

# The Power of Melatonin

When the lights go out, melatonin ignites your sleep cycle—and moonlights as one of the world's most powerful antioxidants. Now you just need to harness it

BY LAURA ROBERSON • PHOTOGRAPH BY TRAVIS RATHBONE

**YOU OWN AN ALARM CLOCK, RIGHT? YOU KNOW, THAT THING** designed specifically to annoy slumbering human brains into wakefulness? Well, you also own a sleep clock. It's called melatonin, and trust us when we tell you that it's much more advanced than that contraption on your nightstand. Not only does it quietly help you conk out every night, but it also functions as an über-antioxidant, preventing disease with one hormonal hand tied behind its back.



“Compared with other antioxidants, like vitamin E or vitamin C, melatonin is far superior in preventing cellular damage from free radicals, the by-products of oxygen,” says Russel Reiter, Ph.D., a professor of cellular biology at the University of Texas health science center in San Antonio. “The wrinkles beside your eyes? That’s free-radical damage. Degeneration of organs? Free-radical damage. Alzheimer’s? Free-radical damage. Oxygen is required for life. But it’s also what kills you over the course of a lifetime.”

Unfortunately, some things can mess with your melatonin levels. And while your sleep clock may never stop ticking, it can be thrown seriously out of whack, leaving you awake when you should be asleep—and dead when you should be alive. That is, unless you . . .

### Move toward the light

We’re all for conserving electricity, except at the office, where you should *turn on the damn lights!* Tell anyone who complains that sitting in a dimly lit office all day may suppress your melatonin at night. In a 2011 Harvard study, researchers exposed people to either low or normal light during the day, followed by a few hours of bright light at night. Those exposed to low daytime light were more susceptible to the melatonin-suppressing effects of bright nighttime light. In fact, a 2010 Swiss study found that the better illuminated your waking hours are, the more soundly you’ll sleep at night. So when you arrive at work, raise your blinds and replace your bulbs with the “cool white” type (look for 4100K on the label); these bulbs emit light from the blue part of the spectrum, which delays your melatonin production. We like EarthTronics 13T2 Micro Spiral Cool White 4100K (\$2.50, greenlightingsupply.com).

### Make a melatonin salad

Even if your body is sometimes short on melatonin, it’s good to know that the stuff does, in fact, grow on trees. Take tart cherries, for example—they’re one of several foods that are natural sources of the hormone. And although these foods won’t provide enough melatonin to help you sleep, they will bolster your disease defenses. “Any melatonin, including that from plants, will be absorbed and used to provide antioxidant protection,” says Reiter.

### Set a Guinness record for health

You’ll probably never tune in to a beer commercial and hear “Less Calories, More Melatonin!” but yes, it’s even in your brew. In a recent Spanish study, drinking beer boosted people’s

blood levels of melatonin and, consequently, their antioxidant capacity. Make it a Guinness Extra Stout: The study also found that the higher a beer’s alcohol content, the more melatonin it contains.

### Follow the military model

From cheap quartz crystals to precision mechanical movements, there are myriad ways to make sure a clock or watch keeps accurate time. In the case of your sleep clock, it comes down to discipline. If you want your melatonin to tell you to sleep at the right time, then you need to make sure the rest of your routine happens like, well, clockwork. “It’s like a mild case of jet lag. If your sleep becomes messed up, try to keep other factors constant,” says W. Christopher Winter, M.D., *Men’s Health* sleep advisor and medical director of the sleep center at Martha Jefferson Hospital

in Virginia. “The military is a great model: Soldiers eat meals at the same time, exercise at the same time, sleep at the same time. Your body likes regimen.” If you provide it with time cues throughout the day, your body will release melatonin at the right time, too.

### Sleep in a cave

Your bedroom isn’t for watching *Modern Family*. If Sofia Vergara doesn’t keep you awake, the light from your TV, iPad, computer screen, or smartphone will. “Even short intervals of light at night immediately depress melatonin,” says Reiter. Turn off electronics at least 2 hours before bed, suggests Dr. Winter, and block outside light with room-darkening curtains, such as Plow & Hearth Blackout Curtain Panels (plowhearth.com, \$30). Have night-lights? Swap out white bulbs with red ones, which have the least impact on melatonin.

### Take the children’s dose

Given melatonin’s near-magical powers, you’d think more would be better. But you’d think wrong if you were talking about the

supplemental stuff. “A lower dose of melatonin may be as effective as a higher dose,” says David Blask, Ph.D., M.D., a professor of structural cellular biology at Tulane medical school. “In some cases, large doses may actually *diminish* the response you’re trying to achieve.” Worse, if you regularly take a megadose, you may stop responding to melatonin—in natural or supplement form—entirely, warns Richard Wurtman, M.D., the MIT neuropharmacology professor who discovered melatonin’s role in sleep. His studies show that the effective dose for sleep is 0.3 milligram (mg). You won’t find such a small dose in stores—supplement makers tend to think more is better. So pick up a pill cutter and take a quarter or half of a 1 mg pill, such as Natrol Melatonin (\$14 for 180, natrol.com).

### Supplement strategically

It’s the melatonin paradox: Melatonin supplements are pills that help you fall asleep, but they aren’t “sleeping pills.” With regular knockout drugs, you take a dose just before bedtime and wait for the curtain to come down on your consciousness. Melatonin supplements don’t *induce* sleep but rather initiate the sleep cycle, which actually begins several hours before you hit the sack. Try swallowing your supplement a few hours before darkness falls. As the melatonin enters your bloodstream, your body will think dusk has arrived early, so you’ll fall asleep more easily come bedtime.

### Say no to NSAIDs

Workout soreness can keep you awake, but so can the painkillers you might pop to relieve it. There’s evidence that taking a nighttime dose of nonsteroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen, may suppress the part of your nervous system that releases melatonin, says Reiter. Fight your evening aches with acetaminophen, he says, which may have less of an effect on melatonin. Next, check your prescription bottles: “If taken in the evening, beta-blockers can turn down melatonin production—or even turn it off at a high enough dose,” says Dr. Blask. Some antidepressants such as fluoxetine (Prozac) may also have this effect. If you’re often tired during the day, ask your doctor if you can take your meds earlier. ■

#### MELATONIN FOOD SOURCES (in nanograms per gram)

Raspberries	387
Almonds	39
Sunflower seeds	29
Tart cherries	(up to) 15
Flaxseeds	12
Strawberries	(up to) 11
Poppy seeds	6
Walnuts	3.5
Tomatoes	1.2–1.4

Sources: *Critical Reviews in Food Science and Nutrition and Food Chemistry*

## MELATONIN MAYHEM

*Does your favorite sleep aid have a dark side?*

Melatonin isn’t toxic, and oversleeping is the worst side effect most people experience after taking it. So why do U.S. poison centers receive more calls about melatonin than any other supplement? Because your sleep aid looks like candy to a kid. “Most are unintentional ingestions—say, a child who raids the medicine cabinet,” says Alvin Bronstein, M.D., of the American Association of Poison Control Centers. If your child swallows a few, poison control will probably just tell you to let the kid sleep it off, says Richard Wurtman, M.D., a professor of neuropharmacology at MIT. If there’s vomiting, make sure your child drinks plenty of clear liquids, like ginger ale, to avoid dehydration. —L.R.