

Raw or Nonpasteurized Products Can Make You Sick

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Maureen Marshall] Hi, I'm Maureen Marshall and today I'm talking with Dr. Adam Langer, a CDC epidemiologist. Our conversation is based on his paper about the dangers of consuming nonpasteurized dairy products, which appears in CDC's journal, *Emerging Infectious Diseases*. Welcome, Dr. Langer.

[Adam Langer] Thanks, Maureen. It's great to be here today.

[Maureen Marshall] Dr. Langer, what is pasteurization?

[Adam Langer] Pasteurization is the process of heating milk to a specific temperature for a specific period of time in order to kill disease-causing bacteria that might be in the milk. The process was invented by the famous scientist Louis Pasteur, and his co-workers, in the 1800s to reduce spoilage in beer and wine, and was later used to improve milk safety and increase shelf life. Pasteurization was introduced for routine use on milk in the United States in the mid-1900s and is one of the major public health achievements of the 20th Century because it significantly reduced the number of illnesses and outbreaks caused by contaminated milk. The FDA doesn't allow raw milk or raw milk products to be sold across state lines in final package form, but some states still allow the sale of raw milk and raw milk products produced in that state.

[Maureen Marshall] Is it risky or dangerous to consume nonpasteurized dairy products?

[Adam Langer] Absolutely. Raw milk and other nonpasteurized dairy products can carry harmful bacteria and other germs that can make you very sick or kill you. This is because cows and other dairy animals can carry many different types of bacteria that can cause illness in people. These animals usually don't appear to be sick because often they are not affected by these bacteria. These animals appear healthy and clean, but the bacteria can be present in their feces, in the milk itself, and on their skin, as well as in the environment of the dairy. No matter how clean the dairy is or what the animals are fed, disease-causing bacteria can still be in the milk. Pasteurization is absolutely necessary to eliminate these bacteria from the milk and make it safe to consume. It's true that some people have consumed nonpasteurized, or raw, dairy products and not gotten sick—at least not yet. These individuals are the lucky ones. Unfortunately, the unlucky ones who do get sick can suffer from severe diarrhea or vomiting and potentially end up in the hospital. Some bacteria that can contaminate nonpasteurized dairy products cause even more severe illnesses, like paralysis or kidney failure, requiring extended hospitalizations, or can even kill someone. Some of these infections can spread from one person to another, so a person that did not drink the raw milk can get sick as well. It just isn't worth the risk of getting a serious disease, especially for people who are already vulnerable to infection, such as pregnant women, young children, older adults, and people with weakened immune systems. Remember, you can't look at, smell, or taste a bottle of raw milk and tell if it's safe to drink.

[Maureen Marshall] How much of a public health threat are nonpasteurized products in the 21st century?

[Adam Langer] As we sit here talking, one of the largest recent outbreaks of foodborne illness caused by nonpasteurized dairy products is being investigated in several mid-Atlantic states, with more than 80 people sick with *Campylobacter* infections so far. The dairy that supplied the contaminated milk is located in a state where selling raw milk products is allowed.

In our study, we looked at outbreaks caused by contaminated dairy products that were reported to CDC during 1993 through 2006. Sixty percent of these outbreaks were caused by raw milk products. That's over half of the outbreaks, involving 1,500 sick people and two deaths, that could have been avoided if people didn't consume raw dairy products, and that doesn't even include the people who were sickened by raw products and never reported it to the health department.

Outbreaks caused by raw milk products also tend to involve bacteria that can cause very serious illnesses, such as *Campylobacter*, *Salmonella*, and even *E. coli*. People sickened during outbreaks caused by raw milk products are more likely to end up in the hospital, and sometimes these people are so sick that they need weeks of kidney dialysis or even a ventilator to help them breathe. Raw milk products are clearly a pretty significant, and totally preventable, threat to public health.

[Maureen Marshall] Why do people use nonpasteurized products if they are apparently considered unsafe?

[Adam Langer] There are several reasons that people have given for why they consume raw milk products or feed them to their families. Some people prefer the taste of raw milk products. Others prefer to get their food with as little processing as possible. This is understandable, but in the case of dairy products, pasteurization is a necessary step to make the food safe to eat. Most people know it isn't safe to eat raw meat and the same principle—even more so—applies to raw milk.

One point that I would like to address directly is the belief on the part of some raw milk consumers that raw milk provides better nutrition than pasteurized milk. This is simply not true. Studies have shown that the nutrients in milk are not significantly affected by pasteurization. In fact, by consuming raw milk rather than fortified, pasteurized milk, consumers are missing out on an opportunity to include a good source of Vitamin D in their diets. Nonfortified milk, including raw milk, is not a good source of Vitamin D.

[Maureen Marshall] Have any studies been done to see if there are any health benefits to using nonpasteurized products?

[Adam Langer] A few studies have suggested that symptoms of asthma and allergies are less common among children who lived on a farm or drank farm milk—now that's not necessarily raw milk, just milk from their farm. Many of the families said they boiled their farm milk, which is essentially the same as pasteurizing it. Other studies have not found any link at all. The authors of these studies have not recommended raw milk because of the danger of serious infections. Considering the definite, proven potential for serious illness or even death from consuming raw

milk products, the unproven possibility that raw milk might give some small protection from asthma or allergies is just not worth it.

[Maureen Marshall] What does CDC advise?

[Adam Langer] CDC strongly recommends that nonpasteurized milk and fresh soft cheeses, like Mexican style queso fresco, that are made from raw milk, not be consumed. The risk of serious illness or death is just too high. Also, an important finding from our study is that states that did not allow raw dairy products to be legally sold had a lower risk of outbreaks from these products. We want state officials to have access to this information when they are considering what laws and regulations regarding raw dairy products will best serve their residents.

[Maureen Marshall] Thanks, Dr. Langer. I've been talking with Dr. Adam Langer about his paper, *Nonpasteurized Dairy Products, Disease Outbreaks, and State Laws—United States, 1993- 2006*, which appears in the March 2012 issue of CDC's journal, Emerging Infectious Diseases. You can see the entire article online at www.cdc.gov/eid.

If you'd like to comment on this podcast, send an email to eideditor@cdc.gov. That's e-i-d-editor - one word - at c-d-c-dot-gov. I'm Maureen Marshall, for Emerging Infectious Diseases.

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