controlled trial. *Clinical Nutrition* 43(3):593-602. Titus F, Dávalos A, Alom J, Codina A. 5-Hydroxytryptophan versus methysergide in the prophylaxis of migraine. Randomized clinical trial. *European Neurology* 1986;25(5):327-329. Turner EH, Loftis JM, Blackwell AD. Serotonin a la carte: supplementation with the serotonin precursor 5-hydroxytryptophan. *Pharmacology & Therapeutics* 2006;109(3):325-338. Varga J. Clinical manifestations and diagnosis of systemic sclerosis (scleroderma) in adults. UpToDate 2023 [Accessed 2023 October 18]. Available from : <https://www.uptodate.com/>. Wyatt RJ, Zarcone V, Engelman K, Dement WC, Snyder F, Sjoerdsma A. Effects of 5-hydroxytryptophan on the sleep of normal human subjects. *Electroencephalography and Clinical Neurophysiology* 1971;30(6):505-509. Zmilacher K, Battegay R, Gastpar M. L-5-hydroxytryptophan alone and in combination with a peripheral decarboxylase inhibitor in the treatment of depression. *Neuropsychobiology* 1988;20(1):28-35. References Reviewed Agazzi A, De Ponti F, De Giorgio R, Candura SM, Anselmi L, Cervio E, Di Nucci A, Tonini M. Review of the implications of dietary tryptophan intake in patients with irritable bowel syndrome and psychiatric disorders. *Digestive and Liver Disease* 2003;35(8):590-595. Amer A, Breu J, McDermott J, Wurtman RJ, Maher TJ. 5-Hydroxy-L-tryptophan suppresses food intake in food-deprived and stressed rats. *Pharmacology, Biochemistry, and Behavior* 2004;77(1):137-143. Auffranc JC, Berbis P, Fabre JF, Garnier JP, Privat Y. [Sclerodermiform and poikilodermal syndrome observed during treatment with carbidopa and 5-hydroxytryptophan]. *Annales de Dermatologie et de Venereologie* 1985;112(9):691-692 (in French). Battistella PA, Bordin A, Cernetti R, Broetto S, Corra S, Piva E, Plebani M. Beta-endorphin in plasma and monocytes in juvenile headache. *Headache* 1996;36(2):91-94. Beers MH, Berkow R, editors. *The Merck Manual of Diagnosis and Therapy*, 17th edition. Whitehouse Station (NJ): Merck & Co., Inc; 1999. Bhushan B, Seth SD, Saxena S, Gupta YK, Karmarkar MG. An adverse reaction to L-5hydroxytryptophan. *The American Journal of Psychiatry* 1991;148(2):268-269. Boiardi A, Crenna P, Merati B, Negri S, Tansini E, Bussone G. 5-OH-tryptophane in migraine: clinical and neurophysiological considerations. *Journal of Neurology* 1981;225(1):41-46. Boiardi A, Picotti GB, Di Giulio AM, Bussone G, Galva MD, La Mantia L, Mantegazza P. Platelet met-enkephalin immunoreactivity and 5-hydroxytryptamine concentrations in migraine patients: effects of 5-hydroxytryptophan, amitriptyline and chlorimipramine treatment. *Cephalalgia* 1984;4(2):81-84. Bono G, Criscuoli M, Martignoni E, Salmon S, Nappi G. Serotonin precursors in migraine prophylaxis. *Advances in Neurology* 1982;33:357-363. Buckingham J, editor. *Dictionary of Natural Products*, Version 16:1. Boca Raton (FL): Chapman & Hall/CRC; 2007. Bussone G, Boiardi A, Cerrati A, Girotti F, Merati B, Rivolta G. Monoamine oxidase activities in patients with migraine or with cluster headache during the acute phases and after treatment with L-5-hydroxytryptophan. *Rivista Di Patologia Nervosa E Mentale* 1979;100(5):269-274. Cangiano C, Ceci F, Cairella M, Cascino A, Del Ben M, Laviano A, Muscaritoli M, RossiFanelli F. Effects of 5-hydroxytryptophan on eating behavior and adherence to dietary prescriptions in obese adult subjects. *Advances in Experimental Medicine and Biology* 1991;294:591-593. De Benedittis G, Massei R. Serotonin precursors in chronic primary headache. A double-blind cross-over study with L-5-hydroxytryptophan vs. placebo. *Journal of Neurosurgical Sciences* 1985;29(3):239-248. De Giorgis G, Miletto R, Iannuccelli M, Camuffo M, Scerni S. Headache in association with sleep disorders in children: a psychodiagnostic evaluation and controlled clinical study--L-5HTP versus placebo. *Drugs Under Experimental and Clinical Research* 1987;13(7):425-433. Ek A, Witkop B. The synthesis of labile hydroxytryptophan metabolites. *Journal of the American Chemical Society* 1954;76(22):5579-5588. Farinelli S, Mariani A, Grimaldi

