

Boost Sleep Quality with a High-Protein, High-Fiber Diet

Description

The intricate relationship between sleep and dietary habits continues to be a focal point of scientific inquiry, with a recent study illuminating specific correlations between various food types—particularly those abundant in fiber and fats—and sleep quality.

Conducted by researchers at the University of Tsukuba in Japan, this study analyzed data from 4,825 individuals utilizing mobile applications for meticulous tracking of both sleep patterns and dietary intake. The researchers meticulously cross-referenced these statistics while factoring in potential variations attributable to age, sex, and [BMI](#).

The researchers elucidate: “Increased total energy, fat, and sodium consumption correlated with diminished total sleep duration, whereas enhanced intakes of protein and dietary fiber were associated with prolonged sleep duration,” as detailed in their published findings.

Nutrients Diet Sleep

Analysis of macronutrients and dietary components on sleep variables, including total sleep duration, latency, and nocturnal awakenings. (Seol et al., *Journal of Medical Internet Research*, 2025)

Moreover, individuals whose diets were richer in fiber exhibited tendencies towards quicker sleep onset and reduced nighttime awakenings, a trend corroborated by prior investigations. While the differences in sleep duration may not be monumental—those with the highest protein consumption averaged a mere 15 additional minutes of sleep per night—these outcomes present valuable insights for optimizing dietary practices to enhance sleep quality.

The researchers propose that a multitude of factors may influence these outcomes. Previous studies suggest that higher protein consumption may stimulate the production of neurotransmitters such as melatonin and serotonin, which play pivotal roles in sleep regulation.

Furthermore, dietary fiber may positively influence gut microbiota, which in turn is believed to affect the synthesis of these crucial sleep-regulating chemicals. A more balanced gut microbiome has been associated with improved sleep health, and vice versa.

“Recent investigations have indicated that alterations in gut microbiota may modulate both sleep quality and nutrient absorption,” the researchers assert.

It is imperative to note that the study relied on self-reported data, which inherently limits the establishment of direct causative links, given the multitude of variables—including meal timing and physical activity—that remain unaccounted for.



Sleep chart

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The researchers charted the balance of nutritional intake against sleep duration and quality metrics. (Seol et al., *Journal of Medical Internet Research*, 2025)

Individuals who engage in tracking their dietary and sleep habits may possess a heightened interest in health, prompting the researchers to advocate for further studies encompassing a more diverse participant pool.

For those seeking to improve sleep quality, the findings offer promising avenues for exploration, reinforcing the notion that simple dietary enhancements—such as increasing protein and fiber intake—may yield substantial benefits for sleep.

“The interplay between dietary choices and sleep is reciprocal; the consumption of nutritionally sound foods correlates with enhanced sleep quality, whereas diets rich in processed foods and added sugars are detrimental,” the researchers conclude. The study's findings have been published in the [Journal of Medical Internet Research](#).

Vocabulary List:

1. **Intricate** /'ɪn.trɪ.kət/ (adjective): Very detailed and complex.
2. **Correlations** /,kɔː.rə'leɪ.ʃənz/ (noun): Mutual relationships or connections between two or more things.
3. **Elucidate** /ɪ'luː.sɪ.deɪt/ (verb): To make something clear or easy to understand.
4. **Prolonged** /prə'lɔːŋd/ (adjective): Extended or made longer in time.
5. **Causative** /'kɔː.zə.tɪv/ (adjective): Causing or producing an effect or result.



6. **Nutritional** /nju:'trɪf.ən.əl/ (adjective): Relating to the process of providing or obtaining the food necessary for health and growth.

Comprehension Questions

Multiple Choice

1. According to the study, which type of food consumption correlated with diminished total sleep duration?
Option: A. Fiber
Option: B. Sodium
Option: C. Protein
Option: D. Fats
2. What did individuals with diets richer in fiber exhibit tendencies towards?
Option: A. Increased sleep duration
Option: B. Quicker sleep onset
Option: C. Increased nighttime awakenings
Option: D. None of the above
3. Which crucial sleep-regulating chemicals may be affected by gut microbiota according to the study?
Option: A. Melatonin and Vitamin D
Option: B. Serotonin and Protein
Option: C. Melatonin and Serotonin
Option: D. Vitamin C and Calcium
4. What is associated with improved sleep health according to the study?
Option: A. High sugar intake
Option: B. Balanced gut microbiome
Option: C. Low fiber intake
Option: D. Processed food consumption
5. What did the researchers suggest may influence outcomes in the study?
Option: A. Climate change
Option: B. Body temperature
Option: C. Multiple factors
Option: D. Meal sizes



6. What did the study find to be detrimental to sleep quality?

- Option: A. Fiber intake
- Option: B. Protein consumption
- Option: C. Processed food and added sugars
- Option: D. High sodium intake

True-False

- 7. Increased fat consumption was associated with prolonged sleep duration according to the study.
- 8. The study relied on objective data rather than self-reported data.
- 9. The researchers advocate for further studies encompassing a less diverse participant pool.
- 10. Dietary fiber positively influences gut microbiota according to the study.
- 11. The interplay between dietary choices and sleep is unidirectional.
- 12. Simple dietary enhancements have no substantial benefits for sleep according to the study.

