



How Brain Networks Sustain Attention

Description

Scientists have studied deep focus in the brain. In other words, they wanted to know what happens in our brain when we concentrate hard on something. They used a special brain scan called fMRI to watch brain networks work.

They found that the brain networks change and move. This can affect how well a person pays attention.

The scientists saw a pattern that repeats about every 20 seconds in the brain networks during deep focus. They also found that two important parts of the brain work together during this process. These parts are called the fronto-parietal control network (FPCN) and the default mode network (DMN).

The FPCN becomes active when you're trying to carry out a task. The DMN, on the other hand, plays a role in deep thought. The results indicate that the ways these networks work can predict changes in how well a person can pay attention.

This research could help people learn to focus better. The Georgia Tech team hopes to further study these brain activities and better understand how to increase focus and attention. This is a step toward developing strategies to help people focus better, particularly during cognitive tasks.

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Vocabulary List:

1. **Focus** // (noun): Concentration or attention on a particular subject.
2. **Concentrate** // (verb): To direct one attention or mental effort towards a particular object or activity.
3. **Scan** // (noun): An image or diagram produced by electronically scanning a subject.
4. **Network** // (noun): A group of interconnected people or things.
5. **Predict** // (verb): To say or estimate that something will happen in the future.
6. **Cognitive** // (adjective): Relating to cognition the mental action or process of acquiring knowledge and understanding through thoughtexperienceand the senses.

Vocabulary quizzes

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

1. Which term refers to the act of directing attention and energy towards a specific task or goal?
Option: Network
Option: Cognitive
Option: Focus
Option: Failure
2. What neurodegenerative disease is characterized by memory loss and cognitive decline?
Option: Severe
Option: Alzheimer
Option: Diagnoses
Option: Crisis
3. Which term describes the act of adhering to rules or guidelines?
Option: Transparency
Option: Compliance
Option: Disclose
Option: Intervention
4. Which term means to encourage or incite a reaction or response?
Option: Severity
Option: Cravings
Option: Influence
Option: Stimulates



5. What term describes something that is related to the treatment or healing of a disorder?

- Option: Regulating
- Option: Therapeutic
- Option: Well-being
- Option: Failure

6. Which term refers to the mental effort or focus put into a particular task?

- Option: Failure
- Option: Connection
- Option: Cravings
- Option: Concentration

7. What term refers to the ability to forecast or foresee future events or outcomes?

- Option: Incidence
- Option: Prediction
- Option: Failure
- Option: Severe

8. Which term describes advice or suggestions given to others based on expertise?

- Option: Failure
- Option: Recommendation
- Option: Complications
- Option: Influence

9. What term means to examine or analyze systematically or thoroughly?

- Option: Alzheimer
- Option: Diagnoses
- Option: Scan
- Option: Renowned

10. Which term describes a system of interconnected people or things?

- Option: Compliant
- Option: Network
- Option: Discrepancies
- Option: Intervention

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

11. The patient experienced _____ complications following the surgery.

12. The project was deemed a _____ due to lack of proper planning.



13. The _____ of flu cases has increased significantly this year.
14. The company aims to maintain a high level of _____ in its operations.
15. She is a _____ scientist known for her groundbreaking research.
16. The government is required to _____ information about public spending.
17. Early _____ is crucial in preventing the spread of infectious diseases.
18. She experienced intense food _____ after starting her new diet.
19. Media advertisements can have a significant _____ on consumer behavior.
20. Regular exercise plays a key role in _____ blood sugar levels.

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

21. Studying in a quiet environment can enhance your ability to maintain during exams.
22. LinkedIn is a popular platform for professionals to expand their professional .
23. The product launch was a due to the lack of market research.
24. Education plays a crucial role in improving children's abilities.
25. The surgery was successful but post-operative arose.
26. Mindfulness meditation can have a positive impact on your overall .
27. Weather forecasters use various tools to upcoming weather patterns.
28. Music therapy is considered a approach to mental health treatment.
29. Doctors may lifestyle changes to manage certain health conditions.
30. The patient's condition deteriorated and reached a stage.

Answer

Multiple Choice: 1. Focus 2. Alzheimer 3. Compliance 4. Stimulates 5. Therapeutic 6. Concentration
7. Prediction



8. Recommendation 9. Scan 10. Network

Gap-Fill: 11. Severe 12. Failure 13. Incidence 14. Transparency 15. Renowned 16. Disclose 17. Intervention
18. Cravings 19. Influence 20. Regulating

Matching sentence: 1. Concentration 2. Network 3. Failure 4. Cognitive 5. Complications 6. Well-being 7.
Predict 8. Therapeutic 9. Recommend 10. Severe

CATEGORY

1. Health - LEVEL2

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