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A common sleeping pill may reduce buildup of Alzheimer's proteins

Assignment Summary:

Recent research suggests that suvorexant, a common sleeping pill, may reduce the buildup of proteins related to Alzheimer's, such as beta-amyloid and tau, which contribute to cognitive decline. Although the results are promising, further study is needed to understand the long-term effects. This finding highlights the importance of sleep for brain health.

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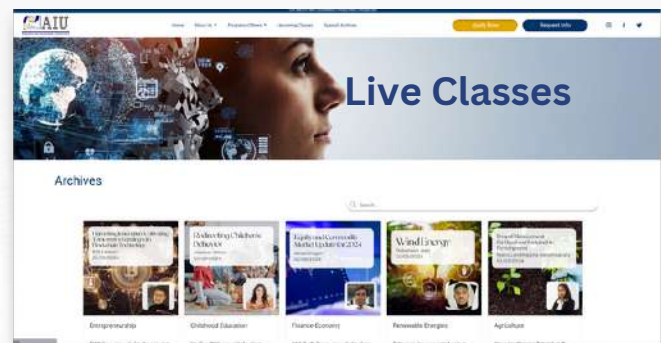
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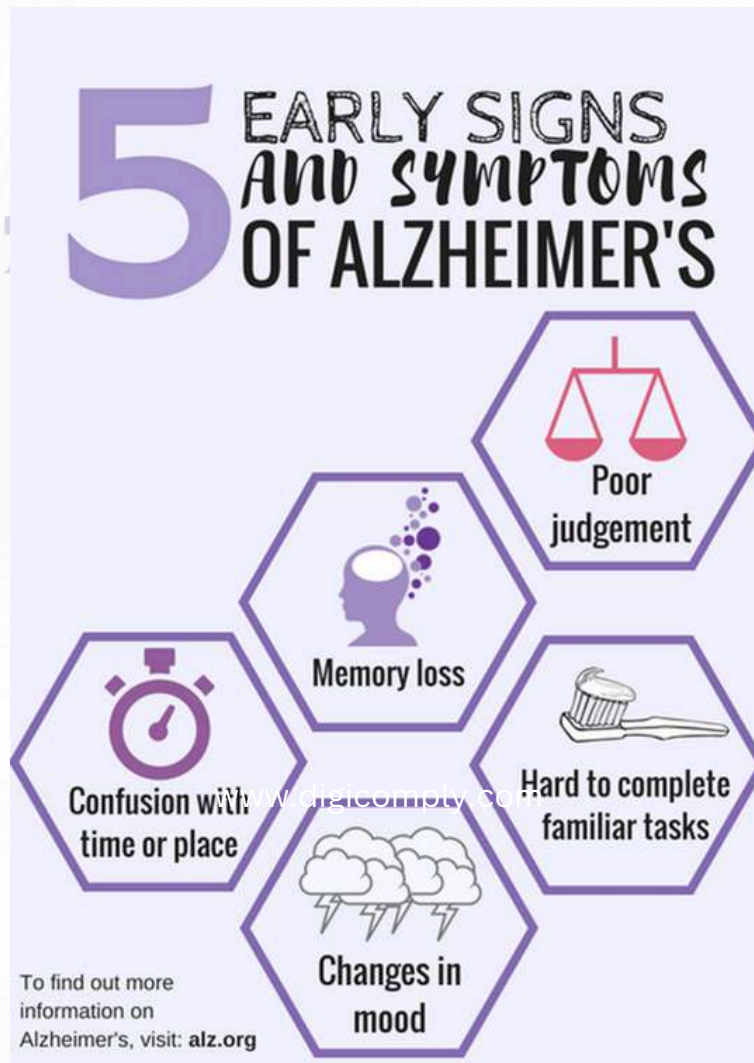


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A common sleeping pill may reduce buildup of Alzheimer's proteins

Alzheimer's disease remains one of the most challenging neurodegenerative diseases to study and treat. Despite decades of research, a cure or effective prevention method has yet to be found, leaving researchers and medical professionals grappling with new ways to understand and address this complex condition. One emerging area of study that has garnered attention is the connection between sleep and Alzheimer's disease, particularly how sleep quality impacts the buildup of toxic proteins in the brain associated with the disease. A recent study has shed light on how a common sleeping pill might reduce the buildup of these proteins, providing a promising avenue for further research and raising new questions about the role of sleep in brain health.