A, Mariani M, Iannessi A, De Rosa F. [Eosinophilia-myalgia syndrome associated with 5-OH-tryptophan. Description of a case]. *Recenti Progressi in Medicina* 1991;82(7-8):381-384 (in Italian). FDA 2001: Food and Drug Administration. Information Paper on L-Tryptophan and 5- Hydroxy-L-Tryptophan. Rockville (MD): Food and Drug Administration, Center for Food Safety and Applied Nutrition, Office of Nutritional Products, Labeling, and Dietary Supplements; 2001. [Accessed 2023 March 07]. Available from: <https://www.nemsn.org/Articles/FDA-Info.pdf>. Frangatos G, Chubb FL. A new synthesis of 5-hydroxytryptophan. *Canadian Journal of Chemistry* 1959;37:1374-1376. Fugh-Berman A, Cott JM. Dietary supplements and natural products as psychotherapeutic agents. *Psychosomatic Medicine* 1999;61(5):712-728. Garcia C. [Mianserin agranulocytosis followed by oxitriptan eosinophilia]. *Der Nervenarzt* 1992;63(5):303-307 (in German). Genazzani AR, Sandrini G, Facchinetti F, Rizzo V, Alfonsi E, Sances G, Calvani M, Nappi G. Effects of L-5HTP with and without carbidopa on plasma beta-endorphin and pain perception. Possible implications in migraine prophylaxis. *Cephalalgia* 1986;6(4):241-245. Gijsman HJ, Van Gerven JM, De Kam ML, Schoemaker RC, Pieters MS, Weemaes M, De Rijk R, Van Der Post J, Cohen AF. Placebo-controlled comparison of three dose-regimens of 5-hydroxytryptophan challenge test in healthy volunteers. *Journal of Clinical Psychopharmacology* 2002;22(2):183-189. Goodnick PJ, Sandoval R. Psychotropic treatment of chronic fatigue syndrome and related disorders. *Journal of Clinical Psychiatry* 1993;54(1):13-20. Guilleminault C, Cathala JP, Castaigne P. Effects of 5-hydroxytryptophan on sleep of a patient with a brain-stem lesion. *Electroencephalography and Clinical Neurophysiology* 1973;34(2):177-184. Gwaltney-Brant SM, Albretsen JC, Khan SA. 5-Hydroxytryptophan toxicosis in dogs: 21 cases (1989-1999). *Journal of the American Veterinary Medical Association* 2000;216(12):1937-1940. Halford JC, Harrold JA, Lawton CL, Blundell JE. Serotonin (5-HT) drugs: effects on appetite expression and use for the treatment of obesity. *Current Drug Targets* 2005;6(2):201-213. Imeri L, Mancina M, Bianchi S, Opp MR. 5-Hydroxytryptophan, but not L-tryptophan, alters sleep and brain temperature in rats. *Neuroscience* 2000;95(2):445-452. Jacobsen FM, Sack DA, Wehr TA, Rogers S, Rosenthal NE. Neuroendocrine response to 5-hydroxytryptophan in seasonal affective disorder. *Archives of General Psychiatry* 1987;44(12):1086-1091. Juhl JH. Fibromyalgia and the serotonin pathway. *Alternative Medicine Review* 1998;3(5):367-375. Kahn RS, Westenberg HG. L-5-hydroxytryptophan in the treatment of anxiety disorders. *Journal of Affective Disorders* 1985;8(2):197-200. Kahn RS, Westenberg HG, Verhoeven WM, Gispen-de Wied CC, Kamerbeek WD. Effect of a serotonin precursor and uptake inhibitor in anxiety disorders; a double-blind comparison of 5hydroxytryptophan, clomipramine and placebo. *International Clinical Psychopharmacology* 