Unpasteurized (Raw) Milk and Highly Pathogenic Avian Influenza: Advice for Healthcare Providers

Purpose

This document provides healthcare providers with information and resources on the risks of consuming unpasteurized (raw) milk and dairy products made from unpasteurized milk, specifically as it relates to the new public health concern resulting from the detection of highly pathogenic avian influenza (HPAI) A(H5N1) virus in unpasteurized milk.

Top Patient Counseling Tips
• Unpasteurized (raw) milk and dairy products made from it (e.g., cheese, yogurt, ice cream) can be contaminated with germs that can cause serious illness, hospitalization, or death. • Though bird flu is causing outbreaks in U.S. dairy cows, pasteurization kills harmful germs in milk so that pasteurized milk is safe to consume. • Always choose pasteurized milk and dairy products to protect your health and the health of your family. • The risk to the general public from H5N1 bird flu is currently low.

Recommendations to Healthcare Providers

To protect the health of the public, CDC recommends that healthcare providers continue to support the consumption of only pasteurized milk and dairy products made from pasteurized milk. Healthcare providers should also continue to educate patients on the risks of consuming unpasteurized milk or products made from unpasteurized milk, particularly emphasizing that unpasteurized milk or related products can contain bacteria or viruses, including HPAI A(H5N1) viruses, that can adversely impact human health.

The following advice can be shared with patients:

- Unpasteurized (raw) milk and any products made from raw milk, including cheese, ice cream, and yogurt, can be contaminated with germs that can cause serious illness, hospitalization, or death. Make the best decision for your health and the health of your family by always choosing pasteurized milk and products made with it.
- Anyone, even healthy adults, can get sick from drinking raw milk. If you or your family member have consumed raw milk and get sick, seek medical attention immediately.
- Most of the nutritional benefits of drinking milk are available from pasteurized milk without the risk of illness that comes with drinking raw milk.
- Federal law prevents the sale of raw milk for human consumption (in its final package form) across state lines. Each state makes its own laws about selling raw milk within state borders. Just because raw milk is legal to obtain in your state does not mean it is safe to drink.

Patients can be referred to the following resources for more information:

- Printable handout: Raw Milk: Know the Facts (cdc.gov)
- CDC website: Raw Milk | CDC
- FDA website: The Dangers of Raw Milk: Unpasteurized Milk Can Pose a Serious Health Risk | FDA

Background

The U.S. Centers for Disease Control and Prevention (CDC), the U.S. Department of Agriculture (USDA), and the U.S. Food and Drug Administration (FDA), along with state public health and animal health officials and other partners continue to investigate an outbreak of HPAI A(H5N1) virus impacting dairy cattle in multiple states. To date, CDC is aware of one recent associated human case in a farm worker on a commercial dairy farm in Texas who developed conjunctivitis as a result of HPAI A(H5N1) virus infection; this was the second person to test positive for HPAI A(H5N1) virus in the United States.[1,2]

HPAI A(H5N1) virus has been detected in unpasteurized (raw) milk collected from clinically ill and asymptomatic dairy cattle during the course of the outbreak investigation. It has been well documented that unpasteurized milk and products made from unpasteurized milk can be contaminated with pathogens including *Campylobacter*, *Escherichia coli*, *Listeria*, *Salmonella*, *Staphylococcus aureus*, *Yersinia enterocolitica*, *Mycobacterium bovis*, *Brucella*, and *Coxiella burnetii*. These pathogens can cause serious illness, hospitalization, or death. Recent research suggests that 4.4% of U.S. adults consume unpasteurized milk at least once a year. There is concern that consumption of unpasteurized milk and products made from unpasteurized milk contaminated with HPAI A(H5N1) virus could transmit HPAI A(H5N1) virus to people; however, the risk of human infection is unknown at this time.

Unpublished mouse feeding studies indicate a risk of infection from oropharyngeal administration of affected milk. HPAI A(H5N1) viruses rarely cause infection of the respiratory tract of people and preferentially bind to virus receptors that are most prevalent in the lower respiratory tract. To date, HPAI A(H5N1) viruses have not acquired the ability to bind to virus receptors that are most prevalent in the upper respiratory tract of people. Recently, HPAI A(H5N1) virus was shown to also infect conjunctival tissues of the dairy worker in Texas. If a person consumed unpasteurized milk with live HPAI A(H5N1) virus, the person could become infected, theoretically, by the virus binding to a limited amount of virus receptors in the upper respiratory tract or by aspiration of virus into the lower respiratory tract where receptors that HPAI A(H5N1) viruses can bind to are more widely distributed. Additional investigation and research are needed to fully understand the potential risk to public health from consuming unpasteurized milk containing HPAI A(H5N1) virus.

Pasteurization is the process of heating milk to a high enough temperature for a long enough time to kill disease-causing pathogens, including HPAI A(H5N1) viruses. Based on the current evidence from FDA, pasteurized milk is safe to consume. Limited studies to date have shown that the U.S. commercial pasteurized milk supply is safe from HPAI A(H5N1) virus because of the pasteurization process and because milk from sick cows is diverted or destroyed.

Footnotes

[1]The first human case of A(H5N1) bird flu in the United States was reported in 2022 in a person in Colorado who had direct exposure to poultry and was involved in the depopulating of poultry with presumptive A(H5N1) bird flu. The 2022 human case was not related to dairy cattle. The person recovered. Learn more at U.S. Case of Human Avian Influenza A(H5) Virus Reported | CDC Online Newsroom | CDC

[2]The second human case of A(H5N1) bird flu in the United States was reported in 2024 and linked with dairy cattle and reported eye redness as their only symptom, consistent with conjunctivitis, and has recovered. Learn more at Highly Pathogenic Avian Influenza A (H5N1) Virus Infection Reported in a Person in the U.S. | CDC Online Newsroom | CDC

Additional Information for Healthcare Providers

Highly pathogenic avian influenza resources

Updates on Highly Pathogenic Avian Influenza (HPAI) | FDA

Information on Bird Flu | Avian Influenza (Flu) (cdc.gov)

Health Alert Network (HAN) - 00506 | Highly Pathogenic Avian Influenza A(H5N1) Virus: Identification of Human Infection and Recommendations for Investigations and Response (cdc.gov)

Early Release - Highly Pathogenic Avian Influenza A(H5N1) Clade 2.3.4.4b Virus Infection in Domestic Dairy Cattle and Cats, United States, 2024 - Volume 30, Number 7—July 2024 - Emerging Infectious Diseases journal - CDC

Unpasteurized (raw) milk resources

Outbreak Studies on Raw Milk | CDC

Raw Milk Misconceptions and the Danger of Raw Milk Consumption | FDA

American Academy of Pediatrics Policy Statement: Consumption of Raw or Unpasteurized Milk and Milk Products by Pregnant Women and Children

Prevention of Disease From Contaminated Food Products | Red Book (2018) Report of the Committee on Infectious Diseases | AAP Books | American Academy of Pediatrics