



Mushroom Fiber Guards Against Flu: New Study Reveals

Description

Mushrooms, often underestimated, are a type of fungi that harbors immense potential. Previous research has unveiled the ability of mushrooms to mitigate the risk of depression, enhance the growth of brain cells, and offer protection against cancer. A recent study now suggests that mushrooms may also serve as a shield against influenza.

A research team from McGill University in Canada discovered that the beta-glucan fibers present in all mushroom varieties could act as a barrier against the flu. These fibers were found to limit inflammation in the lungs of mice exposed to infection after receiving a dose of beta-glucan.

Interestingly, mice treated with these fibers exhibited improved lung function and a reduced likelihood of severe illness and mortality when confronted with the flu. Although human trials are needed for further insights, this avenue holds promise for researchers to delve into.

Lung scans and or type unknown

Mice administered with beta-glucan displayed reduced lung damage from flu infections. (Khan et al., *Nature Immunology*, 2025)

Immunologist Maziar Divangahi from McGill University remarked, "Beta-glucan, present in the cell walls of all fungi, including those in our microbiome, could potentially influence an individual's immune response to infections due to its presence."

Beta-glucan, known to enhance immunity, was tested by the researchers for its disease tolerance capabilities, which aim to reduce the impact of viral attacks on the body. It was observed that beta-glucan could reprogram immune cells to better combat the flu, showcasing immense potential for long-term protection against respiratory illnesses.

This groundbreaking research, published in [Nature Immunology](#), sheds light on the intricate mechanisms that underlie disease tolerance, offering a new perspective that could revolutionize treatment strategies for various respiratory diseases.

Vocabulary List:

1. **Mushrooms** /'mʌʃ.ru:mz/ (noun): A type of fungi that typically grows in the ground or on decaying matter.
2. **Influenza** /,ɪn.flu'ɛn.zə/ (noun): A viral infection that attacks the respiratory system.
3. **Beta-glucan** /'beɪ.tə 'glu:.kən/ (noun): A type of soluble dietary fiber that has health benefits especially in immune function.
4. **Inflammation** /,ɪn.flə'meɪ.jən/ (noun): The body's response to injury or infection causing redness and swelling.
5. **Mortality** /mɔ:'rʔæl.i.ti/ (noun): The state of being subject to death.



6. **Mechanisms** /'mekənɪzəmz/ (noun): Processes or systems that produce a particular result.

Comprehension Questions

Multiple Choice

1. What potential benefits of mushrooms have been uncovered by previous research?
Option: Mitigate the risk of depression
Option: Enhance the growth of brain cells
Option: Offer protection against cancer
Option: All of the above
2. Where was the recent study conducted that suggests mushrooms may act as a shield against influenza?
Option: McGill University in Canada
Option: Harvard University in the USA
Option: Oxford University in the UK
Option: Sorbonne University in France
3. What effect did beta-glucan fibers have on the lungs of mice exposed to infection?
Option: Increased inflammation
Option: Reduced lung function
Option: Limited inflammation
Option: Caused severe illness
4. What did mice treated with beta-glucan fibers display?
Option: Worsened lung function
Option: Improved lung function
Option: Increased likelihood of severe illness
Option: Reduced mortality
5. According to Maziar Divangahi, how could beta-glucan influence an individual's immune response?
Option: By causing infections
Option: Through presence in the microbiome
Option: By enhancing flu symptoms
Option: By reducing immune cells
6. What did the researchers observe about the disease tolerance capabilities of beta-glucan?



- Option: Increased impact of viral attacks
- Option: No effect on immune cells
- Option: Potential to reduce viral attack impact
- Option: Limited potential for long-term protection

True-False

7. Previous research has shown mushrooms to mitigate the risk of depression.
8. Beta-glucan fibers increased inflammation in the lungs of mice exposed to infection.
9. Human trials have already provided all the insights needed about mushrooms and flu protection.
10. Beta-glucan can potentially reprogram immune cells to combat the flu more effectively.
11. The recent study on mushrooms and flu protection was published in Nature Immunology.
12. Researchers believe that beta-glucan offers limited potential for long-term protection against respiratory illnesses.