1987;2(1):33-45. Klarskov K, Johnson KL, Benson LM, Gleich GJ, Naylor S. Eosinophilia-myalgia syndrome case-associated contaminants in commercially available 5-hydroxytryptophan. *Advances in Experimental Medicine and Biology* 1999;467:461-468. Maron E, Toru I, Vasar V, Shlik J. The effect of 5-hydroxytryptophan on cholecystokinin-4 induced panic attacks in healthy volunteers. *Journal of Psychopharmacology* 2004;18(2):194-199. Martin TG. Serotonin syndrome. *Annals of Emergency Medicine* 1996;28(5):520-526. Martinelli I, Mainini E, Mazzi C. [Effect of 5-hydroxytryptophan on the secretion of PRL, GH, TSH and cortisol in obesity]. *Minerva Endocrinologia* 1992;17(3):121-126 (in Italian). Meyers S. Use of neurotransmitter precursors for treatment of depression. *Alternative Medicine Review* 2000;5(1):64-71. Michelson D, Page SW, Casey R, Truchsess MW, Love LA, Milstien S, Wilson C, Massaquoi SG, Crofford LJ, Hallett M, Gold PW, Sternberg EM. An eosinophilia-myalgia syndrome related disorder associated with exposure to L-5-hydroxytryptophan. *The Journal of Rheumatology* 1994;21(12):2261-2265. Morris AJ, Armstrong MD. Preparation of 5-hydroxy-L-and D-tryptophan. *Journal of Organic Chemistry* 1957;22:306-308. NIH 2023: National Institutes of Health. PubChem. Bethesda (MD): Specialized Information Services, National Library of Medicine, National Institutes of Health, US Department of Health & Human Services. 5-Hydroxytryptophan; RN: 56-69-9. [Accessed 2023 March 07]. Available from: <https://pubchem.ncbi.nlm.nih.gov/compound/5-Hydroxytryptophan>. PDR Health 2023: Drug Information, Nutritional Supplements. 5-Hydroxytryptophan (5-HTP). Montvale (NJ): Thomson PDR; 2007. [Accessed 2023 March 07]. Available from: http://www.pdrhealth.com/drug_info/nmdrugprofiles/nutsupdrugs/5hy_0011.shtml. Pijl H, Koppeschaar HP, Cohen AF, Iestra JA, Schoemaker HC, Frolich M, Onkenhout W, Meinders AE. Evidence for brain serotonin-mediated control of carbohydrate consumption in normal weight and obese humans. *International Journal of Obesity and Related Metabolic Disorders* 1993;17(9):513-520. Renson J, Goodwin F, Weissbach H, Udenfriend S. Conversion of tryptophan to 5hydroxytryptophan by phenylalanine hydroxylase. *Biochemical and Biophysical Research Communications* 1961;6(1):20-23. Ribeiro CA. L-5-Hydroxytryptophan in the prophylaxis of chronic tension-type headache: a double-blind, randomized, placebo-controlled study. For the Portuguese Head Society. *Headache* 2000;40(6):451-456. Santucci M, Cortelli P, Rossi PG, Baruzzi A, Sacquegna T. L-5-hydroxytryptophan versus placebo in childhood migraine prophylaxis: a double-blind crossover study. *Cephalalgia* 1986;6(3):155-157. Schruers K, Van Diest R, Overbeek T, Griez E. Acute L-5-hydroxytryptophan administration inhibits carbon dioxide-induced panic in panic disorder patients. *Psychiatry Research* 2002;113(3):237-243. Shaw K, Turner J, DelMar C. Tryptophan and 5-hydroxytryptophan for depression. Oxfordshire (UK): The Cochrane Database of Systematic Reviews;

