



Simple Daily Habit to Reduce Alzheimer's Symptoms

Description

Deep sleep appears to play a pivotal role in mitigating the gradual deterioration of cognitive health, a phenomenon potentially precursory to Alzheimer's disease, the predominant form of dementia. In a seminal 2023 investigation involving 62 older adults with intact cognitive function, researchers from the University of California, Berkeley, Stanford University, and UC Irvine discerned that individuals exhibiting brain alterations characteristic of Alzheimer's demonstrated enhanced performance on memory assessments commensurate with increased deep sleep duration.

This correlation persisted regardless of educational attainment and physical activity—two factors alongside social engagement known to bolster cognitive resilience in the elderly.

Conversely, those exhibiting analogous Alzheimer's-related cerebral changes who failed to accrue sufficient deep sleep did not perform as well on these cognitive evaluations. In contrast, sleep patterns exerted negligible influence on individuals possessing minimal amyloid deposits.

Taken collectively, the findings, disseminated in May 2023, suggest that an ample amount of restorative sleep may be instrumental in counteracting the cognitive decline that surfaces as dementia begins to manifest.

“Consider deep sleep as a buoyancy aid—propping up memory while offsetting the deleterious effects of Alzheimer's pathology,” articulated Matthew Walker, a neuroscientist at UC Berkeley. “This is particularly thrilling as we can actively improve sleep quality, even in older populations.”

Echoing previous studies, this research noted that amyloid-beta accumulation in the brains of those with sleep disturbances correlates with cognitive impairment. Despite poor sleep being both a symptom and a risk factor for Alzheimer's, disentangling the causative mechanisms remains a complex endeavor. Notably, elevated levels of amyloid-beta, alongside tau proteins, can infiltrate brain cells decades prior to symptomatic emergence.

Walker's earlier research indicated that significant amyloid-beta levels disrupt deep sleep—particularly non-rapid eye movement slow wave sleep—thereby impairing memory function.

Some individuals seem to defy the cognitive decline associated with Alzheimer's despite high amyloid-beta levels. To elucidate this resilience, Walker and his team monitored participants' brainwave activity during sleep and subsequently administered memory tests. Strikingly, within cohorts possessing similar amyloid-beta burden, deeper sleep was decisively linked to improved cognitive performance.

Longitudinal studies are warranted to ascertain whether sustained enhancements in deep sleep can effectively preserve cognitive faculties amidst rising amyloid levels over time. This research reinforces the notion that sleep is a modifiable risk factor for Alzheimer's disease, positing that quality sleep may furnish the brain with the necessary respite to cleanse cellular waste accumulated throughout the day.

“Even in the presence of significant brain pathology, cognitive symptoms are not an inevitable outcome,”



surmised Zsófia Zavecz, lead author from UC Berkeley. Lifestyle factors, particularly the quality of sleep, can mitigate these impacts.

Despite the study's limited scale, it suggests that natural sleep may offer superior benefits compared to pharmacological interventions, given the potential adverse effects of sleeping pills, which might induce superficial sleep rather than the restorative deep sleep phases.

To optimize one's sleep hygiene, Zavecz recommends minimizing late-afternoon caffeine intake, engaging in regular physical activity, eschewing screen exposure in the evening, and indulging in a warm shower before bedtime.

As researchers diligently unravel the intricacies of Alzheimer's disease—a condition that imperils millions globally—the urgency for effective sleep strategies becomes increasingly apparent.

The study has been published in [BMC Medicine](#).

This article initially appeared in May 2023.

Vocabulary List:

1. **Deterioration** /dɪˌtɪə.ri.ə'reɪ.jən/ (noun): The process of becoming progressively worse.
2. **Resilience** /rɪ'zɪl.jəns/ (noun): The capacity to recover quickly from difficulties; toughness.
3. **Correlation** /ˌkɔːrə'leɪʃən/ (noun): A mutual relationship or connection between two or more things.
4. **Pathology** /pə'thɒl.ə.dʒi/ (noun): The study of diseases and their causes processes development and consequences.
5. **Cognitive** /'kɒɡ.nɪ.tɪv/ (adjective): Relating to the mental processes of perception memory judgment and reasoning.
6. **Pharmacological** /ˌfɑː.mə.kə'lɒdʒ.ɪ.kəl/ (adjective): Relating to the branch of medicine that deals with the uses effects and modes of action of drugs.

Comprehension Questions

Multiple Choice

1. Which disease is mentioned as a potential precursor to Alzheimer's in the text?

Option: Parkinson's disease

Option: Dementia

Option: Sleep apnea

Option: Hypertension



2. What aspect of cognitive health does deep sleep help mitigate?

- Option: Enhancing brain function
- Option: Counteracting cognitive decline
- Option: Promoting physical strength
- Option: Boosting creativity

3. According to the text, what did individuals with brain alterations characteristic of Alzheimer's demonstrate?

- Option: Decreased cognitive function
- Option: Enhanced memory performance
- Option: Increased physical activity
- Option: Reduced deep sleep duration

4. What is mentioned as a factor alongside social engagement that bolsters cognitive resilience in the elderly?

- Option: Educational attainment
- Option: Physical activity
- Option: Depression
- Option: Genetic predisposition

5. What did Walker's research indicate disrupts deep sleep and impairs memory function?

- Option: High levels of caffeine intake
- Option: Significant amyloid-beta levels
- Option: Daily exercise
- Option: Sufficient social interaction

6. What lifestyle factor does Zsófia Zavecz mention as being able to mitigate the impacts of brain pathology?

- Option: Healthy diet
- Option: Quality sleep
- Option: Morning meditation
- Option: Regular medication

True-False

7. Sleep patterns had a negligible influence on individuals with minimal amyloid deposits.

8. Rising amyloid levels over time can effectively preserve cognitive faculties.



-
9. Zsófia Zavecz recommends late-afternoon caffeine intake as a way to optimize sleep hygiene.
10. The study suggests that pharmacological interventions offer superior benefits compared to natural sleep.
11. Quality sleep is posited as a modifiable risk factor for Alzheimer's disease.
12. Sleep disturbances are not correlated with cognitive impairment.

