



# Social isolation results in decreased brain cell count and cognitive decline

## Description

A recent study published in the journal "Brain Structure and Function" reveals the harmful effects of social isolation on brain health. Conducted on mice, the research showed that isolation not only impairs social recognition but also leads to a decrease in brain cells. This emphasizes the importance of social interaction in early life for brain development and social cognition.

The study focused on the effects of social isolation shortly after weaning in male C57BL/6 mice. The isolated mice exhibited changes in brain structure and function compared to the group-housed mice, including reduced neurons and oligodendrocytes in vital brain regions. Although isolated mice initially showed no difference in social interest, they struggled with social recognition tests, indicating difficulty in distinguishing between familiar and new social contacts.

Despite the limitations of using animal models in psychological research, the study suggests new avenues for exploring the biological pathways affected by social isolation. Understanding these pathways could lead to early detection of mental health risks and the development of targeted treatments. Conducted by a team of researchers, this study sheds light on the impact of social isolation on brain health.

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## Vocabulary List:

1. **Isolation** // (noun): The state of being separated or alone.
2. **Recognition** // (noun): The ability to identify someone or something.
3. **Impairs** // (verb): Weaken or damage.
4. **Cognition** // (noun): Mental processes related to acquiring knowledge and understanding.
5. **Oligodendrocytes** // (noun): A type of glial cell that produces the myelin sheath in the central nervous system.
6. **Avenues** // (noun): In this context it means ways or possibilities for progress or development.

## Vocabulary quizzes

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

1. What is the term for being admitted to a hospital for medical treatment?  
Option: Surgery  
Option: Check-up  
Option: Hospitalization  
Option: Home care
2. What term refers to the mental action or process of acquiring knowledge and understanding?  
Option: Intuition  
Option: Cognition  
Option: Reaction  
Option: Sensation
3. What word describes the changing of the structure of a gene resulting in a variant form?  
Option: Evolution  
Option: Emphasis  
Option: Mutation  
Option: Adaptation
4. Which term is related to or concerning birds?  
Option: Aquatic  
Option: Reptilian  
Option: Mammalian  
Option: Avian



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5. Which nutrient is commonly found in seafood and is essential for brain health?  
Option: Vitamin D  
Option: Protein  
Option: Omega-3  
Option: Iron
6. What term describes the ability to produce a desired or intended result?  
Option: Probable  
Option: Functioning  
Option: Effective  
Option: Difficulty
7. Which word means to give special importance or prominence to something in speaking or writing?  
Option: Ignore  
Option: Downplay  
Option: Emphasize  
Option: Mimic
8. What term refers to the action or process of recognizing or being recognized?  
Option: Confusion  
Option: Denial  
Option: Recognition  
Option: Oblivion
9. Which term describes the state of being separated from other people or things?  
Option: Inclusion  
Option: Integration  
Option: Isolation  
Option: Cooperation
10. Which word means to eat drink or ingest?  
Option: Preserve  
Option: Discard  
Option: Consume  
Option: Neglect

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

11. Overcoming \_\_\_\_\_ in life can lead to personal growth and development.
12. The \_\_\_\_\_ nature of the virus led to widespread illness.



13. Addressing the economic \_\_\_\_\_ in society is essential for achieving equality.
14. A \_\_\_\_\_ area has a population of 10,000 to 50,000 people.
15. The baby was born \_\_\_\_\_ and required special care in the neonatal unit.
16. It is \_\_\_\_\_ to eat a balanced diet for overall health.
17. The team's performance was good but it was just \_\_\_\_\_ of winning the championship.
18. Vitamins and minerals are \_\_\_\_\_ for the body to function properly.
19. Lack of sleep \_\_\_\_\_ cognitive function and decision-making abilities.
20. Medical \_\_\_\_\_ are required to treat the patient's condition.

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

21. The student showed talent in mathematics far surpassing his peers.
22. The doctor the patient with a rare autoimmune disorder.
23. The marine biologist studied the behavior of species such as dolphins and whales.
24. are a type of brain cell that produce myelin protecting nerve fibers.
25. The rapid of the virus necessitated strict containment measures.
26. Exploring new career can lead to unexpected opportunities.
27. The research results showed potential for future applications in medicine.
28. His expertise in the field was widely by his colleagues.
29. The accident left him with an ability to walk unaided.
30. Excessive alcohol can have serious health consequences.



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## Answer

**Multiple Choice:** 1. Hospitalization 2. Cognition 3. Mutation 4. Avian 5. Omega-3 6. Effective 7. Emphasize  
8. Recognition 9. Isolation 10. Consume

**Gap-Fill:** 11. Challenges 12. Pathogenic 13. Disparities 14. Micropolitan 15. Premature 16. Recommended  
17. Falling short 18. Essential 19. Impairs 20. Interventions

**Matching sentence:** 1. Exceptional 2. Diagnosed 3. Cetacean 4. Oligodendrocytes 5. Transmission 6. Avenues  
7. Promising 8. Recognized 9. Impaired 10. Consumption

## CATEGORY

1. Health - LEVEL2

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