2002, Issue 1. Art. No.: CD003198. DOI: 10.1002/14651858.CD003198. Sigma-Aldrich 2023: Sigma-Aldrich Corporation. H9772 5-Hydroxy-L-tryptophan Solid. St. Louis (MO): Sigma-Aldrich Co.; 2007. [Accessed 2023 March 07]. Available from: <http://www.sigmaaldrich.com/catalog/search/ProductDetail/SIGMA/H9772>. Singhal AB, Caviness VS, Begleiter AF, Mark EJ, Rordorf G, Koroshetz WJ. Cerebral vasoconstriction and stroke after use of serotonergic drugs. *Neurology* 2002;58(1):130-133. Takahashi S, Takahashi R, Masumura I, Miiike A. Measurement of 5-hydroxyindole compounds during L-5-HTP treatment in depressed patients. *Folia Psychiatrica et Neurologica Japonica* 1976;30(4):463-473. The Arthritis Society 2023. Scleroderma. Toronto (ON): The Arthritis Society; 2023. [Accessed 2023 March 07]. Available from: [https://arthritis.ca/about-arthritis/arthritis-types-\(a-z\)/types/scleroderma](https://arthritis.ca/about-arthritis/arthritis-types-(a-z)/types/scleroderma). Thorne Research, Inc. 5-Hydroxytryptophan. *Alternative Medicine Review* 1998;3(3):224-226. Van Praag HM. In search of the mode of action of antidepressants. 5-HTP/tyrosine mixtures in depressions. *Neuropharmacology* 1983;22(3):433-440. Van Praag HM. Management of depression with serotonin precursors. *Biological Psychiatry* 1981;16(3):291-310. Van Praag HM. Central monoamine metabolism in depressions. I. Serotonin and related compounds. *Comprehensive Psychiatry* 1980;21(1):30-43. Van Praag HM, De Haan S. Chemoprophylaxis of depressions. An attempt to compare lithium with 5-hydroxytryptophan. *Acta Psychiatrica Scandinavica Supplementum* 1981;290:191-201. Van Praag HM, Korf J, Dols LC, Schut T. A pilot study of the predictive value of the probenecid test in application of 5-hydroxytryptophan as antidepressant. *Psychopharmacologia* 1972;25(1):14-21. Van Vliet IM, Slaap BR, Westenberg HG, Den Boer JA. Behavioral, neuroendocrine and biochemical effects of different doses of 5-HTP in panic disorder. *European Neuropsychopharmacology* 1996;6(2):103-110. Webb M, Kirker JG. Severe post-traumatic insomnia treated with L-5-hydroxytryptophan. *Lancet* 1981;1(8234):1365-1366. Westenberg HG, Gerritsen TW, Meijer BA, Van Praag HM. Kinetics of L-5-hydroxytryptophan in healthy subjects. *Psychiatry Research* 1982;7(3):373-385. Yamada J, Sugimoto Y, Ujikawa M. Involvement of leptin in hypophagia induced by the serotonin precursor 5-hydroxytryptophan (5-HTP) in mice. *Biological and Pharmaceutical Bulletin* 2006;29(3):557-559. Zarcone VP, Berger PA, Brodie KH, Sack R, Barchas JD. The indoleamine hypothesis of depression: an overview and pilot study. *Diseases of the Nervous System* 1977;38(8):646-653. Report a problem on this page Date modified: 2019-03-01