Gap-Fill

- 14. Individuals with the highest protein consumption averaged a mere _____ additional minutes of sleep per night.
- 15. Balanced gut microbiome has been associated with improved sleep health, and _____ versa.
- 16. A more balanced gut microbiome is believed to affect the synthesis of crucial sleep-regulating chemicals like melatonin and _____.
- 17. The consumption of nutritionally sound foods correlates with enhanced sleep quality according to the _____.



Answer

Multiple Choice: 1. B. Sodium 2. B. Quicker sleep onset 3. C. Melatonin and Serotonin 4. B. Balanced gut microbiome 5. C. Multiple factors 6. C. Processed food and added sugars

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

Gap-Fill: 14. 15 15. vice 16. serotonin 17. researchers

Vocabulary quizzes

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

1. Which term best describes someone who takes bold risks?

Option: Audacious

Option: Cerebral

Option: Propensity

Option: Decimate

2. Which term is related to the nerves or nervous system?

Option: Propensity

Option: Neuronal

Option: Sustenance

Option: Inhibit

3. Which term refers to something caused by or related to a disease?

Option: Nuanced

Option: Ecological

Option: Metabolic

Option: Pathological

4. Which term means a natural tendency to behave in a particular way?

Option: Circumspect

Option: Explicate

Option: Propensity

Option: Bioenergetic

5. Which term describes something innovative or pioneering?



- Option: Decimate
- Option: Inhibit
- Option: Causative
- Option: Groundbreaking

6. Which term relates to the study of the complete set of metabolites in a biological system?

- Option: Metabolomic
- Option: Correlations
- Option: Alterings
- Option: Prolonged

7. Which term refers to the reduction or exhaustion of something?

- Option: Sustenance
- Option: Depletion
- Option: Integration
- Option: Attenuate

8. Which term describes rapid multiplication or increase in numbers?

- Option: Proclivity
- Option: Bioenergetic
- Option: Proliferation
- Option: Nutritional

9. Which term refers to the brain's ability to reorganize itself?

- Option: Sustenance
- Option: Neuronal
- Option: Neuroplasticity
- Option: Inhibit

10. Which term relates to the intake of food for growth and health?

- Option: Metabolic
- Option: Bioenergetic
- Option: Ecological
- Option: Nutritional

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

11. The professor asked the students to _____ their theories in detail.

12. The use of sunglasses can help to _____ the intensity of sunlight.



13. Conservation efforts aim to protect the _____ balance of ecosystems.
14. The artist spent months working on the _____ details of the painting.
15. The expert was brought in to _____ the complex legal terms to the jury.
16. Climate change is _____ weather patterns around the world.
17. The company is working on the _____ of new technology into their current systems.
18. Access to clean water is essential for the _____ of life.
19. The researchers are looking into the _____ factors behind the disease outbreak.
20. The study aims to analyze the _____ between diet and longevity.

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

21. The professor praised the student for their approach to problem-solving.
22. The athlete follows a strict diet to fuel their performance.
23. The actor delivered a performance that captured the subtle emotions of the character.
24. The patient experienced pain after the surgery.
25. His for risk-taking often led him into dangerous situations.
26. The study focused on the processes within the cells.
27. The film highlighted the impact of deforestation on wildlife.
28. The rapid of social media platforms has changed the way we communicate.
29. The doctor explained the processes that regulate energy production in the body.
30. The hurricane threatened to the entire crop yield of the region.

Answer

Multiple Choice: 1. Audacious 2. Neuronal 3. Pathological 4. Propensity 5. Groundbreaking 6. Metabolomic 7. Depletion



8. Proliferation 9. Neuroplasticity 10. Nutritional

Gap-Fill: 11. explicate 12. attenuate 13. ecological 14. intricate 15. elucidate 16. altering 17. integration
18. sustenance 19. causative 20. correlations

Matching sentence: 1. cerebral 2. bioenergetic 3. nuanced 4. prolonged 5. propensity 6. bioenergetic
7. ecological 8. proliferation 9. metabolic 10. decimate

CATEGORY

1. Health - LEVEL6

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