

Detox Your Brain - It's Easy

Inability to focus, moodiness, low productivity and accident risks are common effects of not getting enough zzzs. You need to detox your brain.

Past research showed that sleep deprivation may increase your risk for obesity, heart disease, and diabetes. Now we have one more reason to make sleep a priority: a potential link between inadequate sleep and Alzheimer's disease, according to a recent study.

Not getting regular sleep? You may be putting your brain's health at risk.

Our brain cells actively use energy to learn and think during the day, and toxins build up. The study, published in the journal, *Science Advances*, describes the importance of sleep for clearing your brain of cellular waste.

The waste removal system of the central nervous system - called the glymphatic system - needs you to do your part to detox your brain. It gets the majority of its brain cleaning duties done during our sleeping hours. When we don't sleep well, it can't keep up. Too much cellular waste can pile up, including excess amyloid proteins—the primary protein associated with an Alzheimer's diagnosis.

It's our cerebral spinal fluid that acts as a flushing system for brain detoxification each night, says Dr. Alberto R. Ramos, who specializes in researching the relationship between sleep disorders, cerebrovascular disease and neurocognitive aging.

This fluid essentially takes out the garbage at night," he says. "Excess proteins and waste inside our brains move through the fluid to the outside of our brains.

They can then be removed from the body by our other systems to keep all cells healthy.

Dr. Ramos, the director of the Sleep Disorders Program at the University of Miami Health System's Evelyn F. McKnight Brain Institute, adds that an additional theory about excess use is being talked about. If one's brain cells (neurons) and the links between them (synapses) are overly active in the day, but do not get enough rest and refresh time, "brain waste" may accumulate in greater amounts.

How well you snooze is as important as how much

According to Dr. Ramos, the quality of your sleep is equally critical to the quantity.

"Animals and humans need to go through the complete cycle of sleep stages for maximum benefit," he says. "Delta sleep, or slow wave sleep, happens in the deep sleep stage. It occurs after the first two stages of sleep, and before the REM (dreaming) stage of sleep. This is when the cerebral spinal fluid moves out of brain, and when the synapses are more quiet.

Beware of sleep medications

Not able to fall asleep easily? A sleep medication may help in the short term, but it also could worsen problems for you.

Dr. Ramos says that some sleep medications, when used sparingly under a doctor's supervision, can play a role helping some people fall or stay asleep. However, chronic use of such drugs can be detrimental for several reasons.

"Even when someone is enabled to spend six or seven hours asleep aided by a sleeping pill, we know that these meds for the most part do not provide a quality sleep," he says. "You are likely staying in a lighter stage of sleep, instead of getting

the restorative health benefits of deeper sleep. Some studies even suggest that the chronic use of sleep medications and/or sedatives may put an individual at a greater risk for developing early dementia.”

Additionally, in April 2019, the U.S. Food and Drug Administration began requiring boxed warning labels for many popular prescription insomnia medications. The decision was in response to documented “rare but serious injuries” (including deaths) attributed to behaviors caused by the medications. The “complex sleep behaviors” noted included sleepwalking and sleep driving.

Overall, the message is clear: healthy, adequate sleep matters in a big way.

Need help for a sleep problem, feel tired, have memory problems, or snore loudly? Let us help you detox your brain. Visit the UHealth Sleep Medicine Center online today to schedule an appointment, or call 305-243-3100.

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