Melatonin

Image credit: Adobe Stock

Summary: Melatonin is a hormone that is naturally produced in the body. Its main role is to regulate your sleep/wake cycles. Melatonin may be taken to help with difficulties sleeping (insomnia), and is generally available as an over-the-counter medication (meaning a prescription is not required).

What is melatonin used for?

Melatonin may be used to relieve symptoms of insomnia: difficulties falling asleep or maintaining sleep.

How does melatonin work?

Melatonin improves sleep difficulties (insomnia) by resetting the internal body clock and regulating sleep cycles. Melatonin is naturally produced in the brain in response to darkness to promote sleep at night. Conversely, its levels are low during daytime to promote wakefulness. In people who have a low level of natural melatonin, supplementing this hormone may shorten the time it takes you to fall asleep and increase the duration of sleep.

Melatonin in children and adolescents

Melatonin has been shown to improve sleep in children and adolescents without psychiatric conditions who have difficulties sleeping, as well as patients with attention-deficit/hyperactivity disorder (AD/HD), autism or developmental delays. In children and adolescents with AD/HD, melatonin may shorten the time it takes to fall asleep by 15 to 30 minutes. Melatonin may also help you stay asleep longer. This medication may be particularly helpful for patients who experience jetlag from traveling, or who have trouble sleeping from working nightshifts. Melatonin is only effective if you have low levels of natural melatonin.

Strategies for sleep

Before starting treatment with melatonin for sleep, you may wish to try the suggestions below first to see if you have a need for medication. These are suggestions for developing good sleep habits (sleep hygiene). Sometimes, improving sleep hygiene may be all that is needed to improve sleep difficulties. Whenever possible, adding good sleep hygiene to melatonin therapy increases the chance you will benefit from this medication.

- Avoid caffeine (from tea, coffee or colas) and alcohol, nicotine or other recreational drugs
- Keep a regular sleep/wake schedule everyday; avoid sleeping in or napping during the day
- Avoid stimulating activities before bedtime (e.g. watching television, using the computer, playing video games or exercising late in the evening)
- Ensure a quiet and comfortable sleep environment (e.g. comfortable temperature, dark room, no pets in bed)
- Doing something relaxing or enjoyable before bedtime (e.g. listening to soothing music or take a warm bath)
- Before bedtime, avoid large meals and exposure to bright lights (e.g. from television or computers)
- Exercise on a regular basis (during the day)
- Use your bedroom only for sleep; remove any clocks from eyesight
- If you do not fall asleep within 30 minutes, get up and go to another room. Come back to bed only when you start to feel sleepy.

How should melatonin be taken?

Melatonin comes in quick-acting capsules, controlled-release (CR) capsules, and liquid that is taken by mouth. Sublingual tablets are also available. Each dose of quick-acting melatonin releases medication right away, whereas each dose of controlled-release melatonin releases medication slowly over a longer period of time.

The quick-acting capsules may be swallowed whole. You may also open the capsules and dissolve its contents in any preferred liquid just before use. Controlled-release capsules should be swallowed whole with liquids, and should not be crushed or chewed. If you are using the sublingual tablets, place the tablet under your tongue until it is completely dissolved and absorbed (do not swallow for 2 minutes).

The quick-acting form of melatonin may work better for helping you fall asleep faster. On the other hand, the controlled-release form of melatonin may be more beneficial for maintaining sleep overnight.

Note also:

- Melatonin is best absorbed when taken on an empty stomach.
- Avoid alcoholic drinks while taking melatonin, as this may result in increased side effects.
- Use the lowest possible dose of melatonin that works well for you.

Dosage

The dose of melatonin required to improve sleep varies and is different for each person. It depends on the type of sleep disorder being treated and your response to this medication. A proper diagnosis of the sleep disorder is required prior to starting treatment. See your doctor or pharmacist to determine the dose of melatonin that works best for you.

With the 3 mg capsule, a usual starting dosage is 3 mg, increased up to 9 mg in the evening.

With the 5 mg capsule, a usual starting dosage is 5 mg, increased up to 10 mg in the evening.

The melatonin dose should be taken 30 minutes before bedtime.

When will melatonin start working?

You should start feeling sleepy 30 minutes after taking melatonin.

How long do I have to take melatonin?

Melatonin may be taken regularly or on an as-needed basis for as long as sleep problems persist. Melatonin remains effective for promoting sleep even when taken regularly for extended periods of time. Whenever possible,

use melatonin for the shortest duration possible. You may stop it occasionally to see if melatonin is still needed. Due to the complex nature of sleep disorders, children and adolescents should remain under a doctor's care during melatonin treatment.

