

Information About Melatonin

The use of melatonin to help children and adolescents sleep has increased significantly. However, in the United States, melatonin is an unregulated supplement so there is often very little guidance for families. This handout will provide some background on melatonin, but if you are considering melatonin use for your child, it is essential that you discuss this first with your child's sleep medicine or primary care clinician.

What is melatonin?

Melatonin is a naturally produced hormone that is part of the system in your brain that controls your internal clock. When it gets dark outside, that darkness travels through your eyes to your brain and cues your brain to release melatonin. This prepares your body for sleep. Melatonin is released all night, helping you stay asleep. Bright light in the morning again travels through your eyes to your brain, telling your brain to stop making melatonin and wake up.

During puberty, the timing of when melatonin is released is delayed by about 1 to 2 hours. This makes it harder for most adolescents to go to sleep at a desired or previously regular early bedtime.

Will melatonin help my child go to sleep?

Melatonin supplements (in liquid, pill, or gummy form) are taken by mouth to help with some sleep problems. Studies have shown that taking melatonin supplements as a *hypnotic* (making you sleepy) helps children and adolescents with autism, ADHD, and moderate to severe eczema go to sleep faster. Melatonin can also be taken as a *chronobiotic* (making you go to sleep at the right time) when an adolescent's internal clock makes it hard for them to go to sleep early enough to get enough sleep at night.

Studies suggest that melatonin may be less effective in neurotypical children and should not be used due to potential side effects, including nightmares, sleep terrors, sleepiness, headache, upset stomach, daytime dizziness, low blood pressure, bedwetting, or grogginess when they wake up. Also, some children may become more active and have more sleep problems with melatonin.

Using Melatonin as a Hypnotic

Melatonin supplements can be taken by mouth 30 minutes before the desired sleep time. A low dose should be used first (0.5 to 1 mg) regardless of a child's age or weight. If this is not helpful after one week, the dose can be increased by 1 mg each week. Most studies show that up to 6 mg of melatonin is helpful, and unlike other medications, a higher dose is not likely to work better if a lower dose is not working.

Using Melatonin as a Chronobiotic

To help an adolescent go to sleep earlier, a small dose of melatonin (0.3 to 0.5 mg) can be taken by mouth 4–6 hours before the desired sleep time. Larger doses of melatonin taken at this earlier time will not be effective. Instead, this use is to try and mimic the natural melatonin the body releases when it gets dark outside.

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Even with melatonin, why does my child still wake up during the night?

Melatonin supplements taken as a hypnotic are most effective about 45 minutes after taking them. Thus, melatonin supplements are useful for helping children go to sleep at bedtime but do very little to help children stay asleep during the night. There is a time-release version of melatonin that releases a second small dose of melatonin during the night, but it must be taken in pill form and swallowed whole to be effective (not chewed or dissolved).

However, if night wakings are long and persistent, a small second dose of melatonin (e.g., 0.5 mg or 1 mg) can be given during the night if the child still has 4 hours left before their typical wake time. Giving melatonin any later than that increases the risk of daytime sleepiness in your child.

Will melatonin help my child's sleep problems?

Melatonin should **never** be the first thing you use to try and help your child sleep. Healthy sleep habits are the best first step, including a consistent, developmentally-appropriate bedtime and wake time, as well as a consistent bedtime routine. Further, it is important to provide a consistent response to a child's bedtime protests or nighttime waking. While behavioral approaches may not be a quick fix, in the long run they are significantly more effective than using melatonin, which stops working when your child stops taking it.

Melatonin will also not help with sleep problems caused by medical conditions like snoring or stomach problems. Because melatonin can interact with other medications or supplements, it is essential that you share information about your child's physical health, mental health, and sleep habits with your child's sleep clinician or primary care clinician.

Do I need a prescription for my child to take melatonin?

Not in the United States, where melatonin is a dietary supplement and is not regulated by the Food and Drug Administration. This means that the amount and purity of the melatonin in supplements you buy cannot be guaranteed. Try to select melatonin that carries a USP Verified Mark, indicating that it is made in a facility that follows good manufacturing process standards.

How long will my child take melatonin?

Stop melatonin immediately if your child experiences any side effects. Report all side effects to your sleep medicine or primary care clinician to decide if continuing melatonin is appropriate.

Stop melatonin if your child's sleep is not improving on the maximum dose recommended by your sleep medicine or primary care clinician.

Melatonin should not be the long-term solution for your child's sleep problems. While melatonin can be used while it helps your child's sleep, you should also be working on long-term approaches to helping your child learn to go to sleep and return to sleep without melatonin. For healthy typically developing children in particular the goal should be to decrease and stop melatonin use as soon as your child's sleep has improved.