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Understanding the Link Between Sleep and Alzheimer's Disease

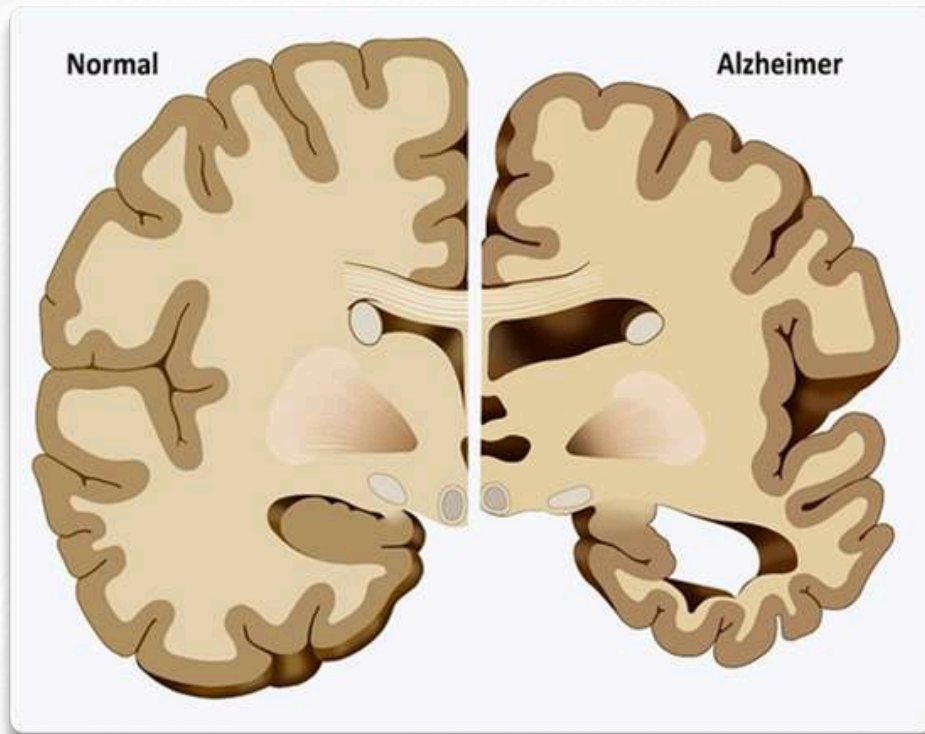
In a study conducted in 2023 by researchers from Washington University in St. Louis, a sleeping pill known as suvorexant, commonly prescribed for insomnia, was tested to observe its effects on the buildup of two proteins strongly linked to Alzheimer's: amyloid-beta and tau. These proteins are notorious for forming plaques and tangles in the brain, respectively, which interfere with cell function and ultimately contribute to cognitive decline.

What makes this study particularly significant is its focus on the relationship between sleep and brain health. Previous research has established that poor sleep can exacerbate the buildup of amyloid-beta, with just one night of disrupted sleep potentially causing a spike in amyloid levels. The body's natural cleansing system, called the glymphatic system, works during sleep to clear out waste products from the brain, including amyloid-beta and tau proteins. When sleep is compromised, this cleansing process is less effective, leading to a greater risk of toxic protein buildup over time.

Atlantic International University

In the Washington University study, 38 healthy middle-aged participants without cognitive impairments were observed over a period of two nights. They were given either suvorexant or a placebo, and researchers collected cerebrospinal fluid samples to measure changes in amyloid-beta and tau levels. The results were promising: those who took suvorexant experienced a 10-20% reduction in amyloid-beta levels, and the higher dose of the drug temporarily reduced levels of hyperphosphorylated tau, a form of tau associated with cell death.

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www.alzheimernavarra.com

The Potential Role of Sleeping Pills in Alzheimer's Prevention

While the findings of this study are encouraging, they also come with caution. The effect of suvorexant on protein levels was short-lived, with tau concentrations rebounding within 24 hours. Furthermore, the study only spanned two nights and included a small group of participants, which means the results cannot yet be generalized to broader populations or used as the basis for long-term treatment recommendations.

