



The Impact of Heat on the Brain

Description

A **heat wave** in Boston during July 2016 gave Harvard researcher Jose Guillermo Cedeño Laurent a chance to study how heat affects young adults' thinking. He looked at university students living in **dorms** with and without **air-conditioning**. He found that students in rooms without air-conditioning did worse on tests during hot days.

Studies show that high temperatures affect our bodies and our **cognitive** functions. Even a small increase in temperature can make thinking harder. This is a problem for students taking exams in hot rooms. High temperatures can affect cognitive performance, making it hard to focus and think clearly.

Heat is also linked to more anger. People are more likely to be angry and act without thinking in hot places. The brain uses energy to keep the body cool, leaving less energy for cognitive functions. To stay sharp and in a good mood, it is important to stay cool and drink water to stay **hydrated**.

Vocabulary List

1. **Heat wave** /hi:t we?v/ (noun): A period of very hot weather.
2. **Air-conditioning** /?e?r k?n?d???n?/? (noun): A system that cools the air indoors.
3. **Dorms** /d??rmz/ (noun): Short for dormitories, buildings where students live.
4. **Cognitive** /?k??n?t?v/ (adjective): Related to thinking and understanding.
5. **Hydrated** /?ha?dre?t?d/ (adjective): Having enough water in the body.

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4. **Cognitive** /'kɒgnɪtɪv/ (adjective): Related to thinking and understanding.
5. **Hydrated** /haɪ'dreɪtɪd/ (adjective): Having enough water in the body.
6. **Performance** /pə'fɔ:rməns/ (noun): The manner in which someone or something functions operates or behaves.

Vocabulary quizzes

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



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1. Which type of food is highly processed and typically low in essential nutrients?
Option: Refined grains
Option: Whole grains
Option: Fruits
Option: Vegetables
 2. What type of substance helps protect cells from damage caused by free radicals?
Option: Antioxidant
Option: Carbohydrate
Option: Protein
Option: Fat
 3. Who is a scientist who studies the patterns causes and effects of health and disease conditions in defined populations?
Option: Epidemiologist
Option: Psychiatrist
Option: Cardiologist
Option: Endocrinologist
 4. What medical device delivers electrical stimulation to specific nerve sites in the body?
Option: Neurostimulator
Option: Pacemaker
Option: Insulin pump
Option: Oxygen concentrator
 5. Which process involves all the chemical reactions that occur in the body to maintain life?
Option: Metabolism
Option: Respiration
Option: Photosynthesis
Option: Digestion
 6. What term describes the state of having adequate water or fluid in the body?
Option: Hydrated
Option: Dehydrated
Option: Satiated
Option: Starved
 7. What is the body's response to injury or infection causing redness swelling pain or heat?
Option: Inflammation
Option: Circulation
Option: Lubrication
Option: Mobilization



8. Which carbohydrate is commonly found in foods such as potatoes rice and wheat?

- Option: Starch
- Option: Fiber
- Option: Sugar
- Option: Protein

9. Which term describes a medical device or material that is inserted into the body?

- Option: Implanted
- Option: External
- Option: Surface
- Option: Portable

10. What describes a person environment or action that provides encouragement or assistance to others?

- Option: Supportive
- Option: Oppressive
- Option: Critical
- Option: Indifferent

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

11. Consuming too many _____ may lead to health issues due to high levels of added sugars fats and salt.

12. A neurostimulator is used to manage a specific medical _____ by providing targeted stimulation.

13. Patients with inflammation may experience a range of _____ such as pain fever and swelling.

14. Cravings for unhealthy foods can be controlled by opting for nutrient-dense snacks over unhealthy _____.

15. During a _____ staying cool and hydrated is crucial to prevent heat-related illnesses.



16. Severe inflammation near the spinal cord can lead to temporary or permanent _____
in certain body parts.
17. Lack of a specific _____ may result in difficulty digesting certain types of
carbohydrates.
18. Regular physical activity can help build _____ to certain health conditions.
19. Individuals with implanted neurostimulators may experience fewer _____ associated
with their condition.
20. Sudden changes in cognitive function could be _____ and may require immediate
medical attention.

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

21. The campaign aimed to educate the public about the importance of making healthy food choices.
22. Improved infrastructure and policies can enhance the availability and quality of medical services in underserved areas.
23. The cognitive abilities of the elderly can be maintained through engaging activities and social interactions.
24. Regular exercise and stress management techniques contribute to overall well-being and mental health.
25. Many students opt to live in university dorms for the convenience and social aspects of communal living.
26. Athletes focus on nutrition and training to optimize their physical and mental performance during competitions.
27. The combination of symptoms observed in the patient indicated a rare genetic syndrome.
28. The neurologist recommended brain stimulation therapy to help alleviate chronic pain.



29. The surgeon successfully implanted the artificial heart valve during the open-heart surgery.

30. She found a supportive community online that helped her cope with the challenges of her medical condition.

Answer

Multiple Choice: 1. Refined grains 2. Antioxidant 3. Epidemiologist 4. Neurostimulator 5. Metabolism 6. Hydrated 7. Inflammation 8. Starch 9. Implanted 10. Supportive

Gap-Fill: 11. processed foods 12. condition 13. symptoms 14. cravings 15. heat wave 16. paralysis 17. enzyme 18. resistance 19. seizures 20. concerning

Matching sentence: 1. nutrition awareness 2. healthcare access 3. cognitive 4. well-being 5. dorms 6. performance 7. syndrome 8. stimulation 9. implanted 10. supportive

CATEGORY

1. Health - LEVEL2

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