Gap-Fill

13. Immunologist Maziar Divangahi is from _____ University.
14. The beta-glucan fibers were found to limit _____ in the lungs of mice exposed to infection.
15. Beta-glucan could reprogram immune cells to better combat the _____.
16. Published in Nature Immunology, the research sheds light on the intricate mechanisms that underlie _____ tolerance.
17. Mice treated with beta-glucan displayed improved lung function and a reduced likelihood of severe _____.



18. Human trials are needed for further insights into the potential of mushrooms for fighting

Answer

Multiple Choice: 1. All of the above 2. McGill University in Canada 3. Limited inflammation 4. Improved lung function 5. Through presence in the microbiome 6. Potential to reduce viral attack impact

True-False: 7. True 8. False 9. False 10. True 11. True 12. False

Gap-Fill: 13. McGill 14. inflammation 15. flu 16. disease 17. illness 18. influenza

Vocabulary quizzes

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

1. What is a significant advancement called?

Option: A

Option: Breakthrough

Option: Obstacle

Option: D

2. What is the process of merging two or more things into a single entity?

Option: A

Option: B

Option: C

Option: Fusion

3. What term refers to the state of being subject to death?

Option: A

Option: Mortality

Option: B

Option: D

4. What are slight shaking movements of the earth's surface?

Option: Tremors

Option: A

Option: B

Option: D



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5. What term is used for changing something radically or fundamentally?
Option: Revolutionizing
Option: A
Option: B
Option: D
6. What is a type of polysaccharide found in cell walls of bacteria fungi yeasts algae lichens and plants such as oats and barley?
Option: Beta-glucan
Option: B
Option: C
Option: D
7. What are things that stand in the way of progress or success?
Option: A
Option: B
Option: Obstacles
Option: D
8. What are things that deviate from what is standard normal or expected?
Option: A
Option: Anomalies
Option: C
Option: D
9. What is a viral infection that affects the respiratory system?
Option: Influenza
Option: B
Option: C
Option: D
10. What is the action or process of producing a list or book by assembling information from other sources?
Option: A
Option: Compilation
Option: C
Option: D

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

11. The solution to the problem remained _____ despite numerous attempts.



12. Continuous _____ of the patient's vital signs is crucial in the ICU.
13. The scientist's _____ research in the field of robotics earned her international recognition.
14. The _____ surrounding the outcome of the negotiations created anxiety among the team members.
15. The marathon runner experienced extreme _____ after completing the race.
16. The long hours of work led to physical and mental _____ among the employees.
17. The sudden disappearance of the lake was a natural _____ that baffled scientists.
18. The new policy had far-reaching _____ for small businesses in the region.
19. The stock market experienced significant _____ throughout the trading day.
20. The local _____ came together to support the victims of the natural disaster.

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

21. Conserving natural resources and reducing waste are crucial for the environment for future generations.
22. The study aims to investigate the underlying the biological process of cell division.
23. The region was hit by a event that caused widespread damage to buildings and infrastructure.
24. The success of the experiment relies on the of the measurements taken by the instruments.
25. The patient claimed to have visions while under the influence of a hallucinogenic drug.
26. The captain skillfully the ship through the treacherous waters of the storm.
27. Continuous of the construction site is essential to ensure safety regulations are followed.
28. The drone is programmed to fly without human intervention once the flight path is set.



29. The of data from various sources helped researchers identify patterns in the market trends.

30. The strenuous physical activity led to extreme and fatigue.

Answer

Multiple Choice: 1. Breakthrough 2. Fusion 3. Mortality 4. Tremors 5. Revolutionizing 6. Beta-glucan
7. Obstacles 8. Anomalies 9. Influenza 10. Compilation

Gap-Fill: 11. elusive 12. monitoring 13. groundbreaking 14. uncertainty 15. fatigue 16. exhaustion
17. phenomenon 18. implications 19. fluctuations 20. community

Matching sentence: 1. sustaining 2. mechanisms 3. seismic 4. accuracy 5. hallucinated 6. navigating
7. monitoring 8. autonomously 9. compilation 10. exhaustion

CATEGORY

1. Health - LEVEL5

Date Created

2025/02/20

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