

Milk: Raw versus Pasteurized

August 21, 2024

KEY TAKEAWAYS

1. Raw milk contains viruses, bacteria, and/or parasites that can cause serious disease, particularly in infants, young children, and pregnant women.¹
2. The pasteurization process helps remove the bacteria strains from raw milk products, making them safe for consumption.^{2,3}
3. There is little evidence to support the claims that raw milk is healthier than pasteurized milk.^{2,3}
4. Farmers can sell raw milk from their farms with the appropriate licenses and inspections to ensure the quality of milk products.^{4,5}

Raw Milk

The risk of illness from raw milk is on the rise compared to pasteurized milk.

- Little evidence supports the claims that raw milk has more health benefits than pasteurized milk.^{2,3}
- Raw milk consumption can increase the risk of illness — especially for young children, pregnant women, and older adults — as the product commonly contains bacteria, viruses, and infections.^{1,6}
 - Brucellosis, Listeria, Salmonella, and E. Coli infections are bacterial illnesses that can be spread to humans through the consumption of raw or unpasteurized dairy products and undercooked meats.⁶⁻⁸

People who drink unpasteurized raw milk are

840x

more likely to contract a foodborne illness than those who drink pasteurized milk.⁹

Pasteurization

Pasteurization of cow milk in the United States began after the discovery of mycobacterium bovis, a bovine tuberculosis carried in raw milk.¹⁰

- Most infections by mycobacterium bovid come from consumption (eating or drinking) of contaminated, unpasteurized milk products.¹¹
 - Mycobacterium bovis can cause tuberculosis in humans, affecting their lungs, lymph nodes, and other body parts.¹¹

Pasteurization^{2,3}

involves the process of heating dairy beverages and foods to high temperatures in order to kill:



Harmful bacteria








Viruses



Parasites

- Nutrient losses during the pasteurization process of milk are minimal compared to the benefits of reducing foodborne illnesses and food spoilage without pasteurization.¹²

How Pasteurization Impacts Vitamins in Milk ^{7,12}

<p>Water-Soluble Vitamins Lost During Pasteurization</p> <p>Vitamin B2</p>  <p>supports energy production and vision</p>		<p>Heat-Stable Vitamins Not Lost During Pasteurization</p> <p>Vitamin A</p>  <p>supports vision health</p>	<p>Vitamin D</p>  <p>supports bone health</p>	<p>Vitamin E</p>  <p>supports anti-aging</p>	<p>Vitamin K</p>  <p>supports blood pressure</p>
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In Texas, raw milk can be purchased for use and consumption through licensed farms.^{4,5,13}

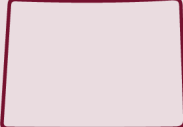


- To sell raw milk, farmers must obtain a license and ensure annual inspections and samplings of raw milk products for pathogens and milk quality take place.
 - After the license is obtained, farmers can register to sell raw milk on the Texas Department of State Health Services website.

Avian Influenza (Bird Flu)

In the United States, Highly Pathogenic Avian Influenza (HPAI) Virus A, also known as A(H5N1), has been detected in livestock, especially among dairy cattle.^{14,15}

- Avian influenza has been detected in livestock, such as dairy cattle and poultry.^{14,15}
- Avian influenza in poultry has been reported in 12 Texas counties since April 2022.¹⁶
 - Avian influenza is highly contagious, and sometimes deadly, in poultry. It is often transmitted from wild birds to domestic poultry and other animal species.¹⁷
- While avian influenza does not typically infect humans, there have been known cases in humans in the U.S.¹⁸

3 states have known cases of A(H5N1) in humans since the start of the multi-state outbreak:¹⁸

<p>Colorado</p>  <p>1 confirmed case 3 presumptive positive cases*</p>	<p>Michigan</p>  <p>2 confirmed cases</p>	<p>Texas</p>  <p>1 confirmed case</p>
<p><i>*Information updated at the time of publication</i></p>		

In March 2024, high levels of the A(H5N1) virus were detected in raw milk of infected cows. A study to understand the effects of pasteurization to inactivate the virus in milk and other dairy products was conducted.¹⁹

- Samples from four affected states were obtained and screened for A(H5N1), with approximately 57% of the samples testing positive for the virus.¹⁹
- After pasteurization, no viable traces of the virus were found. The heating phase of pasteurization inactivates the A(H5N1) strain originally detected in raw milk, meaning pasteurized milk is safe for consumption even after previous contamination.¹⁹

Protecting Yourself and Animals from A(H5N1)²⁰⁻²²

Prioritize strategies aimed at prevention, early detection, and management to mitigate the spread of avian influenza to other animals and people.

Protect Your Animals

- Minimize wild bird access to cattle and land
- Manage cattle movement across land
- Separate new and returning sick animals for a minimum of 21 days
- Contact your veterinarian if you suspect your cattle or animals have influenza

Protect Yourself

- Disinfect shoes, clothes, hands, and any materials that may have been exposed
- Wear personal protective equipment, such as disposable boots and masks, when in contact with animals
- Avoid direct contact with sick or dead animals, feces, and contaminated milk

Experts

Joseph B. McCormick, MD

*UTHealth Houston School of Public Health,
Brownsville Location*

Catherine L. Troisi, PhD

UTHealth Houston School of Public Health

Susan Fisher-Hoch, MD

*UTHealth Houston School of Public Health,
Brownsville Location*

Content development and research for this report were led by Postdoctoral Research Fellow Shelby Flores-Thorpe, PhD. For further information, please contact TXRPCNetwork@uth.tmc.edu.

Resources

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