

# Melatonin 10 mg



## CLINICAL APPLICATIONS

- *Helps Regulate the Body's Circadian Rhythm*
- *Promotes Immune Cell Activity*
- *Provides Antioxidant Activity Directly and Indirectly*
- *Maintains Normal Inflammatory Balance*



## ENDOCRINE HEALTH

Melatonin is a hormone produced by the pineal gland and plays a key role in regulating the body's circadian rhythms, endocrine secretions and sleep patterns. It also plays an essential role in maintaining normal inflammatory balance and supports the body with strong antioxidant activity. This formulation is available as a 10 mg tablet for flexible dosing.

### Overview

Melatonin is primarily produced by the pineal gland but also in the bone marrow, platelets, GI tract, eyes, skin and lymphocytes.<sup>1</sup> Its 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 daytime hours and increase as night falls. Since it has important effects on circadian rhythms, melatonin has also been reported to have significant effects on reproduction<sup>2</sup> in addition to sleep-wake cycles and antioxidant function.

### Deficiency<sup>†</sup>

Nighttime secretion of melatonin peaks between one to three years of age, and nocturnal levels naturally decline with age.<sup>3-5</sup> Light inhibits melatonin secretion, so when the body is not exposed to an appropriate amount of environmental light, melatonin levels decrease.<sup>6</sup> Research suggests that melatonin supplementation supports healthy sleep patterns in certain individuals, such as the elderly, individuals with nighttime working hours or people traveling across time zones.<sup>7-12</sup> Low levels of melatonin in the body are often associated with occasional sleep disturbances that may impact overall health.<sup>1</sup>

### Sleep Support<sup>†</sup>

Melatonin supports the quality of healthy sleep as it relates to falling asleep, sleep efficiency and awakening. In adults, studies have shown that doses between 0.3-75 mg have a positive effect on increasing total sleep time and reducing the time it takes to fall asleep.<sup>13</sup>

### Immune Support<sup>†</sup>

Melatonin has been shown to be a powerful antioxidant<sup>14,15</sup> and antioxidant inducer. It supports glutathione production and stimulates intracellular antioxidant enzyme production, including superoxide dismutase, glutathione peroxidase and glutathione reductase.<sup>16-18</sup> It has also been found to scavenge free radicals and promote cytokine balance, which helps maintain normal inflammatory balance.<sup>19-21</sup> Specifically, melatonin has been shown to have an inhibitory effect on the NLRP3 inflammasome.<sup>15,22</sup> Melatonin is also able to pass through the lipid part of low-density lipoprotein (LDL) and act as an antioxidant in cells. It has been found to maintain healthy blood pressure levels,<sup>23,24</sup> and it improves measures of quality of life, such as mental health and vitality, and temporarily relieves body aches in young adults.<sup>25-27</sup>

### Directions

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

### Does Not Contain

Gluten, yeast, synthetic colors or artificial flavors.

<sup>†</sup> 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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## Cautions

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

## Supplement Facts<sup>V1</sup>

Serving Size 1 Tablet  
Servings Per Container 60

	Amount Per Serving	% Daily Value
Melatonin	10 mg	*

\* Daily Value not established.

Other Ingredients: Mannitol, Microcrystalline Cellulose, Natural Flavors, Fruit and Vegetable Juice (for color), Luo Han Guo Extract (Fruit), Stearic Acid, Silicon Dioxide and Citric Acid.

ID# 609060 60 Tablets

## References

1. Shamseer L, Vohra S. Complementary, holistic, and integrative medicine: melatonin. *Pediatr Rev*. Jun 2009;30(6):223-228.
2. Olcese JM. Melatonin and Female Reproduction: An Expanding Universe. *Front Endocrinol (Lausanne)*. 2020 Mar 6;11:85. doi: 10.3389/fendo.2020.00085. PMID: 32210911;PMCID: PMC7067698.
3. Zeitzer JM, Daniels JE, Duffy JF, et al. Do plasma melatonin concentrations decline with age? *Am J Med*. 1999;107:432-6.
4. Salti R, Galluzzi F, Bindi G, et al. Nocturnal melatonin patterns in children. *J Clin Endocrinol Metab*. 2000;85:2137-44.
5. Wurtman RJ. Age-related decreases in melatonin secretion--clinical consequences. *J Clin Endocrinol Metab*. 2000;85:2135-6.
6. Mishima K, Okawa M, Shimizu T, Hishikawa Y. Diminished melatonin secretion in the elderly caused by insufficient environmental illumination. *J Clin Endocrinol Metab*. 2001;86:129-34.
7. Haimov I, Lavie P, Laudon M, et al. Melatonin replacement therapy of elderly insomniacs. *Sleep*. 1995 Sep;18(7):598-603. [PMID: 8552931].
8. 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].
9. 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].
10. 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].
11. 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].
12. 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].
13. 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.
14. Reiter RJ, Tan DX, Acuña-Castroviejo D, et al. Melatonin: mechanisms and actions as an antioxidant. *Curr Top Biophys*. 2000;24:171-183.
15. Pieri C, Moroni M, Marcheselli F, et al. Melatonin is an efficient antioxidant. *Arch Gerontol Geriatr*. 1995;20:159-165.
16. 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].
17. Reiter RJ, Tan DX. Melatonin: an antioxidant in edible plants. *Ann NY Acad Sci*. 2002;957:341-344.
18. Gulcin I, Buyukokuroglu ME, Oktay M, Kufrevioglu OI. On the in vitro antioxidative properties of melatonin. *J Pineal Res*. 2002;33(3):167-171.
19. Acuña Castroviejo D, Escames G, Carazo A, León J, Khaldy H, Reiter RJ. Melatonin, mitochondrial homeostasis and mitochondrial-related diseases. *Curr Top Med Chem*. 2002;2(2):133-151.
20. Reiter RJ, Tan DX, Manchester LC, El-Sawi MR. Melatonin reduces oxidant damage and promotes mitochondrial respiration: implications for aging. *Ann NY Acad Sci*. 2002;959:238-250.
21. Mayo JC, Tan DX, Sainz RM, Natarajan M, Lopez-Burillo S, Reiter RJ. Protection against oxidative protein damage induced by metal-catalyzed reaction or alkylperoxyl radicals: comparative effects of melatonin and other antioxidants. *Biochim Biophys Acta*. 2003;1620(1-3):139-150.
22. Bahrapour Juybari K, Pourhanifeh MH, Hosseinzadeh A, Hemati K, Mehrzadi S. Melatonin potentials against viral infections including COVID-19: Current evidence and new findings. *Virus Res*. 2020;287:198108.
23. 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].
24. Koziróg M, Poliwczak AR, Duchnowicz P, Koter-Michalak M, Sikora J, Broncel M. Melatonin treatment improves blood pressure, lipid profile, and parameters of oxidative stress in patients with metabolic syndrome. *J Pineal Res*. 2011;50(3):261-266.
25. Nagtegaal JE, Laurant MW, Kerkhof GA, et al. Effects of melatonin on the quality of life in patients with delayed sleep phase syndrome. *J Psychosom Res*. 2000;48:45-50.
26. Buscemi N, Vandermeer B, Pandya R, et al. Melatonin for treatment of sleep disorders. *Evid Rep Technol Assess (Summ)*. 2004;(108):1-7.
27. Buscemi N, Vandermeer B, Hooton N, et al. The efficacy and safety of exogenous melatonin for primary sleep disorders. A meta-analysis. *J Gen Intern Med*. 2005;20:1151-8.

LT-PDN-160-D

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