

Nurse News



Melatonin for Sleep – Is it used correctly?

Melatonin sleep aids are growing in popularity, with 3-million Americans using them in 2012, according to a nationwide survey from the Centers for Disease Control and Prevention. If you're among them or are considering melatonin for sleep, it's smart to understand exactly how melatonin works. "Your body produces melatonin naturally. It doesn't make you sleep, but as melatonin levels rise in the evening it puts you into a state of quiet wakefulness that helps promote sleep," explains Johns Hopkins sleep expert Luis F. Buenaver, Ph.D., C.B.S.M. "Most people's bodies produce enough melatonin for sleep on their own. However, there are steps you can take to make the most of your natural melatonin production, or you can try a supplement on a short-term basis if you're experiencing insomnia, want to overcome jet lag, or are a night owl who needs to get to bed earlier and wake up earlier.

"Melatonin levels rise about two hours before bedtime," Buenaver says. "Create optimal conditions for it to do its job by keeping the lights low before bed. Stop using your computer, smartphone or tablet—the blue and green light from these devices can neutralize melatonin's effects. If you watch television, be sure you're at least six feet away from the screen. Turn off bright overhead lights too." Meanwhile you can help program your body to produce melatonin for sleep at the right time of day by getting exposure to daylight during the morning and afternoon. Take a walk outside or sit beside a sunny window.

Use melatonin sleep supplements wisely and safely. Taken at the right time, in the right dose, it can, indeed, repair a sleep schedule thrown off kilter by jet lag, a long weekend filled with late nights, or certain circadian rhythm disorders. But for insomnia that happens now and then, research shows its effectiveness is limited. And some fear that if misused, it may do harm. Experts also question how safe it is for children. Australian experts called the increase in use among children "alarming" and warned in 2015 that parents shouldn't give it to their children.

"A lot of people just take it right before they go to bed as if it were a sleeping pill," says Michael Breus, PhD, a California-based clinical psychologist who specializes in sleep disorders. "It's not that simple." "Less is more," Buenaver says. Take 1 to 3 milligrams two hours before bedtime. To ease jet lag, try taking melatonin two hours before your bedtime at your destination, starting a few days before your trip. "You can also adjust your sleep-wake schedule to be in sync with your new time zone by simply staying awake when you reach your destination—delaying sleep until your usual bedtime in the new time zone. Also, get outside for natural light exposure. But for insomnia that happens now and then, research shows its effectiveness is limited. And some fear that if misused, it may do harm.

Works for Some, Not for Others. Discovered in 1958, melatonin is a potent hormone naturally produced in the body to help regulate our circadian rhythm, or natural body clock. Light is the switch that controls it: As daylight fades, levels of melatonin begin to rise about two hours before bedtime, nudging us to become sleepy. In the morning, when light hits the eyes, it signals the brain to halt melatonin production, and we grow alert. "**Melatonin is a sleep regulator, not a sleep initiator,**" explains Breus, also the author of *Good Night: The Doctor's 4-week Program to Better Sleep and Better Health.* "Since the 1980s, dietary supplement makers have billed

melatonin made in a lab as a promising sleep aid. But its effects on occasional insomnia are not significant.

Know when to stop. “If melatonin for sleep isn’t helping after a week or two, stop using it,” says Buenaver. “And if your sleep problems continue, talk with your health care provider. If melatonin does seem to help, it’s safe for most people to take nightly for one to two months. “After that, stop and see how your sleep is,” he suggests. “Be sure you’re also relaxing before bed, keeping the lights low and sleeping in a cool, dark, quiet, and comfortable bedroom for optimal results.”

Safety Concerns on the Rise. According to Cathy Goldstein, MD, an assistant professor of neurology at the University of Michigan Sleep Medicine Clinic. While short-term use (a few months or less) of melatonin is thought to be safe in healthy adults, it can boost blood sugar, so it is not recommended for people with diabetes. Breus also says, taking too much melatonin can also lead to bad dreams and grogginess the next day, and it can make many drugs less effective, including high blood pressure medications, seizure medications, and birth control pills. Because dietary supplements are not regulated as much as prescription drugs, quality can vary wildly from bottle to bottle. One recent study found that 71% of melatonin supplements surveyed did not contain exactly what they said on the label. Some had more than four times as much melatonin as indicated, and 26% contained the powerful neurotransmitter serotonin, a chemical found in many antidepressant medications. When it comes to children’s use, there are concerns abound.

The American Association of Poison Control Centers reports that calls about melatonin have skyrocketed 114% nationwide since 2012, with 79% of the 24,000 calls in 2016 involving children. Parents often call poison control after their children have taken it unintentionally or taken too much. That can lead to nausea, diarrhea, headaches, changes in mood, lasting sleepiness the next day, and bedwetting, experts say. Experts are also not sure if using melatonin would harm children.

Skip melatonin for sleep if...

Women do not use melatonin if you are pregnant or breastfeeding. If one has an autoimmune disorder, a seizure disorder or depression. Talk to your health care provider if you have diabetes or high blood pressure. Melatonin supplements may also raise blood-sugar levels and increase blood pressure levels in people taking some hypertension medications.

As the school nurse, here at Steller, I hear about families who have chosen to use melatonin as a sleep aid and I want parents and students to be informed of the potential side effects and that it’s only meant for short-term use. I realize here in Alaska daylight becomes abundant reducing the natural melatonin effects, but knowledge is power to make informed decisions. Read the next post for tips on how to manage sleep when insomnia strikes.

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References

Centers for Disease Control and Prevention, John Hopkins, Mayo Clinic, and WebMD