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Additionally, sleep aids like suvorexant may not always induce the kind of deep, slow-wave sleep that is most beneficial for brain health. Research has shown that slow-wave sleep, the deepest stage of sleep, is particularly important for clearing toxins from the brain. While suvorexant appears to help reduce amyloid and tau levels in the short term, its long-term effects on sleep quality and cognitive function are still unclear. As neurologist Brendan Lucey, the study's lead author, cautions, "it would be premature for people who are worried about developing Alzheimer's to interpret it as a reason to start taking suvorexant every night."

This study, however, contributes to a growing body of evidence linking sleep disturbances with Alzheimer's disease. As Alzheimer's continues to defy conventional treatments, researchers are increasingly interested in lifestyle factors—such as sleep—that may play a preventative role.

The Broader Implications of Sleep and Brain Health

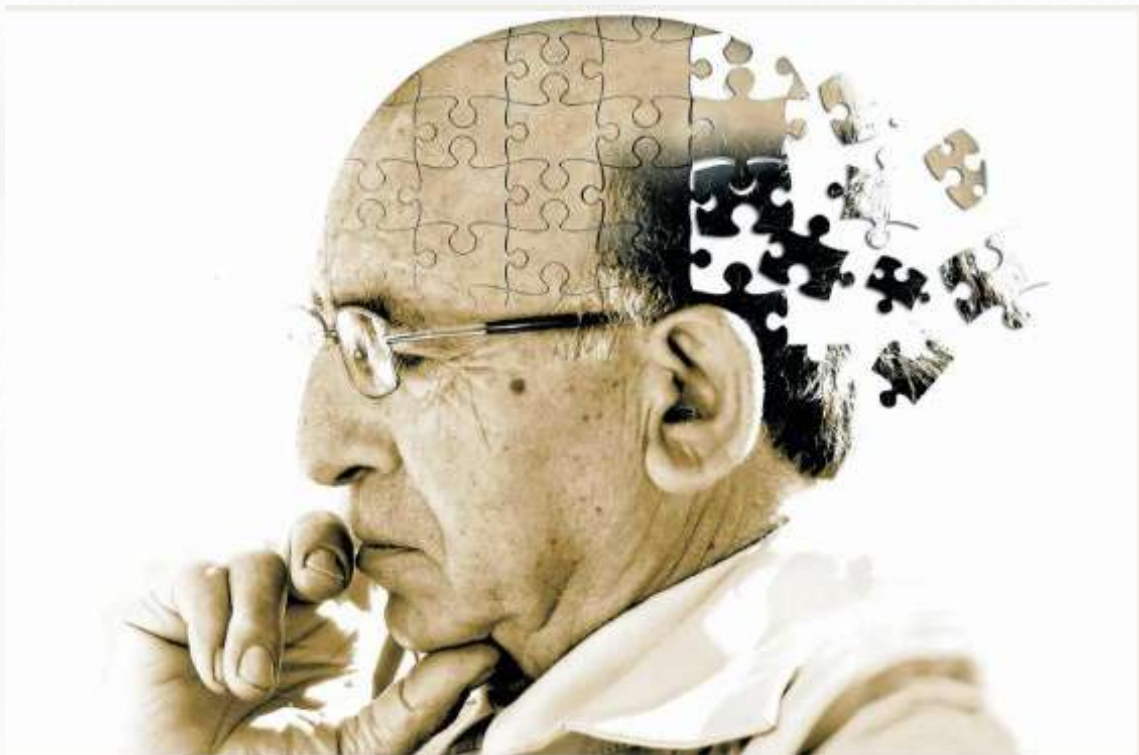
Atlantic International University

This new research is part of a larger conversation about the role of sleep in overall brain health. Chronic sleep deprivation has been linked to a wide range of cognitive issues, including memory loss, reduced concentration, and impaired problem-solving abilities, which are all common symptoms of Alzheimer's. Improving sleep hygiene, therefore, might be one of the simplest and most effective ways to support long-term brain health.

Good sleep hygiene practices include maintaining a consistent sleep schedule, avoiding stimulants like caffeine close to bedtime, and creating a restful sleep environment. For those experiencing more serious sleep disorders, such as sleep apnea, seeking treatment could also be crucial. Sleep apnea, a condition in which breathing stops and starts repeatedly during sleep, has been linked to an increased risk of cognitive decline and Alzheimer's disease.