Is melatonin addictive?

Melatonin is not addictive. You will not have "cravings" for this medication like some people do with nicotine or street drugs.

What are the side effects of melatonin and what should I do if I get them?

Melatonin is generally very well-tolerated in children and adolescents, even when used over a long period of time. As with most medications, side effects may occur. These effects are usually more common when starting a medication or after a dose increase. Most side effects are mild and almost always decrease with time. It is also possible to experience a side effect that you feel is serious or long-lasting. If this occurs, speak to your doctor about ways to manage the side effects at your next appointment. On the next page are some of the more common side effects of taking this medicine. In brackets are suggested ways to lessen these effects.

Common side effects

If any of these side effects is troublesome for you or is a change from your usual pattern, please discuss them with your doctor, nurse or pharmacist.

- Vivid dreams, nightmares (discuss this with your doctor)
- Morning or daytime drowsiness/tiredness following melatonin use (this usually goes away if the dose is decreased. Do not drive or operate machinery until you know how this medication affects you.)
- Headache (try using a pain reliever like acetaminophen (Tylenol®))
- Stomach cramps (try taking with food)
- Dizziness

Uncommon side effects (e.g. those that occur in less than 5% of patients)

Contact your doctor IMMEDIATELY if you have any of these potentially serious side effects:

- Symptoms of depression (prolonged low mood or sadness) (discuss with your doctor)
- Mild anxiety or irritability
- Confusion or reduced alertness
- Nausea or vomiting
- Increased frequency of seizures in patients with a seizure disorder (epilepsy) (this side effect is very rare. Recent research has shown that melatonin dose not appear to cause or worsen seizure disorders.)

Melatonin does not appear to cause changes in the onset of puberty, or significantly interfere with the body's own production of natural melatonin.

What precautions should my doctor and I be aware of when taking melatonin?

Several medications may interact with melatonin, including sleep-aides such as diphenhydramine (Benadryl®, Sleep-Eze®, Nytol®) and zopiclone (Imovane®); anti-anxiety medications such as lorazepam (Ativan®) and clonazepam (Rivotril®), and several others. If you are (or begin) taking any other prescription or over-the-counter medications, be sure to check with your doctor or pharmacist to see if they are safe to use. Your doctor may need to change the doses of your medication(s) or monitor you carefully for side effects if you are taking certain other medications.

Tell your doctor or pharmacist if you:

- Have any allergies or have experiences a reaction to melatonin or another medication
- Have depression or any other psychiatric condition
- Have diabetes
- Have epilepsy or have ever had a seizure
- Use alcohol regularly
- Miss a period, are pregnant (or are planning to become pregnant) or are breast-feeding

Melatonin is not regulated by Health Canada to the same extent as prescription medications. Melatonin is manufactured synthetically, and cannot transmit animal diseases.

What special instructions should I follow while using melatonin?

- Keep all appointments with your doctor. Inform your doctor about your sleep pattern and if you notice any other effects you think may be related to taking melatonin. Your doctor will monitor your sleep and your response to this medication.
- Do not allow anyone else to use your medication.

What should I do if I forget to take a dose of melatonin?

Unlike most of the other medications used for sleep, sleep difficulties will not worsen (i.e., a “rebound” effect) if a dose of melatonin is missed. If you take melatonin regularly and you forget to take it, skip the missed dose and take your next dose at its regularly scheduled time the next day. Do NOT double your next dose.

What storage conditions are needed for melatonin?

- Keep this medication in the original container, stored at room temperature away from moisture and heat (e.g., not in the bathroom).
- Keep this medication out of reach and sight of children.

About this document

Special thanks to the Kelty Centre for Mental Health for permission to adapt this document. The original document was developed by health professionals of BC Mental Health and Addiction Services, and reviewed by the staff of the Kelty Mental Health Centre. French translation provided courtesy of the Ontario Centre of Excellence for Child and Youth Mental Health

Creative Commons license

You are free to copy and distribute this material unchanged and in its entirety as long as 1) this material is not used in any way that suggests we endorse you or your use of the material, 2) this material is not used for commercial purposes (non-commercial), 3) this material is not altered in any way (no derivative works). View full license at http://creativecommons.org/licenses/by-nc-nd/2.5/ca/. For any other uses, please contact the original rights holder, the Kelty Mental Health Centre.