



Dangers of Unpasteurized Beverages

Why Pasteurize Milk, Juice or Cider?

The list of diseases that can be transmitted by raw or unpasteurized milk, grape juice and apple cider is overwhelming and can include:

- Salmonella
- Campylobacter
- Yersinia
- Brucellosis
- Tuberculosis (TB)
- Shigellosis
- E. coli
- Q Fever
- Streptococcal Infections

These diseases can cause severe diarrhea (which may be bloody), stomach cramps or abdominal pain, vomiting, fever, weakness, and chills.

Some of these diseases are extremely dangerous to infants, young children, the elderly and those who have compromised immune systems. Compromised persons may include those who are receiving multiple steroid, antibiotic or chemotherapy treatments, transplant recipients, and other individuals with immune deficiencies.

Clean raw milk, juice or cider is not necessarily safe. It may be low in dirt particles and bacteria, but could still contain disease-causing germs.



Raw milk, cream, grape juice and apple cider can be rendered entirely safe for human consumption by pasteurization. Effects on the nutritional value are minimal and of no consequence.

What are the Steps in Pasteurization?

* FOR PERSONAL HOME USE ONLY.

The pasteurization process consists of three essential steps:

1. Heating.
2. Holding.
3. Cooling rapidly.

Equipment Needed

- Double boiler (stainless or aluminum).
- An accurate metal stem-probe thermometer (cooking thermometer).
- Storage containers (litre-size mason jars are suitable).

How Pasteurization Can be Done Safely at Home

1. Sterilize storage containers by boiling in water for 10 minutes. Set aside with tops placed on loosely.
2. Place milk, juice or cider in the top part of the double boiler. Gradually raise the temperature (while stirring frequently to prevent burning) to:
 - a. 63 degrees Celsius (150 F) and hold at this temperature for not less than 30 minutes. Remove the skin that forms on the surface of the milk, OR
 - b. 72 degrees Celsius (162 F) and hold at this temperature for not less than 16 seconds.

Remove any skin that forms on the surface.
3. To check the temperature of the milk, juice or cider, insert the thermometer into the liquid only two-thirds of the way down (do not rest it on the bottom or sides).
4. Pour milk, juice or cider into the sterilized containers. Place containers into a sink of cold water to cool for 15 minutes.
5. Place the containers in the refrigerator to cool the liquid to a temperature below 4°C (40°F) within six hours.

Continued on reverse.

Milk is a highly perishable food and an excellent source of food for the growth of bacteria. Pasteurized whole milk should keep for up to two weeks in the refrigerator.

Don't assume store-bought juice or cider has been pasteurized. Check labels for pasteurization information.

Remember:

The only truly safe milk, juice or cider is that which has been pasteurized and protected from subsequent recontamination.

Commercially pasteurized milk is a safe choice for human consumption. It has the added advantage of being fortified with Vitamin D.

Can a Microwave be Used for Pasteurization?

Microwave ovens are not recommended for home pasteurization. It is difficult to achieve the uniform distribution of heat that is required for effective pasteurization.

What About Commercial Pasteurizers?

Commercial pasteurizers are also available. These are water-jacketed units, heated electrically with thermostatic controls. When the pasteurizing cycle is completed, the pasteurizer will turn off automatically and a loud buzzer will sound, which is the signal to commence cooling the product.

Advantages to using a commercial pasteurizer:

- Greater convenience.
- Requires very little attention during pasteurization.
- Provides greater assurance against under- or over-heating the product.
- Cools rapidly.
- Better taste.

For more information on safe food handling, contact your local Public Health Inspector.

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