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Researchers remain hopeful that future studies will build on these findings to develop drugs or treatments that target the link between sleep and Alzheimer's. Lucey, for one, is optimistic: "I'm hopeful that we will eventually develop drugs that take advantage of the link between sleep and Alzheimer's to prevent cognitive decline. But we're not quite there yet."



Alzheimer's Research: New Directions and Challenges

Despite the promise shown by this study, the role of amyloid-beta and tau proteins in Alzheimer's disease remains under scrutiny. For decades, the prevailing hypothesis has been that the buildup of these proteins is a primary cause of Alzheimer's, but recent research has called this into question. While many treatments have been developed to reduce amyloid-beta levels, few have translated into effective therapies for preventing or slowing the progression of the disease.

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This has prompted a rethinking of how Alzheimer's disease develops. Some researchers suggest that the protein buildup may be a symptom, rather than a cause, of the neurodegenerative process, and that other factors—such as inflammation, immune responses, and metabolic dysfunction—might play a larger role in the disease's onset and progression.

Nevertheless, the link between poor sleep and Alzheimer's remains one of the most promising areas of research. By better understanding how sleep impacts the brain's ability to clear harmful proteins, scientists may be able to develop new interventions that could slow or even prevent cognitive decline.

Exploring the Connection Between Sleep and Cognitive Health

The findings from the [Washington University study](#) underscore the importance of sleep for brain health and open up new avenues for Alzheimer's prevention research. While more research is needed to fully understand the role of sleep aids like suvorexant, it is clear that prioritizing good sleep habits is a vital part of maintaining cognitive function and preventing neurological diseases like Alzheimer's.

For students and professionals interested in contributing to this field of study, exploring topics such as neuroscience, cognitive health, and sleep science could lead to significant breakthroughs in understanding and addressing Alzheimer's disease. At AIU, our [flexible programs](#) allow you to dive deeper into these areas, empowering you to create a vision for your future that contributes to the common good. Start your journey today and be part of the next generation of researchers and innovators shaping the future of brain health.

Also, you can learn more about this topic in AIU's, wide range of [recorded classes](#) that cover various subjects of interest and that can be very useful to expand your knowledge. If this topic interests you, you can explore related live classes. Our extensive [online library](#) is also home to a wealth of knowledge, comprised of miles of e-books, serving as a valuable supplemental resource.

A common sleeping pill may reduce buildup of Alzheimer's proteins

Below we share a series of resources that will help you expand your knowledge on this topic:

[A Common Sleeping Pill May Reduce Buildup of Alzheimer's Proteins, Study Finds](#)

[Insomnia drug may lower levels of Alzheimer's proteins](#)

[Two decades of research on the role of diet in Alzheimer's disease \(2003–2023\): a bibliometric and visual analysis based on CiteSpace.](#)

[Suvorexant Acutely Decreases Tau Phosphorylation and AB in the Human CNS](#)

[The Sad Case of The Youngest Person Ever Diagnosed With Alzheimer's](#)

[What Is Alzheimer's Disease And Is There a Way to Treat It?](#)

[Alzheimer's Disease : Recent Findings in Pathophysiology, Diagnostic and Therapeutic Modalities](#)

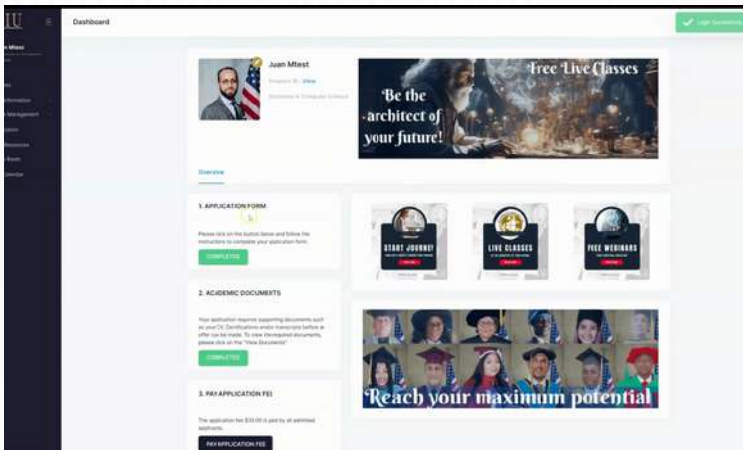
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