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The raw milk paradox in Minnesota

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Summary of Findings:

- The sale and consumption of raw milk is a controversial issue in the United States.
- Many advocates for raw milk value its perceived health benefits, environmentally-friendly practices, and consumer choice.
- Advocates for pasteurized milk—wary of the health risks associated with unpasteurized milk—tend to emphasize the food safety benefits of pasteurization, as well as the lack of scientific data to support purported health benefits of raw milk.

Background

At the beginning of the 20th century, raw milk consumption contributed to an estimated 10% of all human tuberculosis cases in the US. This prompted widespread adoption of milk pasteurization, which soon became a cost-effective tool to control tuberculosis. In 1908, Chicago became the first US city to incorporate cow's milk pasteurization into municipal law. These early milk pasteurization laws started a debate in the US over raw versus pasteurized milk that continues to this day.

Today, Grade "A" pasteurized milk ordinance (PMO) regulates milk pasteurization in the US. Pasteurization has been so successful that currently less than 1% of foodborne illnesses are attributed to pasteurized milk. However, the rarity of tuberculosis and other milk borne illnesses in the US today leads some people to assume that pasteurization is no longer necessary. A growing movement is demanding raw milk (some estimate that 3.4% of US consumers now prefer raw milk) to complement what some believe to be a more environmentally-friendly and naturally healthy lifestyle.

While the US Food and Drug Administration (FDA) bans the sale or distribution of raw milk across state lines, each state is permitted to adopt their own laws regarding the sale of raw milk within the state. Currently, Minnesota statute 32.39311 bans the advertisement of raw milk sales and limits the sale of raw milk to transactions at the farm where the milk is produced. This regulation fuels more tension between raw milk advocates, on the one hand, and mainstream dairy corporations and public health institutions, on the other hand.

Arguments for raw milk

Advocates for raw milk tend to prioritize consumer choice. Many value the potential lower environmental impact and some believe there are health benefits. Listed below are some of the leading health arguments—many of which are not backed by scientific evidence—put forward by raw milk advocates.

- Pasteurization may cause losses of vitamin C, folate, vitamin B12, vitamin B6, and thiamine, even though scientists suggest the losses are minimal (<10%).
Some believe raw milk may reduce lactose malabsorption and would therefore be a good option for people with lactose intolerance. However, studies show that there is no significant difference in lactose malabsorption between raw milk and pasteurized milk.

Pasteurization may reduce the activity of some milk enzymes with antimicrobial properties. Although there may be a 30% reduction of some enzymatic activity following pasteurization, other natural antibacterial systems within milk remain unchanged.

Many believe that raw milk contains bacteria beneficial to the human gut health. Some studies suggest that important probiotic bacteria are more beneficial at lower concentrations.

To be safe, advocates for raw milk suggest that milk must come from grass-fed cows, which adds the benefits of carotenoids (a precursor to vitamin A). Moreover, grazing can help lower the environmental impact of dairy farming in the US.

Raw milk from certified organic farms is free from antibiotics, growth hormones, pesticides, and herbicides.

Raw milk advocates also believe in consumer choice and the ability to decide for themselves what is best for their health.

Arguments against raw milk
Public Health institutions in the US generally agree on the health risks of consuming raw milk and benefits of pasteurization, many of which are described below:

- Healthy animals can transmit potentially life-threatening microorganisms, such as Brucella, Campylobacter, Cryptosporidium, Escherichia coli, Listeria, and Salmonella.
- Pasteurization promotes milk safety, since it kills many microorganisms capable of causing harm to people.
- Pasteurized milk retains most of the nutritional benefits of raw milk without the risk of disease.
- Even grass-fed animals on farms that employ excellent safety practices can harbor disease-causing microorganisms. Furthermore, organic milk is not a guarantee that milk is safe unless it is also pasteurized.

Policy options for Minnesota
The following options could be considered regarding the sale of unpasteurized milk in Minnesota:

1. Maintain the status quo
   - Maintain the current Minnesota statute 32.393, which states that raw milk can be sold only at the farm where it is produced.

2. Ban all raw milk sales in the state
   - Banning all raw milk sales will reduce the public health concerns of listeriosis, tuberculosis, and other serious, potentially life-threatening foodborne diseases related to raw milk consumption. However, it will face considerable resistance from a small and growing sector of the community that advocates for more natural (i.e unprocessed) and environmentally friendly food choices.

3. Completely allow the retail sales of raw milk in the state
   - A third option would be to completely allow the sale of raw milk alongside other ancillary regulations to ensure public health and safety. Additional regulations could include: 1) mandatory labels that clearly state the risks associated with consumption of raw milk; 2) ensuring farms selling raw milk are free from reportable diseases and placing them under tighter control (with inspections every 3-6 months instead of the current 24 months); 3) closely monitoring the shelf life of raw milk.
References

10. Mercola.(2018, June 1). Raw milk and cheese are undergoing a renaissance as artisanal foods rise in popularity [website]. Retrieved from https://articles.mercola.com/sites/articles/archive/2016/04/16/raw-vs-organic-milk.aspx . This website is a good example of the predominant arguments fueling the raw milk advocacy.