



Raw Milk Questions and Answers



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Raw milk is milk that has not been pasteurized to kill harmful bacteria. Raw milk can carry harmful germs, such as *Campylobacter*, *Cryptosporidium*, *E. coli*, *Listeria*, *Brucella*, and *Salmonella*. These germs can pose serious health risks to you and your family.

Read the topics below to get answers to commonly asked questions about raw milk.

The risks of raw milk

What are the risks associated with drinking raw milk?

Raw milk is milk that has not been pasteurized to kill harmful bacteria. Raw milk can be contaminated with harmful germs that can make you very sick. In fact, raw milk is one of the riskiest foods.

People who get sick from raw milk might have many days of diarrhea, stomach cramping, and vomiting. Some people might develop severe or even life-threatening diseases, including:

- [Guillain-Barré syndrome](#), which can cause paralysis, and
- Hemolytic uremic syndrome, which can result in kidney failure, stroke, and even death.

Here are some things you should know:

- Raw milk is linked to a variety of foodborne illnesses. Some of these illnesses can be severe.
 - [Symptoms of foodborne illness](#) depend on the germ swallowed.
- People can get ill from the same brand and source of raw milk that they drank previously, even for a long time, without becoming ill.
- Pasteurizing milk reduces the chance of illness. Pasteurization is the process of heating milk to a high enough temperature for enough time to kill harmful germs in the milk.
- Raw milk can get contaminated many ways. Healthy animals can carry germs that are harmful to people. Germs in these animals' poop can get into raw milk and contaminate it.
- Good safety practices can reduce the chance of germs getting in raw milk, but not completely eliminate it.

Who is at greatest risk of getting sick from drinking raw milk?

[People most at risk for severe foodborne illness](#) are adults 65 years and older, children younger than 5 years, and people with weakened immune systems. But healthy people of any age can get very sick after drinking raw milk contaminated with harmful germs.

Can drinking raw milk hurt me or my family?

Yes. Raw milk and products made from raw milk, including soft 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. If you or your family member have consumed raw milk and get sick, seek medical attention immediately.

Pasteurization

What is pasteurization, and what is pasteurized milk?

Pasteurization is the process of heating milk to a high enough temperature for a long enough time to kill harmful germs. Pasteurized milk is milk that has gone through this process.

What is the history of pasteurization in the United States?

Pasteurization was invented during a time when millions of people became sick and died of tuberculosis, scarlet fever, typhoid fever, and other diseases that were spread through raw milk.

Routine pasteurization of milk began in the United States in the 1920s and became widespread by 1950 as a way to reduce contamination and reduce human illnesses. It led to dramatic reductions in the number of people getting sick. Most public health professionals and health care providers consider pasteurization to be one of public health's most effective food safety interventions ever!

Many medical and scientific organizations recommend pasteurization for all milk consumed by humans; these organizations include CDC, the U.S. Food and Drug Administration, the American Academy of Pediatrics, the American Veterinary Medical Association, the National Association of State Public Health Veterinarians, and others.

Does pasteurization change milk's nutritional benefits?

Most of the nutritional benefits of drinking milk are available from pasteurized milk without the risk of disease that comes with drinking raw milk.

Is it true that raw milk has more enzymes and nutrients than pasteurized milk?

Multiple studies have shown that pasteurization does not significantly affect the nutritional quality of milk. Scientists do not have any evidence that shows a nutritional benefit from drinking raw milk.

Has pasteurized milk ever been linked to illnesses or outbreaks?

Pasteurized milk and products made from it have occasionally caused illnesses and outbreaks. Usually, this has happened because germs got in the milk or milk product after the milk was pasteurized.

Pasteurized milk is very unlikely to contain harmful germs if it is

- correctly handled in the dairy,
- bottled, sealed, and refrigerated after pasteurization, and
- properly handled by the consumer, including refrigerating it at 40°F or colder.

Considering the large amount of pasteurized milk that people drink, illness from it is very rare.

Milk production and contamination

How does milk get contaminated?

Milk can get contaminated in these ways:

- Germs from an animal's poop can get in milk
- Germs from an animal's skin can get in milk
- Germs in the environment (including the barn and milking equipment) can get in milk
- The dairy animal's udder can be infected (mastitis)
- The dairy animal can have a disease (for example, bovine tuberculosis)
- Insects, rodents, and other small animals can get in milk
- Conditions in the milk processing plant can be unsanitary
- Cross-contamination from dairy workers can happen—for example, through contact with dirty clothing or boots

Pasteurization can kill germs in milk that can make people very sick.

Does milk have a “built-in” safety mechanism that prevents bacterial contamination?

No. Pasteurization is the best way to get rid of harmful germs in milk and the only method regularly used in the United States.

My farmer tests raw milk, so isn't it safe?

No. Negative laboratory tests to detect germs in raw milk do not guarantee that raw milk is safe to drink. Tests do not always detect low levels of contamination. People have become very sick from drinking raw milk that came from farms that regularly tested their milk for bacteria.

My farmer uses grass-fed cows and goats to produce raw milk, so isn't it safe?

No. Outbreaks of illness linked to raw milk have been traced back to both grass-fed and grain-fed animals.

