

Melatonin As a Sleep Aid: Is It Safe?

By Alicia Armeli

One, two, three...ninety-eight, ninety-nine...If this fruitless bedtime ritual of counting sheep sounds all too familiar, you're not alone. Whether you find yourself sleeping poorly, waking up too early, unable to fall asleep or stay asleep¹—snooze disorders like these are exceedingly common, with an estimated 50-70 million Americans finding it a challenge to get a good night's rest.²

But if the proverbial counting of sheep won't work, then what will? Many circadian-sufferers are choosing to forgo prescription sleep medications and turn toward supplements to help them reclaim their natural rhythm.

In particular, melatonin use—a hormone produced naturally but now synthetically in a lab—has more than doubled between 2007 and 2012 with an estimated 3.1 million Americans reportedly having used this supplement.³ But does it work and is it safe?

Inside the body, melatonin is produced by the pineal gland—a pea-shaped gland inside the brain—and regulates day to night changes. Because of this, melatonin is released in response to darkness and suppressed by the presence of light. Levels start to rise in the evening, peak around 2-4am, and then decrease to coincide with lower daytime levels.⁴

According to *Natural Medicines Research Collaboration*⁵, melatonin was most likely to be effective in people who have circadian rhythm sleep disorders, as seen with the blind population who are unable to regulate their internal clock. Additionally, it was found to help those who have something called Delayed Sleep Phase Syndrome (DSPS) by helping to decrease the length of time needed to fall asleep. This could prove helpful for the over 55 population when melatonin levels are believed to decline with age. A literature review published by *Drugs & Aging*⁴ found that melatonin did help the elderly population regulate sleep patterns **but only at the lowest possible dose.**

This seems to be true for the general population as well but unfortunately is widely unknown by most consumers. Melatonin is not like a sleeping pill, meaning, taking higher doses of the supplement won't induce a deeper sleep. Melatonin supplementation is most effective in low doses **and** when the pineal gland isn't producing enough on its own.⁶ Many would like to self-diagnose a melatonin deficiency when other factors like anxiety, depression, menstruation, or the onset of menopause can just as easily disturb sleep.¹

Melatonin may often be touted as a natural sleep aid, but marketing strategies such as this need to be taken with a grain of salt. In the world of supplementation, no matter how "natural" a supplement is claimed to be, its manufacturing isn't regulated by the FDA nor is it guaranteed to be safe. Although some studies have shown melatonin to be effective in inducing sleep in adults and children⁶, side effects do exist and are unsafe for specific populations.



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“There is concern that melatonin supplementation has the potential to adversely affect children,” *Natural Medicines Research Collaboration* wrote. “Young people up to the age of 20 years produce melatonin endogenously (within the body) in high levels. Melatonin [supplementation] might adversely affect gonadal development (testes in males and ovaries in females)” and should be “used with caution.”

Other vulnerable groups are pregnant and lactating women, or women wishing to conceive. “High doses might inhibit ovulation, causing a contraceptive effect.” *Natural Medicines Research Collaboration* continued. “It is not known if lower doses cause this effect.” They also concluded there’s not enough evidence to support the use of melatonin in lactating women and until more is known about the safety of melatonin, it’s advised that these populations avoid using melatonin at any dose.

Other side effects can include headaches, dizziness, nausea, and increased risk of seizure with overdose.⁵

Because of this, it’s important to work with a knowledgeable physician when taking melatonin to first work through whether you actually are melatonin deficient or if your inability to sleep is for other reasons. A physician can help to prescribe the correct dosage from a trusted source and advise an acceptable length of time to supplement.

It’s important to note that if you’re having trouble sleeping, it’s helpful to try other things first before popping pills. The *National Sleep Foundation* suggests tips like sticking to a regular sleep schedule, having a relaxing bedtime routine (sans the bright screens of our beloved technology), and keeping your bedroom cool and dark. Be active throughout your day and avoid cigarettes, alcohol, and heavy meals in the evening.⁷ If anxiety and stress seem to be the culprits, winding down with guided visualization and breathing exercises are also suggested.⁸

With this in mind, I believe widely acclaimed French Osteopath Jean-Pierre Barral said it best when he encouraged everyone to “eat healthfully, sleep well, breathe deeply, move harmoniously.”⁹ Here’s to catching some z’s.

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