Gap-Fill

13. According to the text, in contrast to individuals with sleep disturbances, individuals with minimal amyloid deposits displayed _____ influence from sleep patterns.
14. Zsófia Zavecz recommends minimizing late-afternoon caffeine intake, engaging in regular physical activity, eschewing screen exposure in the evening, and indulging in _____ before bedtime to optimize sleep hygiene.
15. The urgency for effective sleep strategies becomes increasingly apparent as researchers unravel the intricacies of _____ disease.
16. Despite the study's limited scale, it suggests that natural sleep may offer _____ benefits compared to pharmacological interventions.
17. Quality sleep is proposed as furnishing the brain with the necessary respite to cleanse cellular waste accumulated throughout the _____.
18. Longitudinal studies are warranted to ascertain whether sustained enhancements in deep sleep can effectively preserve cognitive faculties amidst rising amyloid levels over _____.

Answer

Multiple Choice: 1. Dementia 2. Counteracting cognitive decline 3. Enhanced memory performance
4. Social engagement



5. Significant amyloid-beta levels 6. Quality sleep

True-False: 7. True 8. False 9. False 10. False 11. True 12. False

Gap-Fill: 13. negligible 14. a warm shower 15. Alzheimer's 16. superior 17. day 18. time

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Which term refers to the ability of a treatment to provide a beneficial effect?

Option: Efficacy

Option: Misleading

Option: Skepticism

Option: Correlation

2. Which term is used to describe the study of diseases?

Option: Profound

Option: Cognitive

Option: Pathology

Option: Hypothesis

3. Which term refers to a division or contrast between two things that are represented as being opposed or entirely different?

Option: Skepticism

Option: Dichotomy

Option: Desiccated

Option: Resilience

4. Which term is related to the processes of thought and understanding?

Option: Pharmacological

Option: Cognitive

Option: Ecclesiastical

Option: Subterranean

5. Which term refers to urgent needs or demands?

Option: Hypothesis

Option: Ecclesiastical

Option: Exigencies

Option: Corpus

6. Which term refers to a collection of written texts especially the entire works of a particular author or a body of writing on a particular subject?



- Option: Prohibition
- Option: Correlation
- Option: Interventions
- Option: Corpus

7. Which term describes something that is short-lived or lasts for a very brief time?

- Option: Deterioration
- Option: Transmutes
- Option: Ephemeral
- Option: Illusive

8. Which term refers to a proposed explanation made on the basis of limited evidence as a starting point for further investigation?

- Option: Hypothesis
- Option: Profound
- Option: Cannibalism
- Option: Cherenkov

9. Which term refers to the act of one individual of a species consuming all or part of another individual of the same species?

- Option: Cannibalism
- Option: Remnants
- Option: Ecclesiastical
- Option: Cherenkov

10. Which term relates to the treatment or healing of a disease or disorder?

- Option: Desiccated
- Option: Therapeutic
- Option: Interventions
- Option: Exigencies

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. _____ effects of the medication were observed during the clinical trial.

12. _____ may lead to unnecessary medical interventions.

13. Her _____ and determination helped her overcome the challenges.

14. The speaker's words had a _____ impact on the audience.



15. Archaeologists uncovered ancient pottery _____ at the site.
16. The professor _____ the complex theory in a simple manner.
17. The garden was in full bloom displaying a _____ of colorful flowers.
18. The blue glow observed in the nuclear reactor is due to _____ radiation.
19. The mirage created an _____ appearance of water in the desert.
20. The advertisement was considered _____ as it did not accurately represent the product.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Medical procedures or strategies carried out to improve health outcomes.
22. Doubt or questioning regarding the validity or truth of something.
23. Dried out dehydrated or lacking vitality.
24. Relating to the study or use of drugs in treating diseases.
25. Existing or occurring beneath the surface of the earth.
26. A statistical measure indicating the extent to which two or more variables fluctuate together.
27. The process of becoming progressively worse or less valuable.
28. Relating to the Christian Church or its clergy.
29. This statistical technique determines the degree of relationship between two variables.
30. The team explored the depths of the cave system.

Answer

Multiple Choice: 1. Efficacy 2. Pathology 3. Dichotomy 4. Cognitive 5. Exigencies 6. Corpus 7. Ephemeral 8. Hypothesis 9. Cannibalism 10. Therapeutic

Gap-Fill: 11. Adverse 12. Overdiagnosis 13. Resilience 14. Profound 15. Remnants 16. Elucidated 17. Profusion



18. Cherenkov 19. Illusive 20. Misleading

Matching sentence: 1. Interventions 2. Skepticism 3. Desiccated 4. Pharmacological 5. Subterranean
6. Correlation 7. Deterioration 8. Ecclesiastical 9. Correlation 10. Subterranean

CATEGORY

1. Health - LEVEL6

Date Created

2025/02/27

Author

aimeeyoung99

ESL-NEWS.COM