



Scientists Uncover Gluten's Impact on Gut Health

Description

Celiac disease is a serious condition that lasts for life. It happens when the body's immune system attacks the small intestine after eating gluten, a protein found in wheat, barley, and rye. People with celiac disease must avoid these foods to stay healthy.

Researchers from the University of Rome Tor Vergata studied over 100 past studies to understand how celiac disease happens. They found that genetics play a part, but other factors also contribute. Certain proteins in gluten can confuse the immune system, making it attack the body's own tissues instead.

One important enzyme called tissue transglutaminase 2 (TG2) normally helps break down gluten. However, in some people, this can cause the immune system to react strongly. This leads to damage in the gut lining, causing symptoms like stomach pain and diarrhea.

The research also shows that the balance of bacteria in the gut is important. If this balance is disrupted, it can increase the risk of developing celiac disease. The study suggests that understanding these processes better may lead to new treatments in the future, beyond just avoiding gluten. This is important as around 1 in 100 people have celiac disease.

Vocabulary List:

1. **immune** //ɪ'mjʊn// (adjective): not easily hurt by infections or disease
2. **intestine** //ɪn'testɪn// (noun): long tube in the body that digests food
3. **gluten** //ˈɡluːtən// (noun): a protein in wheat, barley, and rye
4. **genetics** //dʒə'netɪks// (noun): how family traits are passed to children
5. **enzyme** //ˈɛnzɑɪm// (noun): a substance in the body that speeds reactions
6. **bacteria** //bæk'tɪriə// (noun): very small living things that can cause infection

Comprehension Questions

Multiple Choice

1. What protein is associated with celiac disease?

Option: Casein



- Option: Gluten
- Option: Lactose
- Option: Soy

2. Which university conducted the research on celiac disease?

- Option: Harvard University
- Option: University of Rome Tor Vergata
- Option: Stanford University
- Option: Oxford University

3. What is the enzyme that helps break down gluten?

- Option: Amylase
- Option: Pepsin
- Option: Tissue transglutaminase 2 (TG2)
- Option: Lactase

4. What happens when the immune system attacks the body's tissues in celiac disease?

- Option: It improves digestion
- Option: It causes gut damage
- Option: It boosts immunity
- Option: It reduces inflammation

5. Approximately how many people are affected by celiac disease?

- Option: 1 in 50
- Option: 1 in 100
- Option: 1 in 200
- Option: 1 in 500

6. What can increase the risk of developing celiac disease?

- Option: Maintaining a balanced diet
- Option: Disrupted balance of gut bacteria
- Option: Regular exercise
- Option: High fiber intake

True-False

7. Celiac disease only occurs in children.



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8. Celiac disease can be managed by simply avoiding gluten.
 9. Genetics play a role in the development of celiac disease.
 10. Only wheat contains gluten.
 11. Research indicates that new treatments for celiac disease may be developed.
 12. The immune system does not react to gluten in people with celiac disease.

Gap-Fill

13. Celiac disease is triggered when the immune system attacks the small intestine after eating _____.
14. The enzyme tissue transglutaminase 2 (TG2) helps break down _____.
15. If the balance of bacteria in the gut is disrupted, it can increase the risk of developing _____.
16. The study analyzed over 100 past studies to understand how celiac disease _____.
17. Around 1 in 100 people have _____.
18. Symptoms of celiac disease can include stomach pain and _____.

Answer

Multiple Choice: 1. Gluten 2. University of Rome Tor Vergata 3. Tissue transglutaminase 2 (TG2) 4. It causes gut damage 5. 1 in 100 6. Disrupted balance of gut bacteria

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

Gap-Fill: 13. gluten 15. celiac disease 16. happens 18. diarrhea

CATEGORY

1. Health - LEVEL2

POST TAG



1. chain reaction
2. ESL learning
3. esl news
4. Gluten
5. Gut
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