



Scientists at Johns Hopkins Discover Unexpected Brain Health Benefits

Description

A recent study conducted by researchers from Johns Hopkins Medicine and the National Institute on Aging revealed that both intermittent fasting and a standard healthy diet can enhance brain function in obese adults with insulin resistance. The study, which involved 40 older adults with obesity and insulin resistance, found that intermittent fasting showed slightly better cognitive improvements than the standard healthy diet recommended by the U.S. Department of Agriculture.

Participants were randomly assigned to follow either an intermittent fasting regimen or the USDA-approved healthy diet. Both dietary approaches led to improvements in brain function and metabolic health, with intermittent fasting showing more pronounced cognitive gains. The study, published in *Cell Metabolism*, focused on assessing the impact of the two diets on a wide panel of biomarkers related to brain health.

The findings suggest that both intermittent fasting and a standard healthy diet can be beneficial for individuals at risk of cognitive impairment and Alzheimer's disease. However, researchers caution that people interested in intermittent fasting should consult with a healthcare provider, as it may not be suitable for everyone, especially those with certain medical conditions.

Vocabulary List:

1. **Intermittent** /,ɪn.tə'mɪt.ənt/ (adjective): Occurring at irregular intervals; not continuous or steady.
2. **Cognitive** /'kɒɡ.nɪ.tɪv/ (adjective): Relating to the mental processes of perception memory judgment and reasoning.
3. **Metabolic** /,mɛt.ə'bɒl.ɪk/ (adjective): Relating to the chemical processes that occur within a living organism in order to maintain life.
4. **Biomarkers** /'baɪoʊ,mɑrkərs/ (noun): A measurable substance in an organism whose presence is indicative of some phenomenon such as disease infection or environmental exposure.
5. **Consult** /kən'sʌlt/ (verb): To seek information or advice from someone with expertise in a particular area.
6. **Impairment** /ɪm'pɛr.mənt/ (noun): The state of having a disability or dysfunction that hinders normal functioning.

Comprehension Questions

Multiple Choice



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1. What was the main focus of the study by researchers from Johns Hopkins Medicine and the National Institute on Aging?
 - Option: Effect of exercise on brain health
 - Option: Enhancing brain function in obese adults with insulin resistance
 - Option: Impact of sleep on cognitive abilities
 - Option: Nutritional benefits of fruits and vegetables
 2. How many adults participated in the study on intermittent fasting and a healthy diet?
 - Option: 20
 - Option: 50
 - Option: 40
 - Option: 30
 3. Which diet showed slightly better cognitive improvements in the study?
 - Option: Standard healthy diet from the USDA
 - Option: Intermittent fasting
 - Option: Ketogenic diet
 - Option: Vegetarian diet
 4. Where was the study on brain health and dietary approaches published?
 - Option: Nature Communications
 - Option: Cell Metabolism
 - Option: Journal of Clinical Nutrition
 - Option: Psychological Science
 5. Who should consult with a healthcare provider before trying intermittent fasting?
 - Option: Only individuals with obesity
 - Option: Everyone interested in fasting
 - Option: People with certain medical conditions
 - Option: Only the elderly
 6. What did the study findings suggest about intermittent fasting and brain health?
 - Option: Intermittent fasting has no impact on brain function
 - Option: Only a vegetarian diet is beneficial for brain health
 - Option: Both intermittent fasting and a healthy diet can be beneficial
 - Option: A ketogenic diet is the best for brain health

Answer

Multiple Choice: 1. Enhancing brain function in obese adults with insulin resistance 2. 40 3. Intermittent fasting 4. Cell Metabolism 5. People with certain medical conditions 6. Both intermittent fasting and a healthy diet can be beneficial



Vocabulary quizzes

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

1. Which disease is primarily transmitted by mosquitoes?
Option: Malaria
Option: Dengue
Option: Influenza
Option: Tuberculosis
2. Which medication is commonly used to treat type 2 diabetes?
Option: Aspirin
Option: Paracetamol
Option: Insulin
Option: Metformin
3. Which viral disease is typically transmitted through the bite of infected animals?
Option: Typhoid
Option: Mumps
Option: Rabies
Option: Hepatitis
4. Which system in the body is responsible for breathing and gas exchange?
Option: Digestive
Option: Respiratory
Option: Circulatory
Option: Nervous
5. What preventive measure involves administering vaccines to protect against diseases?
Option: Quarantining
Option: Isolating
Option: Vaccinating
Option: Filtering
6. What term is used to describe becoming infected with a disease?



- Option: Erase
- Option: Avoid
- Option: Catch
- Option: Evade

7. What is the verb that means to seek advice or information from someone?

- Option: Ignore
- Option: Consult
- Option: Dismiss
- Option: Refuse

8. Which type of impairment relates to mental processes such as thinking and memory?

- Option: Physical
- Option: Cognitive
- Option: Sensory
- Option: Emotional

9. What term describes making information or work available to the public?

- Option: Privatized
- Option: Restricted
- Option: Published
- Option: Concealed

10. Which term indicates something that is widespread or commonly found?

- Option: Rare
- Option: Scattered
- Option: Prevalent
- Option: Irregular

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

11. In the context of disease transmission a _____ is an organism that spreads the infection.

12. The patient displayed _____ symptoms that came and went periodically.

13. The _____ stores bile produced by the liver.

14. One of the early symptoms of the illness was a general feeling of _____ and



discomfort.

15. Despite treatment the symptoms _____ for several weeks.
16. The _____ enzymes aid in digestion and are produced in the pancreas.
17. The discovery of the new genetic mutation has significant _____ for future research.
18. It is important to take necessary _____ to prevent the spread of the infectious disease.
19. The hospital reported a rare medical _____ involving an unknown virus.
20. The patient was diagnosed with a _____ condition that required long-term management.
21. Researchers are studying potential _____ that could indicate the presence of the disease.

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

22. Continuous monitoring and alertness are necessary to prevent outbreaks of diseases.
23. The spread of infectious agents from person to person is known as this process.
24. Mosquitoes are a common example of this carrier of diseases.
25. Individuals who conduct systematic investigations to gain new knowledge and insights.
26. To be limited or restricted within a defined space or area.
27. The chemical processes within the body that convert food into energy.
28. To identify a particular illness or problem by examining its symptoms.
29. A medical professional who treats and cares for animals.
30. A condition or disease that persists over a long period of time.



31. A physical or mental limitation that affects a person's abilities.

Answer

Multiple Choice: 1. Dengue 2. Metformin 3. Rabies 4. Respiratory 5. Vaccinating 6. Catch 7. Consult 8. Cognitive 9. Published 10. Prevalent

Gap-Fill: 11. Vector 12. Intermittent 13. Gallbladder 14. Malaise 15. Persisted 16. Pancreatic 17. Implications 18. Precautions 19. Incident 20. Chronic 21. Biomarkers

Matching sentence: 1. Vigilance 2. Transmission 3. Vector 4. Researchers 5. Confined 6. Metabolic 7. Diagnosed 8. Veterinarian 9. Chronic 10. Impairment

CATEGORY

1. Health - LEVEL3

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