

PRINT-New Research suggests poor sleep could damage the brain

A new study linking disrupted sleep patterns to changes in brain regions associated with Alzheimer's disease is renewing attention about the importance of healthy sleep habits.

Research published in [the Journal of the Alzheimer's Association](#) suggests that fragmented circadian rhythms, irregular sleep and wake cycles, may be linked to shrinkage in areas of the brain tied to memory and cognition. While experts caution that the findings are still preliminary, they say the study adds to growing evidence that poor sleep can have serious long-term health consequences.

"So it's not a direct linkage that says, you know, if you have fragmented sleep, or if you sleep too much during the day, that you're obviously going to get dementia," says Bradley Gleason, MD, internal clinical director, OSF Sleep Lab in Peoria, Illinois. "But the linkage is strong enough, and it points to needing more studies and more data down the road that there could be a significant link so obviously it's very important to clean up your sleep disorders so that the risk of dementia and Alzheimer's potentially is lowered."

Researchers have long known that sleep affects multiple systems throughout the body, including cardiovascular health, immune function and mental performance. The latest findings raise concerns that chronic sleep disruption could also contribute to neurodegenerative diseases over time.

Don't ignore sleep issues

Dr. Gleason says many people still underestimate the importance of sleep, often delaying treatment for sleep disorders such as insomnia or obstructive sleep apnea.

"We have lots of other data about cardiovascular health and high blood pressure and stroke and all that we know is linked to poor quality sleep and not getting enough sleep," Dr. Gleason shares. "So absolutely, yeah, you want to take this seriously. I'm obviously biased but we want to attack your sleep problems head on as early as we can."

The growing role of wearable devices such as smart watches and sleep trackers in monitoring sleep habits can be helpful. But Dr. Gleason stresses that while those tools can provide useful information, they are not always reliable enough to replace formal sleep evaluations.

At the study's conclusion, researchers found that participants with more consistent daily sleep-wake patterns had larger volumes in the memory-associated brain areas – the hippocampus and parahippocampus – and less shrinkage of the amygdala, a region vital to emotional processing.

When sleep is fragmented, the body becomes stressed according to Dr. Gleason.

Bad sleep impacts your immune system

"So you're not sleeping well and therefore you're going to have the immune-related ways your body kind of fixes itself is not happening and so your cells are dying off and that could lead to some of the study results that now you're getting atrophy is some of those important brain areas. So that's what I would say 'I need to try to fix why are you having these troubles so we can address it now.'"

According to Dr. Gleason, future research will be needed to determine whether poor sleep directly contributes to dementia risk or whether early brain changes themselves disrupt sleep. In the meantime, the message is straightforward: addressing sleep problems early may help protect long-term health.

“There is a link potentially between poor quality sleep and potentially long-term bad outcomes, including memory problems and/or Alzheimer’s disease. It just points to the importance of sleep quality now to avoid those problems later.”

Here are some tips for getting good sleep to potentially help brain health as you age:

- Waking up at about the same time every day
- Getting bright light exposure in the morning
- Staying physically active during the day
- Keeping meals and bedtime consistent
- Limiting long or late naps
- Avoiding caffeine or alcohol too close to bedtime

If you are having trouble getting to sleep or staying asleep, start by talking to your [primary care provider](#). They might also refer you to a sleep specialist at an [OSF Sleep Clinic](#).