

Melatonin

CLINICAL APPLICATIONS

- Encourages Healthy Sleep Patterns
- Helps Regulate the Body's Circadian Rhythm
- Maintains Normal Inflammatory Balance
- Helps Combat Jet Lag

This product is a hormone produced by the pineal gland that plays a key role in regulating the body's circadian rhythms and induction of sleep. It plays an essential role in regulating the sleep cycles, and when supplemented, can be helpful for those who have irregular sleep patterns. This formulation is available as 1 mg tablets for flexible dosing.

Overview

This product is produced primarily in the pineal gland but also in the bone marrow, platelets, GI tract, eyes, skin and lymphocytes.¹ It's chemical precursor is serotonin, a neurotransmitter derived from tryptophan. Serotonin must be acetylated and methylated to form melatonin. Synthesis and production of melatonin is affected by light exposure to the eyes; serum concentrations of melatonin are typically low during the day hours and increase when dark. Since it has important effects in affecting circadian rhythms, melatonin has also been reported to have significant effects on reproduction in addition to sleep-wake cycles and antioxidant function.

Deficiency[†]

Nighttime secretion of melatonin is at its highest during childhood and decreases over time. Research suggests that melatonin supplements support healthy sleep patterns in certain individuals, such as the elderly, individuals with nighttime working hours, or people traveling across time zones.²⁻⁷ Low levels of melatonin in the body are often associated with sleep disturbances.¹

Sleep Support[†]

This product supports the quality of healthy sleep as it relates to falling asleep, sleep efficiency and awakening. Five milligrams of melatonin have been found to be associated with a reduction in sleep onset latency by up to 16 minutes in children aged 6-14 yrs,⁸⁻¹⁰ and similar results were found in children using 3 mg of melatonin before bedtime.¹¹ In adults, studies have shown that doses between 0.3-75mg have a positive effect on increasing total sleep time and reducing the time it takes to fall asleep.^{12,13} Two studies using 5 mg of melatonin in adults with delayed sleep, found the melatonin shortened the time it took to fall asleep by 82 minutes and 115 minutes in the first and second studies.^{14,15} A study of subjects who took melatonin for one week had better initiation, maintenance, efficacy, and activity of sleep when compared to placebo.² Another randomized, double-blind, placebo-controlled study of 33 subjects found melatonin to support the onset, quality, depth and length of sleep without daytime sleepiness.¹⁶ Finally, a review of 10 trials suggests that melatonin supplementation also helps support sleep patterns in individuals crossing time zones.¹⁷

Antioxidant Support[†]

This product has been shown to be a powerful antioxidant inducer. It supports glutathione production, and stimulates intracellular antioxidant enzyme production, including superoxide dismutase and glutathione peroxidase.¹⁸ It has also been found to scavenge free radicals and promote cytokine balance, which helps maintain normal inflammatory balance.¹⁹ This product is also able to pass through the lipid part of low-

density lipoprotein (LDL) and act as an antioxidant in cells. It has also been found to maintain healthy blood pressure levels.¹⁸

Directions

1 or more tablets per day or as recommended by your health care professional.

Does Not Contain

Gluten, corn, yeast, artificial colors and flavors.

Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts^{V3}

Serving Size 1 Tablet
Servings Per Container 100

	Amount Per	% Daily
1 tablet contains	Serving	Value
Melatonin	1 mg	*

* Daily Value not established

References

- Shamseer L, Vohra S. Complementary, holistic, and integrative medicine: melatonin. *Pediatr Rev*. Jun 2009;30(6):223-228.
- Haimov I, Lavie P, Laudon M, et al. Melatonin replacement therapy of elderly insomniacs. *Sleep*. 1995 Sep;18(7):598-603. [PMID: 8552931].
- Kayumov L, Brown G, Jindal R, et al. A randomized, double-blind, placebo-controlled crossover study of the effect of exogenous melatonin on delayed sleep phase syndrome. *Psychosom Med*. 2001 Jan-Feb;63(1):40-8. [PMID: 11211063].
- Van Geijlswijk IM, Korzilius HP, Smits MG. The use of exogenous melatonin in delayed sleep phase disorder: a meta-analysis. *Sleep*. 2010 Dec;33(12):1605-14. [PMID: 21120122].
- Olde Rikkert MG, Rigaud AS. Melatonin in elderly patients with insomnia. A systematic review. *Z Gerontol Geriatr*. 2001 Dec;34(6):491-7. Review. [PMID:11828891].
- Kunz D, Mahlberg R, Müller C, et al. Melatonin in patients with reduced REM sleep duration: two randomized controlled trials. *J Clin Endocrinol Metab* 2004 Jan;89(1):128-34. [PMID: 14715839].
- Pandi-Perumal SR, Srinivasan V, Spence DW, et al. Role of the melatonin system in the control of sleep: therapeutic implications. *CNS Drugs*. 2007;21(12):995-1018. [PMID: 18020480].
- Smits MG, Nagtegaal EE, van der Heijden J, Coenen AM, Kerkhof GA. Melatonin for chronic sleep onset insomnia in children: a randomized placebo-controlled trial. *J Child Neurol*. Feb 2001;16(2):86-92.
- Smits MG, van Stel HF, van der Heijden K, Meijer AM, Coenen AM, Kerkhof GA. Melatonin improves health status and sleep in children with idiopathic chronic sleep-onset insomnia: a randomized placebo-controlled trial. *J Am Acad Child Adolesc Psychiatry*. Nov 2003;42(11):1286-1293.
- Weiss MD, Wasdell MB, Bomben MM, Rea KJ, Freeman RD. Sleep hygiene and melatonin treatment for children and adolescents with ADHD and initial insomnia. *J Am Acad Child Adolesc Psychiatry*. May 2006;45(5):512-519.
- Tjon Pian Gi CV, Broeren JP, Starreveld JS, Versteegh FG. Melatonin for treatment of sleeping disorders in children with attention deficit/hyperactivity disorder: a preliminary open label study. *Eur J Pediatr*. Jul 2003;162(7-8):554-555.
- MacFarlane JG, Cleghorn JM, Brown GM, Streiner DL. The effects of exogenous melatonin on the total sleep time and daytime alertness of chronic insomniacs: a preliminary study. *Biol Psychiatry*. Aug 15 1991;30(4):371-376.
- Zhdanova IV, Wurtman RJ, Lynch HJ, et al. Sleep-inducing effects of low doses of melatonin ingested in the evening. *Clin Pharmacol Ther*. May 1995;57(5):552-558.
- Dahlitz M, Alvarez B, Vignau J, English J, Arendt J, Parkes JD. Delayed sleep phase syndrome response to melatonin. *Lancet*. May 11 1991;337(8750):1121-1124.
- Oldani A, Ferini-Strambi L, Zucconi M, Stankov B, Fraschini F, Smirne S. Melatonin and delayed sleep phase syndrome: ambulatory polygraphic evaluation. *Neuroreport*. Dec 30 1994;6(1):132-134.
- Andrade C, Srihari BS, Reddy KP, et al. Melatonin in medically ill patients with insomnia: a double-blind, placebo-controlled study. *J Clin Psychiatry*. 2001 Jan;62(1):41-5. [PMID: 11235927].
- Herxheimer A, Petrie KJ. Melatonin for the prevention and treatment of jet lag. *Cochrane Database Syst Rev*. 2002;(2):CD001520. Review. [PMID: 12076414].
- Dominguez-Rodriguez A, Abreu-Gonzalez P, Reiter RJ. Melatonin and Cardiovascular Disease: Myth or Reality? [in Spanish]. *Rev Esp Cardiol*. 2012 Mar;65(3):215-218. Epub 2012 Jan 13. [PMID: 22245066].
- Korkmaz A, Reiter RJ, Topal T, et al. Melatonin: an established antioxidant worthy of use in clinical trials. *Mol Med*. 2009 Jan-Feb;15(1-2):43-50. Review. [PMID: 19011689].

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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