

# health **smarts**

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## Nutrition & Sleep

**Sleep issues have become an epidemic**, with 50 million to 70 million U.S. adults having a diagnosed sleep disorder, according to the American Sleep Association.

Individuals with a spinal-cord injury (SCI) have a higher prevalence of sleep issues, as research shows they often have difficulty falling asleep, wake up more frequently during the night, are prescribed sleeping pills



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more often, sleep longer hours, take frequent and longer naps during the day, snore more and often feel tired and sleepy during the day.

The problem with interrupted sleep or lack of sleep is it can contribute to so many health issues such as depression, stress, Type 2 diabetes, heart problems, anxiety, fatigue, mood swings, weight gain and poor concentration and memory.

Sleep is a vital part of our health. When we sleep, a number of hor-

mones and chemicals are released to perform various health functions. When we sleep, it:

- Increases gamma-aminobutyric acid, which helps you feel relaxed and calm
- Increases serotonin to help you feel happy
- Reduces cortisol (stress hormone) levels, which can help reduce appetite and carbohydrate cravings
- Increases thyroid hormones to maximize metabolism
- Increases acetylcholine, a neurotransmitter that helps with muscle development and enhances memory
- Replenishes dehydroepiandrosterone, our anti-aging hormone
- Releases growth hormones to help with fat loss
- Reduces insulin and inflammation important for blood-sugar regulation (diabetes) and pain

So how can diet help with getting good sleep?

### Melatonin Boost

Melatonin is a hormone that aids regular sleep cycles. It helps you get to sleep faster, reduces frequency of waking and increases deep rapid eye movement, or REM, sleep.

Research shows melatonin production reduces with age, depression, stress and complete cervical injuries. Supplementing with melatonin has been shown to help restore sleeping patterns for individuals with SCI.

Supplementing with melatonin might be a quick and easy way to



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support a better night's sleep, but consuming foods high in tryptophan is also helpful, as this amino acid is used by your body to make melatonin.

Foods high in tryptophan include salmon, grass-fed beef, tuna, turkey, chicken, cottage cheese, cheese and milk, preferably from organic and/or local dairy sources. Yogurt and kefir, which is drinkable yogurt, are notably effective, as are bananas, oats, spinach, nuts, rice, hummus, eggs, sunflower seeds and sesame seeds.

There are certain factors that can interfere with your body making melatonin, including smoking, high sugar intake, excessive alcohol use, excessive protein intake, low blood sugar, diabetes and taking certain medications, such as beta blockers for hypertension.

### Calming Minerals

Magnesium and calcium are "relaxing" minerals that can help you get a better night's sleep.



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Magnesium is a muscle and nervous system relaxant and is great if you have difficulty getting to sleep because of stress, pain, muscle cramps or spasms. In fact, restless-

# Best Dinners For Sleep

Meals that are high in carbohydrates with low to medium protein will help you relax in the evening and set you up for a good night's sleep.

Try some of the following:

- Pasta with Parmesan cheese
- Scrambled eggs and cheese
- Chicken stirfry
- Chicken and vegetables with hummus and whole wheat pita bread or wrap
- Turkey burgers with veggies
- Tuna salad sandwich
- Sesame seeds sprinkled on a salad with tuna chunks, and a side of whole wheat crackers



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ness, wakefulness, leg cramps and muscle spasms can be a result of calcium and magnesium deficiencies.

Calcium helps your brain convert tryptophan to melatonin. This explains why dairy products are top sleep-inducing foods.

Foods high in magnesium include black beans, quinoa, sunflower seeds, almonds and wheat bran. Foods high in calcium include broccoli, kale, salmon, almonds, sesame seeds and hazelnuts.

If you're going to supplement with magnesium, choose magnesium glycinate or magnesium bisglycinate, as these are better for promoting relaxation and sleep.

## Avoid Stimulants

It shouldn't be a surprise that caffeine will negatively impact sleep.

Caffeine isn't just found in coffee, but also in teas and chocolate. Some

people can process caffeine better than others, so you'll have to decide when you can drink that last cup.

And don't fool yourself into thinking a glass of beer or wine will help you sleep. It actually does just the opposite.

Alcohol impairs the transport of tryptophan into the brain, where it's needed to make melatonin. It also causes the release of adrenaline, which makes you feel alert, and it can exacerbate sleep apnea.

## Eating Before Bed

Eating carbohydrates with tryptophan-containing foods makes the calming amino acid more available to the brain.

A high-carbohydrate meal stimulates the release of insulin, which helps clear from the bloodstream those amino acids that compete with tryptophan, allowing more of the natural, sleep-inducing amino acids

to enter the brain and manufacture sleep-inducing substances, such as serotonin and melatonin.

Eating a high-protein meal without accompanying carbohydrates may keep you awake, since protein-rich foods also contain the amino acid tyrosine, which perks up the brain.

For dinner and bedtime snacks, eat a meal or snack that is high in complex carbohydrates, such as whole grains, legumes, lentils and vegetables, with a small amount of protein that contains just enough tryptophan to relax the brain.

*Joanne Smith, CNP, and Kylie James, CNP, are co-authors of the Paralyzed Veterans of America-supported book Eat Well, Live Well with Spinal Cord Injury and Other Neurological Conditions. For more information, visit [eatwelllivewellwithsci.com](http://eatwelllivewellwithsci.com).* ■