

A melatonin dosage guide: How much do I need to sleep?

The proper dosage varies depending on age, why you're taking it, and medical history



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If you're one of the 70 million people living with a sleep disorder, you've probably struggled to find a safe and effective way to get better sleep at night. Over-the-counter sleep aids, like ZzzQuil and Unisom, don't always work. Meanwhile, taking the plunge into prescription sleep medications, such as Ambien, carries a risk of dependence (creating another problem instead of a solution!). On top of that, it's likely your difficulty catching zzz's has gotten even worse since the start of the COVID-19 pandemic.

For many people with sleep problems, taking a melatonin supplement before bed seems like the best option. In fact, a 2021 sleep survey by Single Care found that 20% of respondents reported taking a natural supplement like melatonin to sleep better. Because supplements aren't medications, per se, they're available OTC and often considered a "natural" or safer way to find relief from sleeplessness. But *is* melatonin safe to take? And how do you know what's the right dose for you? Here's how to figure it out.

What is melatonin?

The hormone melatonin comes from a small gland in the brain called the pineal gland, whose primary job is melatonin production. Natural melatonin regulates your body's circadian rhythms, or the "clock" that tells your body what time of day or night it is and what it's supposed to be doing every day at those times, according to the Society for Endocrinology. (This is why you generally feel sleepy around the same time every night.)

Normally, melatonin levels increase at night. But many people don't produce these higher levels in the evenings, which means their body clocks aren't sending them the right signals. The reasons why are varied; some people struggle to sleep well when

they have certain medical or mental health conditions, like anxiety or depression, while others can trace their sleeplessness to situational or environmental causes.

“The natural release of melatonin can be altered by cell phone screens, TVs, and bright lights throughout the house,” says Anjali Kohli, MD, internist at Houston Methodist Primary Care. “Other common causes include disturbances in the sleep wake cycle [like those] caused by jet-lag or shift work.”

Not making enough melatonin can lead to the occasional sleepless night, but it can also cause primary sleep disorders like insomnia, sleep apnea, circadian rhythm sleep disorder, and restless leg syndrome. When sleeplessness becomes persistent, many people choose to take a melatonin supplement to boost their body’s natural levels of melatonin.

Dr. Kohli says that melatonin doesn’t *force* you to sleep, but if you’re in the right environment—like a dark, quiet, comfortable room—it should help you feel drowsy and make it easier for you to drift off. Melatonin is a viable option for many people with sleep issues and, though it doesn’t work for everyone, is generally considered effective.

Benefits of melatonin

Melatonin may be used to improve sleep onset, sleep time, or sleep quality. There are several scenarios where you might benefit from taking melatonin for sleep, according to the National Center for Complementary and Integrative Health (NIH). These include:

- Experiencing jet-lag during or after traveling through different time zones
- Performing shift-work that disrupts your sleep cycle
- Having temporary instances of anxiety related to events in your life
- Experiencing the occasional sleepless night
- Being diagnosed with delayed sleep-wake phase disorder

Some healthcare professionals also recommend that children who experience difficulty sleeping due to other health conditions, like autism spectrum disorder and attention deficit hyperactivity disorder, take melatonin—although experts are still unsure about the overall safety and effectiveness of this approach. The American Academy of Pediatrics (AAP) reminds parents to always discuss supplement use with their child’s doctor, especially since melatonin is a hormone and may affect the growth and development of a child who has not fully matured.

How much melatonin should I take?

Melatonin supplements are available in a wide range of dosages, from 1 milligram up to 10 milligrams, and can be taken as pills, dissolvable tablets, liquid drops, or even gummies. However you take it, the best time to use melatonin is about 30 minutes before bedtime.

If you've never taken melatonin before, start small and work your way up if needed. For adults, Dr. Kohli recommends beginning with a 1 to 2 milligram dose daily and increasing the dosage by another 1 to 2 milligrams at a time. For children, the AAP says the dose should remain low (between .5 and 1 milligram), capping out at no more than 3 to 6 milligrams of melatonin.

The maximum dosage for adults ranges from 5 to 10 milligrams. If that sounds like a wide spectrum of normal, it's because the "right" dose of melatonin is very individualized. According to University of Missouri Health Care neurologist Pradeep Bollu, MD, while some people respond well to 3 milligrams daily, others may need more or less. If you feel like you need more than 5 milligrams, you should talk to your doctor first before trying a higher dose. The more melatonin you take the more likely you are to have side effects.

