



# Melatonin

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The pineal gland, found deep within the brain, produces the hormone melatonin via the enzymatic conversion of the amino acid tryptophan, eventually through as serotonin, and finally becoming melatonin. Affected dramatically by light exposure, a reduction in any light in the home will lead to improved melatonin production. Although every individual varies, an average 50 year-old produces approximately 50% of the melatonin of a 20 year-old.

## What it is:

The primary function of melatonin lies in its ability to calm a part of the brain responsible for arousal (the reticular activating system) and allow an easier transition to sleep state. However, melatonin distributes throughout the human body and has a multitude of functions as an anti-aging, anticancer, and anti-oxidant agent, among a variety of other applications. The direct role of melatonin in healing an assortment of ailments makes it among the most versatile supplements known.

## What it does:

- **Cancer Treatment:** The single most proven treatment of solid tumors when used in conjunction with chemotherapy or radiation therapy. In a review of 8 randomized clinical trials used on a variety of solid tumors, melatonin dosed 20mg nightly **doubled one-year survival** while mitigating almost entirely the serious side-effects of radiochemotherapy. Melatonin has immune enhancing and direct tumor suppressing effects that *enhance* effectiveness of cancer therapies while dramatically reducing the side-effects of the most toxic of cancer treatments.
- **Metabolic Syndrome/Insulin Resistance/Steatohepatitis-“Fatty Liver”:** Probably beyond its antioxidant properties, the ability of melatonin to improve insulin resistance while reversing fatty liver disease might become its most important role as a supplement given the prevalence of these conditions in up to two thirds of Americans.
- **Gastrointestinal Health- Irritable Bowel Syndrome(IBS) and Gastroesophageal Reflux Disease(GERD):** Melatonin serves many roles in IBS patients for the improvement of cramps, in maintaining energy and in restoring sleep schedule. In GERD not only does melatonin protect the esophagus

against both acid-reflux and bile-reflux, it can also improve the transient lower esophageal sphincter relaxations that actually cause this disease.

- **Bladder Health:** Melatonin serves as one of the only natural treatments of Overactive Bladder (OAB) whether present in women or men with prostate issues.
- **Insomnia:** The “classic” use of melatonin, with proven effectiveness utilizing immediate-release formulas for those people with problems falling asleep and sustained-release formulas in those people with problems staying asleep. Yes, they can be combined if you have both! Caveat emptor, if you buy melatonin expecting a “knockout punch” like the medicines used for this condition, you will be largely disappointed. But for those people attempting to get off those medicines due to their unexpectedly high rate of lethal complications\*, melatonin in combination with herbal products, like Myocalm PM (by Metagenics) or 5-HTP, can find an excellent sedative effect with much greater safety.

\*People who take sleeping pills have a 3-fold to 5-fold the mortality rate of those who don't take “sleepers” when studied over a 2.5 year period.

### **Dosage:**

For the treatment of cancer with or without the addition of radiochemotherapy, the dosage is 20 mg (Pure Encapsulations) nightly. For the treatment of most of the other conditions, the dosage is Xymogen brand Melatonin CR 5mg caps 1-2 at bedtime. This formula combines the rapid-release and the extended release melatonin.

### **Conclusions:**

The most convincing evidence for supplementation these days come from the literature on two hormones, [“Vitamin” D](#) and melatonin. A strong argument can be made to put everyone over the age of 45 on melatonin due to the profound deficiency disorders that accrue as this hormone declines. Interestingly, the most significant argument against melatonin is the concern that taking the supplement might suppress your pineal gland's own endogenous synthesis. Although this is a valid concern before the age of 40, it is completely moot after 50. Furthermore, there are great trials utilizing melatonin in children with autism and Asperger's showing remarkable safety. No, melatonin isn't a cure-all, but in researching this article I found compelling literature on its use in the help of neurologic, cardiovascular, oncologic, renal, gastrointestinal, liver, and anti-aging programs with a side-effect profile better than placebo. As always, supplement under the guidance of a knowledgeable Integrative Medicine healthcare practitioner.

Your Journey to Health & Healing,  
Gary E. Foresman, MD

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