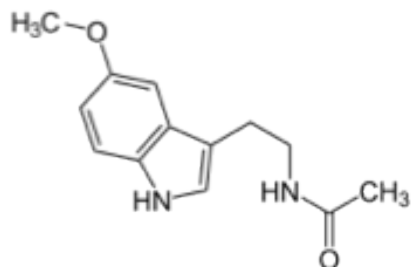


Melatonin induces sleep and shortens the time to fall asleep. It induces a relaxing effect on muscles and nerves, which in turn makes the sleep better. Melatonin is produced by the pineal gland in humans and has been shown to protect against free radicals through its antioxidant¹ properties and have an anti-spasmodic effect on the intestinal tract.



Evidence has shown that fluoride can affect the pineal gland and in turn melatonin production, as can sleeping near electronic devices or power lines. In children, melatonin is

most often used in disorders related to Attention Deficit Hyperactivity Disorder (ADHD), autism and other developmental disabilities.

SYMPTOMS of DEFICIENCY

Most signs of deficiency appear at night with sleep disturbances and the next day with signs of a lack of sleep. The underlying cause of deficiency should be established before treatment is started.

Melatonin deficiency is often noticed during a period of jet lag when people struggle to adjust to time zone changes.

USUAL DAILY DOSES

Sublingual tablets or drops are the most efficient form of treatment compared to oral melatonin (capsules). Usual sublingual doses are between 0.05-1mg/day and for oral melatonin between 0.5-3mg/day between 1-5mg when using slow release melatonin. Higher doses may be prescribed in some cases.

SIDE EFFECTS

Melatonin has few side effects in the short term, for up to three months especially when taken at low doses. When taken long term and in excess patients may find they have deep but short sleep (no more than 3-4 hours), wake with a heavy head, have difficulty getting back to sleep and occasionally wake with a strong heart beat, headache and excessive sweating.

SAFETY

For most children with sleep problems, there is a specific cause that should be identified and treated before melatonin is considered as an option. Much controversy exists about the use of melatonin in children however, in the short term it seems to work well and be safe. Few studies have looked at its long term use but those that have, suggest it is safe².

CONTRAINDICATIONS

No absolute contraindications however,

Consult your doctor if pregnant or trying to conceive or if suffering from an autoimmune disease.

¹**OTHER**

Some medicines including beta-blockers (a high blood pressure medication) can affect melatonin levels.

Melatonin should generally not be used in normal, healthy children, as there is usually an underlying cause, which needs attention. Because of its effects on other hormones melatonin might interfere with development during adolescence.³

If you're waking up feeling lethargic and groggy throughout the day the dose of melatonin is probably too high.

TOP T.I.P.s

- Get regular hormone level tests (at least annually) to ensure the safety and efficacy of your therapy and to minimize the risk of developing side effects.
- If using a troche ensure to place it between the cheek and gum for best absorption. It can be broken up into smaller pieces to aid dissolution
- To increase melatonin naturally at night before bed, darken and silence room, keep eyes closed and have strong exposure to morning sunlight.
- Spend time outside during the brightest time of day 10am-2pm
- Avoid sleeping next to electrical devices or under high current cables
- Avoid stimulating beverages at night (for at least 4 hours before bed) and stressful activities in the evening
- Meals should be timed to avoid going to bed on a full stomach but not hungry either
- Avoid computers and other artificially lit items at least 1 hour before bed
- Avoid fluorescent lighting where possible favouring yellow/orange lighting.

¹Hardeland R (July 2005). "Antioxidative protection by melatonin: multiplicity of mechanisms from radical detoxification to radical avoidance". *Endocrine*

²<http://www.sleephealthfoundation.org.au/pdfs/Melatonin-and-Children.pdf>

³Weiss MD, Wasdell MB, Bomben MM, et al. Sleep hygiene and melatonin treatment for children and adolescents with ADHD and initial insomnia

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