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## Creatine Shown to Improve Cognitive Function by Scientists

### Description

Creatine, a popular supplement used by athletes to improve physical performance, has been discovered to also enhance cognitive function during sleep deprivation. Researchers at Forschungszentrum Jülich conducted a study that found a high single dose of creatine temporarily improves processing capacity and short-term memory in individuals deprived of sleep. The study, published in *Scientific Reports*, warned against excessive creatine intake due to potential health risks but suggested potential cognitive enhancement with lower doses.

During the study, 15 participants were kept awake overnight and given a high single dose of creatine before performing cognitive tasks. The results showed a noticeable improvement in cognitive performance three hours after taking creatine, with the effects peaking after four hours and lasting up to nine hours. The researchers noted significant enhancements in processing capacity and short-term memory.

While creatine has been previously linked to improved cognitive performance, the study highlighted the short-term effects of creatine intake during sleep deprivation. Although high doses of creatine can strain the kidneys and pose health risks, future research may explore the cognitive benefits of lower doses. Overall, creatine shows promise as a potential tool for enhancing cognitive performance in challenging situations.

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### Vocabulary List:

1. **Creatine** // (noun): A popular supplement used by athletes to improve physical performance.
2. **Cognitive Function** // (noun): The mental processes associated with acquiring knowledge and understanding.
3. **Deprivation** // (noun): The lack or denial of something considered to be a necessity.
4. **Enhance** // (verb): To increase or improve the qualityvalueor extent of something.
5. **Capacity** // (noun): The maximum amount that something can contain or produce.
6. **Short-Term** // (adjective): Lasting for only a brief period.

### Vocabulary quizzes

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

1. Which term refers to the action of being unfaithful to a spouse or partner?

Option: Aggressiveness  
Option: Infidelity  
Option: Caregiver

Option: Deprivation

2. What condition is characterized by memory loss and decline in cognitive function?

Option: Alzheimer disease

Option: Menopause

Option: Premature

Option: Insomnia

3. Which protein is associated with the development of Alzheimer's disease?

Option: Intervention

Option: Proteins

Option: Amyloid-beta

Option: Enhance

4. What does it mean to be put in a situation where you are vulnerable to a risk or danger?

Option: Preventing

Option: Exposure

Option: Contagious

Option: Insomnia

5. What type of memory typically holds information for a brief period?

Option: Elevated

Option: Deprivation

Option: Short-Term

Option: Mortality

6. What term indicates that an official statement or order has been given?

Option: Caregiver

Option: Progression

Option: Issued

Option: Insufficiency

7. What feeling arises when one is envious or fearful of losing something or someone?

Option: Estrangement

Option: Jealousy

Option: Creatine

Option: Intervention

8. What measures are taken in advance to prevent something undesirable from happening?



Option: Enhance  
Option: Capacity  
Option: Precautions  
Option: Discovery

9. In what terms is the gradual development or advance of something described?

Option: Mortality  
Option: Proteins  
Option: Progression  
Option: Somatic

10. Who is responsible for providing assistance and support to someone in need?

Option: Alzheimer disease  
Option: Insomnia  
Option: Menopause  
Option: Caregiver

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

11. Taking certain supplements may help \_\_\_\_\_ cognitive function.

12. An \_\_\_\_\_ level of stress can negatively impact one's health.

13. \_\_\_\_\_ can lead to hormonal changes in a woman's body.

14. Regular exercise can improve your body's \_\_\_\_\_ to perform physical tasks.

15. Lack of sleep can result in sleep \_\_\_\_\_.

16. Medical \_\_\_\_\_ may be necessary to treat a severe health condition.

17. Some physical conditions may manifest as \_\_\_\_\_ symptoms.

18. The \_\_\_\_\_ of new treatments can revolutionize healthcare.

19. A diet rich in \_\_\_\_\_ is essential for muscle development.

20. Colds and flu are \_\_\_\_\_ illnesses that can easily spread.

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

21. His behavior towards others often caused conflicts.
22. The baby's birth presented challenges for the medical team.
23. Persistent can lead to fatigue and difficulty concentrating.
24. The government a warning about the approaching storm.
25. She felt vulnerable and after sharing her personal story.
26. Vaccination is key in the spread of infectious diseases.
27. The information can be easily through the online portal.
28. The study focused on factors that affect rates in the elderly population.
29. The project failed due to funding and lack of resources.
30. Early detection can lead to prompt and better treatment outcomes.

## Answer

**Multiple Choice:** 1. Infidelity 2. Alzheimer disease 3. Amyloid-beta 4. Exposure 5. Short-Term 6. Issued 7. Jealousy 8. Precautions 9. Progression 10. Caregiver

**Gap-Fill:** 11. Enhance 12. Elevated 13. Menopause 14. Capacity 15. Deprivation 16. Intervention 17. Somatic 18. Discovery 19. Proteins 20. Contagious

**Matching sentence:** 1. Aggressiveness 2. Premature 3. Insomnia 4. Issued 5. Exposed 6. Preventing 7. Accessed 8. Mortality 9. Insufficiency 10. Intervention

## CATEGORY

1. Health - LEVEL3

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### Author

aimeeyoung99