MEDICINAL INGREDIENT(S)

Must be chosen from the current Natural Health Products Ingredients Database (NHPID) and must meet the limitations outlined in the database. Storage conditions Must be established in accordance with the requirements described in the Natural Health Products Regulations.

DOSAGE FORM(S)

Acceptable dosage forms for oral use are indicated in the dosage form drop-down list of the web-based Product Licence Application form for Compendial applications.

DOSE(S)

Webb M, Kirker JG. Severe post-traumatic insomnia treated with L-5-hydroxytryptophan. *Lancet* 1981;1(8234):1365-1366. Westenberg HG, Gerritsen TW, Meijer BA, Van Praag HM. Kinetics of L-5-hydroxytryptophan in healthy subjects. *Psychiatry Research* 1982;7(3):373-385. Yamada J, Sugimoto Y, Ujikawa M. Involvement of leptin in hypophagia induced by the serotonin precursor 5-hydroxytryptophan (5-HTP) in mice. *Biological and Pharmaceutical Bulletin* 2006;29(3):557-559. Zarcone VP, Berger PA, Brodie KH, Sack R, Barchas JD. The indoleamine hypothesis of depression: an overview and pilot study. *Diseases of the Nervous System* 1977;38(8):646-653.

RISK INFORMATION

Caution(s) and warning(s) All uses Ask a health care practitioner/health care provider/health care professional/doctor/physician before use if you are taking carbidopa or health products with serotonergic activity such as mood balance supplements, cough medication containing dextromethorphan, pain killers or medications for nausea or migraine (Mayo Clinic Staff 2022; Patel and Marzella 2017; Turner et al 2006).When using this product exercise caution while driving or using machinery, as you may experience drowsiness (Berardi et al. 2002).Ask a health care practitioner/health care provider/health care professional/doctor/physician if symptoms persist or worsen. All uses (excluding weight management) Ask a health care practitioner/health care provider/health care professional/doctor/ physician before use if you are pregnant or breastfeeding. Weight management Ask a health care practitioner/health care provider/health care professional/doctor/ physician before use if you are breastfeeding. Healthy mood balance; Fibromyalgia symptoms Ask a health care practitioner/health care provider/health care professional/doctor/physician before use if you have a psychological disorder such as anxiety or depression. Contraindication(s) All uses Do not use if you have scleroderma (Lampert et al. 1992; Sternberg et al. 1980).Do not use if you are taking antidepressants (Mayo Clinic Staff 2022; Patel and Marzella 2017). Weight management Do not use if you are pregnant (HC 2010). Known adverse reaction(s) When using this product you may experience gastrointestinal discomfort/disturbances (Turner et al. 2006; Byerley et al. 1987).Stop use and ask a health care practitioner/health care provider/health care professional/doctor/physician if you experience skin hardening, pain or stiffness of muscles or joints, tremors, agitation/confusion, or an increased heart rate (Boyer 2023; Varga 2023; Mayo Clinic Staff 2022; Patel and Marzella 2017; Das et al. 2004; Erner et al. 2003; Lampert et al. 1992; Sternberg et al. 1980).

NON-MEDICINAL INGREDIENTS

Must be chosen from the current Natural Health Products Ingredients Database (NHPID) and must meet the limitations outlined in the database. Storage conditions Must be established in accordance with the requirements described in theNatural Health Products Regulations.

STORAGE CONDITION(S)

Must be established in accordance with the requirements described in theNatural Health Products Regulations.

SPECIFICATIONS

The finished product specifications must be established in accordance with the requirements described in the Natural and Non-prescription Health Products Directorate (NNHPD) Quality of Natural Health Products Guide.The medicinal ingredient must comply with the requirements outlined in the NHPID. EXAMPLE OF PRODUCT FACTS: Consult the Guidance Document,Labelling of Natural Health Productsfor more details.

REFERENCES

Route of Administration Oral

Compound(s)	Common name(s)	Source information	
Compound(s)	Source material(s)	Part(s)	
tryptophanL-5-Hydroxytryptophan	L-5-HTPL-5-Hydroxytryptophan	N/A	Griffonia simplicifolia
	N/A	N/A	
	Escherichia coli	Whole cell for biosynthesis	
	Saccharomyces cerevisiae	Whole cell for biosynthesis	