

## Study: H5N1 Bird Flu Lingers in Raw Milk Cheese

## **Description**

A study from Cornell University, funded by the US Food and Drug Administration, reveals chilling findings about raw cheese made with milk from bird flu-infected dairy cattle. This cheese harbors the virus for months, potentially posing a risk to public health.

Unlike pasteurized cheeses, raw milk cheeses aren't heat-treated to eliminate germs. Though federal law prohibits raw milk sales across state lines, raw milk cheese is legal nationwide if aged for 60 days. This aging process was thought to reduce contamination risks by allowing natural acids and enzymes to destroy pathogens.

The new study challenges this belief, showing that H5N1 virus may remain active despite cheese aging, highlighting the dangers of consuming raw foods during ongoing bird flu outbreaks.

Dr. Diego Diel, who led the study, suggests the virus's stability is due to its protection within the cheese's matrix of proteins and fats — a cozy environment that shelters it even at low temperatures.

During the study, mini cheeses were made with spiked milk at varying acidity levels. Remarkably, the virus remained infectious throughout the aging period, illustrating its persistence.

While reports of human infection via consumption are nonexistent, this study underscores the necessity of heightened surveillance. One potential safeguard could be making cheese more acidic, a method suggested to kill the virus.

Experts reinforce the advice to steer clear of raw milk products, emphasizing that pasteurization is effective in eliminating the virus and ensuring consumer safety.

# **Vocabulary List:**

- 1. **Harbors** /'hɑ:rbərz/ (verb): To hold or contain a virus or organism.
- 2. **Contamination** /kən,tæmɪ'neɪʃən/ (noun): The action or state of making something impure by exposure to or addition of a poisonous or polluting substance.
- 3. **Pathogens** /'pæ $\theta = \frac{1}{2} \log \theta$  (noun): Microorganisms that can cause disease.
- 4. Infectious /In'fɛkʃəs/ (adjective): Capable of causing infection or disease.
- 5. **Surveillance** /sɜːrˈveɪləns/ (noun): Close observation especially of a suspected spy or criminal.
- 6. **Pasteurization** / pæstəraɪˈzeɪʃən/ (noun): The process of heating food and beverages to kill harmful bacteria.



# **Comprehension Questions**

### **Multiple Choice**

1. Where was the study conducted regarding raw cheese and bird flu?

Option: Harvard University Option: Cornell University Option: Stanford University Option: Yale University

2. What agency funded the study on raw cheese and bird flu?

Option: US Department of Agriculture

Option: Centers for Disease Control and Prevention

Option: World Health Organization

Option: US Food and Drug Administration

3. How long is raw milk cheese legally required to be aged in the US?

Option: 30 days Option: 60 days Option: 90 days Option: 120 days

4. What is suggested as a potential method to kill the virus in cheese?

Option: Increasing fat content Option: Raising temperature

Option: Adding more preservatives
Option: Making the cheese more acidic

5. What scientist led the study on raw cheese and bird flu?

Option: Dr. Emily Brown
Option: Dr. Mark Johnson
Option: Dr. Diego Diel
Option: Dr. Sarah Smith

6. What component of raw milk cheese provides a protective environment for the virus?

Option: Calcium



Option: Proteins and fats

Option: Vitamin D Option: Carbohydrates

#### **True-False**

- 7. Raw milk cheese is subjected to heat treatment to eliminate germs.
- 8. Federal law allows the sale of raw milk cheese across state lines.
- 9. The aging process of raw milk cheese was thought to reduce contamination risks.
- 10. The study found that the H5N1 virus remains inactive after cheese aging.
- 11. Reports of human infection from consuming the cheese are common.
- 12. Experts advise against consuming raw milk products due to safety concerns. ESL-NEWS

### **Gap-Fill**

13. Federal law prohibits the sale of raw milk cheese across state lines, but it is legal nationwide if aged for
days.
14. Dr. Diego Diel led the study and suggested making cheese more acidic as a potential safeguard to kill
the
15. Experts recommend avoiding raw milk products as pasteurization is effective in eliminating the
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16. The new study challenges the belief that aging raw milk cheese reduces contamination risks by allowing
natural acids and enzymes to destroy



7. According to Dr. Diel, the virus remains stable within raw milk cheese due to the protective matrix of
and
8. During the study, mini cheeses were made with spiked milk to illustrate the
f the virus throughout the aging period.
Answer
Multiple Choice: 1. Cornell University 2. US Food and Drug Administration 3. 60 days 4. Making the cheese nore acidic 5. Dr. Diego Diel 6. Proteins and fats  True-False: 7. False 8. False 9. True 10. False 11. False 12. True  Gap-Fill: 13. 60 14. virus 16. pathogens 17. proteins, fats 18. persistence
ocabulary quizzes
Multiple Choice ( Select the Correct answer for each question. )
Which type of disease affects the heart and blood vessels?
Option: Cardiovascular
Option: Endocrine
Option: Musculoskeletal
Option: Neurological
. What term is used to describe additional issues or problems that arise following a primary disease?
Option: Allergies
Option: Complications
Option: Remission
Option: Prevention
Sap-Fill (Fill in the blanks with the correct word from the vocabulary list.)
s is the process of receiving a vaccine to build immunity against a specific
lisease.



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

- 4. Diseases caused by pathogenic microorganisms are considered .
- 5. The act of admitting a patient to a hospital for treatment is known as .

### **Answer**

Multiple Choice: 1. Cardiovascular 2. Complications

Gap-Fill: 3. Vaccination

Matching sentence: 1. Infectious 2. Hospitalization

#### **CATEGORY**

1. Health - LEVEL4

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