

Melatonin

Melatonin is a natural hormone that sets your internal clock. It's levels rise in the dark and fall with light. The best way to get melatonin is to use your own – the one your brain makes in the darkness. Even a small nightlight can shut it off, so sleeping in a pitch dark room can help. It's actually the blue wavelengths of light that shut down melatonin, and blue-light blocking lenses or yellow-tinted bulbs that can improve sleep:

moodtreatmentcenter.com/bluelight.pdf

Melatonin also plays a role in metabolism, and it reduces weight gain on antipsychotic medications. Part of the reason metabolism slows as we age is that melatonin production declines. This is also why sleep worsens. Zinc and magnesium enhance melatonin production and can be taken to improve sleep:

Zinc 11.25mg and Magnesium 225mg nightly, or as close to these doses as you can find.

Those work particularly well in the elderly and can be taken with melatonin or on their own.

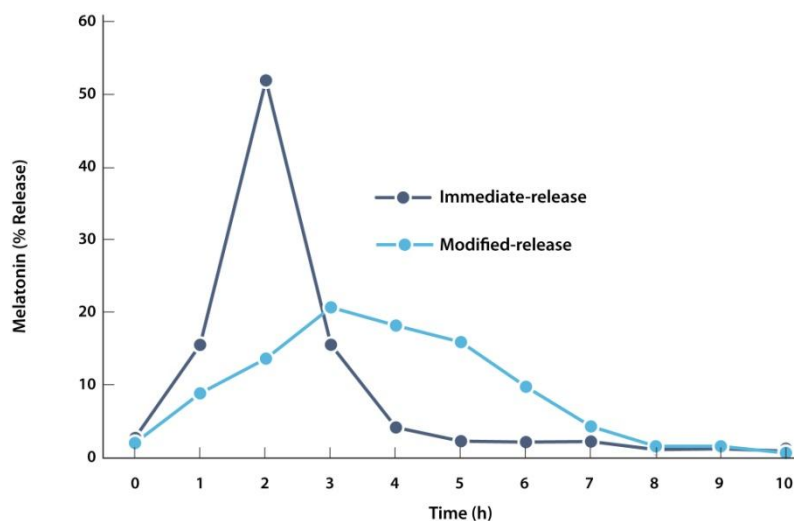
Melatonin can be taken in pill form, though there is controversy about the quality of the ingredients – a study of over-the-counter preparations found that most had much more or less melatonin than advertised. Melatonin's main benefits are in the elderly, in people with blindness or neurologic problems (e.g. autism, dementia, parkinson's, and mental retardation), and in shift-workers, "night owls", or during jet lag. Otherwise, melatonin's sleep benefits are mild. People fall asleep 4 minutes earlier and sleep 12 minutes longer on average.

Part of the reason it doesn't work so great is that it leaves the body quickly. A sustained-release form may be better (e.g. REMFresh).

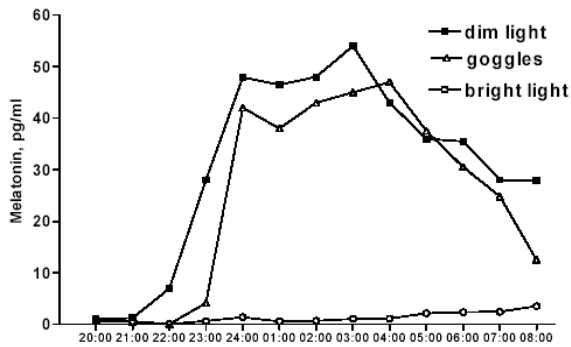
Melatonin has many other medical uses described below. There are also two medications that work through melatonin: ramelteon (Rozerem, a sleep aid), and agomelatine (an antidepressant available in Europe).

How To Take It

- Insomnia: 0.2-5 mg at bedtime as needed. Lower doses (0.2-1mg) may be more effective, especially in sustained-release form taken few hours before bedtime (Melatonin SR 1 mg on Amazon or remfresh.com).
- Insomnia in older age: Melatonin 5mg with zinc 11.25mg and magnesium 225mg nightly (these enhance the natural release of melatonin in the brain – get as close as you can to these doses of zinc and magnesium but it need not be exact. Products with all three ingredients: NiteVites Ultimate Night Time by Purity Products (ASIN# B008AXVIQ4 on Amazon). Melatonin can also work better when combined with B6 and calcium, available in the product Natrol Advanced Sleep Melatonin.
- Prevention of weight-gain on atypical antipsychotics: 3-5mg/night.
- Ear-ringing (tinnitus): 3mg/night.
- Pain: Migraines: 2-3mg/night, Cluster headaches: 10mg/night, TMJ-pain: 5mg/night.
- Reducing nicotine withdrawal symptoms: 0.3 mg orally 3.5 hours after stopping smoking.
- Depression: melatonin-SR 3 mg at night combined with buspirone 15 mg daily.
- Jet lag: see moodtreatmentcenter.com/jetlag.pdf.



This graph shows blood levels of melatonin after taking the pill. Regular melatonin leaves the body after 2-3 hours, while sustained release lasts 5-7 hours.



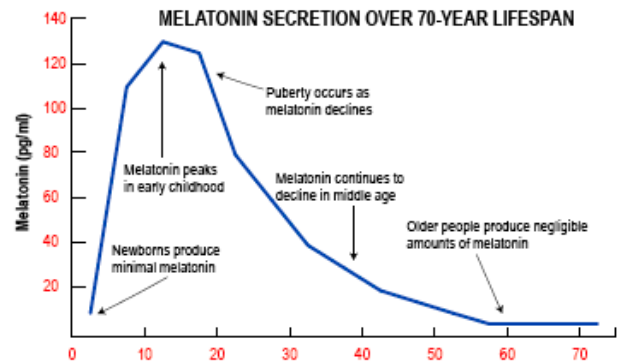
This is a graph of natural melatonin in the brain. The bottom line is close to zero – that’s the effect of light shutting down melatonin production. In a dim-lit room, or with blue-light blocking glasses on, melatonin levels rise naturally after sundown.

Side Effects

Melatonin is generally well-tolerated. Possible side effects include headache, depression (may worsen or improve with melatonin), daytime sleepiness, dizziness, stomach cramps, and irritability.

Warnings

Melatonin may worsen high blood pressure, diabetes, increase the risk for seizures if you have epilepsy (note: when used for antipsychotic weight-gain, melatonin improved blood pressure). Melatonin may be unsafe in pregnancy, breastfeeding and in children (it may interfere with growth hormones). Melatonin might also interfere with ovulation, making it more difficult to become pregnant.



This graph shows the decline in melatonin production with age.

—Chris Aiken, M.D., updated 9/27/17