



## Melatonin: A Simple Overview of Supplement

**Adinarayana Andy\***

Pharmacy Manager, Weatherwax Family Pharmacies Inc, Spring Arbor, Michigan, USA

**\*Corresponding Author:** Adinarayana Andy, Pharmacy Manager, Weatherwax Family Pharmacies Inc, Spring Arbor, Michigan, USA.

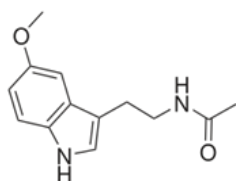
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5-Methoxy-N-Acetyltryptamine, MEL, Melatonina, Mélatonine, MLT, N-Acetyl-5-Methoxytryptamine, N-Acetyl-5-Méthoxytryptamine, Pineal Hormone know melatonin.



Chemical Structure of Melatonin (IUPAC name: N-[2-(5-methoxy-1H-indol-3-yl)ethyl]acetamide).

Melatonin is an endogenous hormone produced in the brain by the pineal gland involved in sleep. The essential amino acid L-tryptophan is a precursor in the synthesis of Melatonin. The onset of Melatonin and its secretion from the brain is linked with the hours of the day, with secretion increasing when it's dark and decreasing when it's light. Melatonin production decreases with age. Endogenous melatonin production is influenced by day and night cycles.

Research on melatonin use for specific conditions shows it can be used for Circadian rhythm sleep disorders in the blind, sleep disorders in children, Jet lag, Insomnia, Shift work disorder, and many other conditions. Still, no good scientific evidence supports most of these uses. There is also no good evidence to support the use of Melatonin for COVID-19.

Melatonin is a dietary supplement available without a prescription in most countries, and it's available in tablets, capsules, gummies, and liquid form for kids. Still, most are synthetic and are produced on a large scale by different supplement manufacturers. Before taking this supplement as medicine, please be advised by

doctors or Pharmacists. Do not use Melatonin if you are allergic to it. Before using this medication or giving it to your child, talk to your healthcare provider. This medication may not be recommended if you have certain medical conditions, such as diabetes, depression, a bleeding or blood clotting disorder such as hemophilia, taking a blood thinner like warfarin, high or low blood pressure, epilepsy or other seizure disorder, and an autoimmune condition.

**Safety and side effects:** Melatonin taken orally in appropriate amounts is generally safe. Melatonin can cause Headaches, dizziness, dry mouth, nausea, and drowsiness. Taking Melatonin during pregnancy and lactation should be avoided due to insufficient reliable safety information.

**Potential drug or disease interactions with Melatonin:** Due to its theoretical immunostimulant effects, avoid it in patients taking immunosuppressants (e.g., transplant patients), with autoimmune disorders, and with lymphoproliferative disorders. Due to theoretical anticoagulant activity, it is prevented in patients with bleeding disorders, and caution is used with anticoagulants or antiplatelets. Due to its unclear effect on the seizure threshold, use caution with drugs that may lower the seizure threshold in patients with seizure disorders. Due to its unclear impact on blood pressure, use caution with antihypertensives in patients with hypertension. Due to its unclear effect on glucose control, use caution in patients with diabetes. Due to reports of worsening dysphoria, avoid in patients with depression. Due to its soothing effects, use caution with central nervous system depressants, for example, such as alcohol and benzodiazepines. Due to its metabolism by CYP1A2, and possibly CYP2C9 and CYP2C19, caution should be used with inhibitors of these enzymes. Due to the in vitro inhibition of CYP2C19 and CYP1A2, caution should be used with the substrates of these enzymes.

Finally, Melatonin has generated significant interest in the past decade. It is available as an over-the-counter supplement and is perceived as a natural and safe product. More clinical research is warranted to understand dietary intake's effects on Melatonin better.