Melatonin dosages		
	Adults	Children
Starting dose	1-2 mg daily	0.5-1 mg daily
Maximum dosage	5-10 mg daily, ask a doctor before exceeding 5 mg of melatonin	3-6 mg daily

Your doctor will also assess your overall health profile when considering the safety of a higher dose. Per the NIH, children, older adults, pregnant and breastfeeding women, and people with epilepsy or other seizure disorders should take either low doses of melatonin under medical advice or none at all. Melatonin may also interfere with some medications, including immunosuppressants, oral contraceptives, and anticoagulants, to name a few.

The dosage you take may also depend on your reason for taking melatonin. Its use in the treatment of some types of migraines and anxiety is still being studied, but many people find taking melatonin at different doses helps them with these other health issues.

"There are initial studies looking at melatonin as a therapy for certain headache disorders and anxiety, especially in relation to surgical procedures," says Dr. Kohli,

though she emphasizes that there is currently no consensus on using it for these issues and studies about the effectiveness are ongoing.

Is it safe to take melatonin every night?

Unfortunately, there's no straight answer here, which you're probably hoping for. There isn't any evidence proving conclusively that long-term use of melatonin is safe. Though the supplement is generally not associated with dependency, habituation, or hangover symptoms, Dr. Kohli says she doesn't suggest taking melatonin every night because of the lack of long-term clinical trials evaluating the safety of chronic use.

At the same time, there isn't any evidence proving nightly melatonin use *isn't* safe. Dr. Bollu points out that melatonin is a natural hormone that fluctuates in our bodies on a daily basis anyway, meaning it may be safer than taking a prescription drug.

However, that's a double-edged sword: Because melatonin supplements aren't medications, they aren't regulated by the U.S. Food and Drug Administration (FDA). There's no guarantee about the quality of the product you're purchasing or the quantity of ingredients claimed on the label, unlike prescription drugs. A pharmacist or nutritionist may be able to help you find a product produced by a reputable manufacturer.

Finally, it's difficult to assess just how much melatonin is too much. It appears to carry a low overdose risk; the National Poison Control website reports several cases where children and adults consumed extremely high doses of melatonin and had little or no side effects (other than acute drowsiness). It's possible there is a lethal dose of melatonin, but no one knows what it is since there has never been a proven instance of too much melatonin causing death.

Side effects of melatonin

Like any other dietary supplement, melatonin may cause side effects in some people—possible side effects include:

- Nausea
- Headaches
- Dizziness
- Drowsiness

Dr. Bollu says “drowsiness” can mean either excessive sleepiness at night or grogginess the next day. He also adds that interfering with your body's natural sleep cues may carry another side effect as well.

“Taking a hypnotic medication regularly, on a nightly basis, would dampen your innate drive to sleep,” explains Dr. Bollu, who adds that although we don’t know for certain, this could also be true for melatonin. However, some research suggests melatonin may not dampen this drive in the same way that Ambien, for example, does. When your body recognizes more melatonin in the body, it begins to slow down its own production of melatonin over time. Therefore, short-term use of a melatonin supplement is preferred.

Melatonin interactions

Taking too much may increase the typical melatonin side effects and may cause drug interactions with other medications you’re taking. Especially in higher doses, melatonin can interact with the following medications, according to the Mayo Clinic:

- Anticoagulants and anti-platelet drugs or supplements
- Anticonvulsants
- Blood pressure medication
- Central nervous system depressants
- Diabetes medications
- Contraceptives
- Cytochrome P450 1A2 (CYP1A2) and cytochrome P450 2C19 (CYP2C19) substrates, such as Valium
- Luvox (fluvoxamine)
- Immunosuppressants
- Seizure threshold lowering drugs

If you experience shortness of breath, chest pain, high blood pressure, or an accelerated heart rate, seek emergency care.

One final note: Even staying within the recommended range of melatonin could lead to long-term side effects or changes to your circadian rhythm. In other words, it might be healthier to look at melatonin as a short-term solution to your sleep troubles, used only occasionally, rather than as a permanent Band-Aid.

“It is always safest to allow your body to fall asleep naturally,” Dr. Kohli says. “Talk to your physician if you are having chronic trouble falling or staying asleep...insomnia is a very complex problem and can sometimes indicate underlying medical issues.”