My farmer's raw milk is organic, so isn't it safe?

No. Raw milk, regardless of whether it is organic, can contain harmful germs. Pasteurized organic milk is available in many places, including supermarkets, farmers' markets, and dairies.

Is raw milk at the farmers market safe?

No. No raw milk is safe. Look for pasteurized milk at farmers markets and farm stands.

I've heard that many organic and raw milk producers are creating sanitary conditions for raising and milking animals. Does this help reduce milk contamination?

Following good hygiene practices on the farm and during milking can reduce the chance of milk contamination – but not eliminate it.

Illness-causing germs thrive in the environment of dairy farms, even if the farm or barns are kept clean and the farmers are careful when milking. Farmers cannot guarantee that their raw milk and the products made from it are free of harmful germs, even if tests indicate the raw milk does not contain harmful germs.

Can I still get a disease from raw milk and raw milk products if the animals are healthy, clean, and grass-fed or if the dairy is careful and clean when collecting the milk?

Yes. Even healthy animals may carry germs that can contaminate milk. Small numbers of bacteria can multiply and grow in milk from the time it is collected until the time a person drinks it. If the milk is not pasteurized to kill germs, people who drink it can get sick.

Methods for collecting milk have improved over the years but cannot be relied on to be sure milk is safe to drink. Raw milk from “certified,” “organic,” or “local” dairies is not guaranteed to be safe. Pasteurization makes milk safe to drink. You can find pasteurized organic milk and products made from it at many locations.

Unproven health benefits of raw milk

Aren't raw or natural foods better than processed foods?

Many people believe that foods with little to no processing are better for their health. Many people also believe that small, local farms are better sources of healthy food. However, some types of processing are needed to protect health. One type of processing happens when we cook raw meat, chicken and other poultry, and fish to make them safe to eat. Similarly, when milk is pasteurized, it is made safe by heating it at a high enough temperature for long enough to kill disease-causing germs. Most nutrients remain in milk after it is pasteurized.

Is raw milk a good source of beneficial bacteria?

Raw milk contains bacteria, and some of them can be harmful. If you're thinking about consuming raw milk because you believe it is a good source of beneficial bacteria, keep in mind that you may instead get sick from the harmful bacteria. If you think that certain types of bacteria may be beneficial to your health, consider getting them from foods that don't involve such a high risk.

I know people who have been drinking raw milk for years, and they never got sick. Why is that?

The presence of germs in raw milk is unpredictable. People can drink it for a long time without getting sick, and then get sick if their milk is contaminated.

Raw milk laws and outbreaks linked to raw milk

Is it legal to buy or sell raw milk?

In some states it is legal to buy or sell raw milk. Because of the chance for serious illness, federal law prohibits dairies from distributing raw milk across state lines in final package form (packaged so that it can be consumed). This means that raw milk can be distributed across state lines only if it is going to undergo additional processing (e.g., pasteurization or used to make certain types of cheeses) before being sold to consumers. Each state makes its own laws about selling raw milk within the borders of the state. In fewer than half of states, selling raw milk directly to consumers is illegal. In the remaining 27 states, raw milk may be sold directly to consumers in some capacity.

- [Learn about outbreaks linked to raw milk where its sale is legal](#)
- [Learn about an outbreak linked to illegal interstate sale of milk](#)

How many outbreaks are related to raw milk?

From 2013 through 2018, 75 outbreaks reported to CDC were linked to raw milk. These outbreaks included 675 illnesses and 98 hospitalizations. Most of the outbreaks were caused by *Campylobacter*, Shiga toxin-producing *E. coli*, or *Salmonella*.

CDC collects data on foodborne disease outbreaks voluntarily reported by state, local, or territorial health departments.


Reported outbreaks represent the tip of the iceberg. Most illnesses are not part of a recognized outbreak, and for every outbreak and every illness reported, many others occur.

Many raw milk outbreaks involve people 19 years or younger. At least one person younger than 19 was involved in 48% of the raw milk outbreaks reported to CDC from 2013 through 2018. Of the 74 outbreaks that occurred in a single state, 58 (78%) were in states where the sale of unpasteurized milk was allowed.

Do more outbreaks related to raw milk occur in states where it is legal to sell?

Yes. States that allow the legal sale of raw milk for human consumption have more raw milk–related outbreaks than states that do not allow raw milk to be sold legally.

More information:

- [Foodborne illness outbreaks linked to unpasteurised milk and relationship to changes in state laws – United States, 1998–2018](#) 
- [Increase in Outbreaks Associated with Nonpasteurized Milk, United States, 2007-2012](#)
- [Nonpasteurized Dairy Products, Disease Outbreaks, and State Laws—United States, 1993–2006](#)

How can I get more information about foodborne disease outbreaks linked to raw milk?

- [Learn about an outbreak linked to illegal interstate sale of milk](#)
- [See a list of current and past multistate foodborne outbreak investigations led by CDC](#)
- [Read the annual summary of foodborne outbreak investigations reported to CDC](#)
- [Search CDC's NORS Dashboard for information on foodborne disease outbreaks reported to CDC since 1998](#)

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