RUS-30188

ZERO SUGAR MELATONIN GUMMIES

Fall asleep faster. Stay asleep longer.

- Facilitates restful, deep sleep throughout the night*
- Supports healthy sleep patterns*
- Also provides antioxidant support*

Melatonin Overview

With increasing age and stress levels, healthy sleeping patterns can be difficult to attain. Our bodies rely on melatonin—a hormone secreted from the brain in response to ambient light—to create circadian rhythms that ensure we sleep when it's dark, and are active when there's light. Though we typically secrete low levels of melatonin during the day, and higher levels at night (see figure 1), research indicates that melatonin secretion slowly decreases and changes with age. These changes become particularly evident after age 60, when melatonin begins to decline in both total and peak secretion,[1-3] and peak secretion tends to occur earlier in the evening.[2]

Biology aside, sleep problems are becoming increasingly prevalent across modern cultures, due in part to elevated stress levels and ambient light at night. For example, in a recent survey of 10,132 people age 15 years or older, 'sleep problems' were reported by 56% of American, 31% of Western European, and 23% of Japanese respondents.[4] Approximately half of the respondents had consulted a physician for help, and of these, drug prescriptions had been provided to 50% of American and Western Europeans, and 90% of the Japanese.[4]

Unlike other hormones, melatonin also has powerful antioxidant properties. It directly scavenges free radicals from reactive oxygen and nitrogen species which damage vital molecules like DNA.[5, 6] In fact, melatonin's breakdown byproducts (metabolites) also act as antioxidants, and one melatonin molecule is believed to have ten times the antioxidant capacity of vitamin C! Additionally, research also indicates that melatonin [5-10] and its metabolites [9, 11] increase energy production by the mitochondria, the cell's energy generator.

Follow the signs

Signs that your melatonin dose and timing are ***just right***:

- You fall asleep gradually, stay asleep, and wake up rested.

Signs that your melatonin dose and timing are ***too high***:

- You wake up drowsy.
- You wake up after a few hours.
- You fall asleep more quickly than desired.
- *Recommendation:* Decrease the dose by ¼ gummy.

Signs that your melatonin dose may be ***too low***:

- There is little change in your ability to fall asleep within 4-6 hours of taking melatonin.
- *Recommendation:* Increase the dose by ¼ gummy.

Signs that you may be taking melatonin ***too early***:

- You get drowsy or fall asleep at an earlier time than desired.
- Recommendation: Take melatonin later by 1-2 hours.

Signs that you may be taking melatonin ***too late***:

- You wake up drowsy.
- You are drowsy throughout the day.
- *Recommendation:* Take melatonin earlier by 1-2 hours.

Melatonin is best used with healthy sleep hygiene: No food, alcohol, stressful activity, exercise, or blue-light screens (TV, phone, tablet) for 1-2 hours before bedtime.

Adjust the dose to YOUR needs

The advantage to taking melatonin in a gummy is that it's very easy to adjust the dose. This is especially important with a supplement like melatonin, given that each person's sensitivity and needs will vary. The average melatonin supplement contains 5 mg;[12] however, this is far more than most people need. In fact, doses greater than 3 mg are known to result in higher concentrations of melatonin in the bloodstream, which are then maintained into the daytime hours,[13-15] and may cause daytime drowsiness.

- It is recommended that people start with one 1.5 mg gummy and adjust the dose by ¼ gummy until the desired results are achieved (see Box 1). Zero Sugar Melatonin gummies cut cleanly and easily with a pair of scissors.
- The timing of administration is also important, and it is recommended that melatonin be taken 4-6 hours before desired onset of sleep.[16, 17] Depending on the dose, the total level of melatonin (supplement + natural) in the body will likely rise above the natural peak.
- Older adults (55 years and over) are advised to start with ½ gummy before adjusting upward for subjective efficacy. This is because older adults may experience more drowsiness at the same dose as a younger person, due to greater bioavailability of supplemental melatonin in older adults.[18]

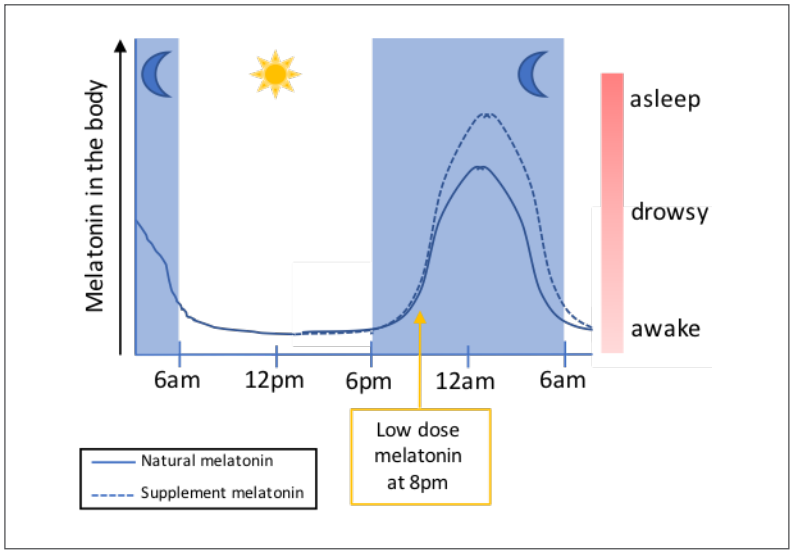

Figure 1. Typically, melatonin starts to rise from 4-6 PM, peak between 12-2 AM, and decline from 4-6 AM. This pattern facilitates sleep onset around 12 AM. If someone doesn't secrete enough natural melatonin to fall asleep, supplemental melatonin can increase amounts to a sufficient level for facilitating sleep.

References:

1. Zhao, Z.Y., et al., Chronobiol Int, 2002. 19(6): p. 1171-82.
2. Zeitzer, J.M., et al., Am J Med, 1999. 107(5): p. 432-6.
3. Zeitzer, J.M., et al., Sleep, 2007. 30(11): p. 1437-43
4. Leger, D., et al., Curr Med Res Opin, 2008. 24(1): p. 307-17.
5. Tan, D.X., et al., J Pineal Res, 2003. 34(4): p. 249-59.
6. Vriend, J. and R.J. Reiter, Biochim Biophys Acta, 2016. 1865(2): p. 176-83.
7. Loren, P., et al., Int J Mol Sci, 2017. 18(6).
8. Shrestha, S., et al., Int J Oncol, 2017. 51(4): p. 1249-1260.
9. Tan, D.X., et al., FASEB J, 2001. 15(12): p. 2294-6.
10. Hardeland, R. and S.R. Pandi-Perumal, Nutr Metab (Lond), 2005. 2: p. 22.
11. Hardeland, R., Cell Mol Life Sci, 2017. 74(21): p. 3883-3896.
12. https://labdoor.com/review?q=melatonin, Accessed 12/30/17.
13. Deacon, S. and J. Arendt, Brain Res, 1995. 688(1-2): p. 77-85.
14. Dawson, D., S. Gibbon, and P. Singh, J Pineal Res, 1996. 20(4): p. 192-7.
15. Hughes, R.J. and P. Badia, Sleep, 1997. 20(2): p. 124-31.
16. Burgess, H.J., V.L. Revell, and C.I. Eastman, J Physiol, 2008. 586(2): p. 639-47.
17. Burgess, H.J., et al., J Clin Endocrinol Metab, 2010. 95(7): p. 3325-31.
18. Vural, E.M., B.C. van Munster, and S.E. de Rooij, Drugs Aging, 2014. 31(6): p. 441-51.