



Avoid Open Kettle Canning: Always Process Canned Goods

Processing involves heating jars of food in a boiling water, atmospheric steam, or pressure canner. The heating process destroys microorganisms and creates a strong vacuum seal.

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What is Open Kettle Canning?

- Open kettle canning involves filling a sterilized jar with hot food, applying the lid and band, and allowing the lid to seal as the contents in the jar slowly cools to room temperature. As the contents cool a weak vacuum seal is formed.
- Open kettle canning has **no** processing step in boiling water, atmospheric steam or under pressure.

What is the origin of Open Kettle Canning?

- According to a USDA article by [Breazeale and Benson](#) in 1936, open kettle canning is the oldest method of canning and is quicker than processing the food in a jar. Even at that time, they recognized that food can easily be contaminated while pouring it into the jars.
- Until the 1980's this method was used for jams and jellies and for highly acidic foods such as pickles, and relishes. Recipes can be found using this method for those foods in

old USDA and Extension publications. Extension educators *no longer* teach that the open kettle method of canning is safe.

- It is not recommended for juices, tomatoes or fruit, but some canners report using it. A study by the National Center for Home Food Preservation in 2000-2001 indicated 21% of survey participants did some open kettle canning.
- Some people think that if the jar is sealed it is safe—this is not true if improper canning methods are used.

What are Safety Issues with Open Kettle Canning?

- Food that is open kettle canned is not adequately heated to destroy spoilage organisms. Molds and yeasts can enter the jar while you are filling the jar; processing heats the headspace of the jar destroying them.
- Mold lowers the pH of a food and a lower pH provides an environment for *C. botulinum* spores to germinate and produce the toxin that causes botulism.
- Open kettle canning is not safe for low acid foods such as meats, soups, and vegetables that are not pickled. In addition to molds, yeasts, and bacteria that might form on these canned goods, low acid foods can support the growth of *Clostridium botulinum* spores that germinate in the absence of oxygen in a sealed jar of low acidity at room temperature. Germination of *Clostridium botulinum* spores causes a potentially fatal illness called botulism.
- Processing jars in a boiling water bath, atmospheric steam or in a pressure canner drives air out of the jar and produces a strong vacuum seal. A weak vacuum seal may unseal later allowing microorganisms to enter the jar during storage.
- **Open kettle canning is not safe!** It is especially dangerous when used for canning tomatoes or tomato products where the acid level may be low enough to allow bacterial growth. Never open kettle can low acid foods (meats, vegetables, soups). These foods must be pressure canned for safety.

Just because a lid “pops,” doesn’t mean the contents inside the jar are safe. The time saved with open kettle canning is not worth the risk of food spoilage or illness.