



## False Sense of Security

By Sue Mosbacher

UCCE El Dorado County Master Food Preservers

A sealed jar can give a false sense of security. Too often people think that if a jar of home preserved food has a vacuum seal, it must be safe. Not true. A vacuum seal means that enough air was driven out of the jar to suck the lid down tight enough to make the seal. That's all. A sealed jar doesn't have anything to do with the safety of the food inside - that's the result of following the proper processing technique.

In July of 2012, three people were hospitalized in Oregon with botulism caused by eating beets that had been canned in a boiling water bath canner and then stored at room temperature. It's easy to understand why it may seem to make sense to do this because boiling water is supposed to kill the bad stuff in food, right? Nope - not everything - especially not botulism.

In May of this year, a Washington lawyer got botulism after eating elk he canned by changing an old family recipe. He processed the meat in a pressure cooker (not a pressure canner) and sped up the cooling time. He is lucky to be alive, and even after months of recovery he still has trouble walking and his taste buds don't work.

(Read the whole story on the Master Food Preservers' main website [http://cecentralsierra.ucanr.edu/Master\\_Food\\_Preservers/Food\\_Safety/](http://cecentralsierra.ucanr.edu/Master_Food_Preservers/Food_Safety/))

Putting low acid foods (vegetables, meat and seafood) in jars and sealing them without either acidifying (with vinegar/fermentation) or processing using a pressure canner is a bad idea. It creates the ideal environment for botulism toxin. And botulism can be devastating, often resulting in paralysis and a long recovery period.

Botulism is caused by *Clostridium botulinum* bacteria, which exist either as spores or as vegetative cells. The spores, which are comparable to plant seeds, can survive harmlessly in soil and water for many years. When ideal conditions exist for growth, the spores produce vegetative cells which multiply rapidly and may produce the deadly botulism toxin. This ideal condition consists of no oxygen, low acid, and room temperature. Improperly home canned foods can provide this environment.

The level of acidity in high acid foods (most fruits) prevents the growth of botulism. Vegetables, meats and seafood do not have enough acid to destroy the botulism spores. You need to kill the spores at temperatures between 240° to 250°F. Obviously, you can't reach this temperature with boiling water, so you must use a pressure canner.

Closer to home than Oregon and Washington is Georgetown. Last summer a regular attendee of our MFP classes paid attention to the advice Master Food Preserver Dick Hall gave when he explained why there are two methods for home canning and when to use each. She had always canned peas (a low acid food) the way her mother and grandmother had – in a boiling water bath canner. When she came to class the next week, she reported that she had decided to throw out her improperly canned green peas. She fed them to her chickens.

The next day, half of her chickens were dead. Coincidence? Maybe. She didn't have the chickens tested for botulism. Worth the risk? No.

So with the potential to create a deadly toxin, why in the world would anyone can low acid foods? Because when you understand and follow the process, pressure canning is a very safe way to preserve broths, soups, meat sauces, vegetables, and the results of a successful hunting or fishing trip!

It's a great feeling to grab a jar of ready-to-heat homemade soup or stew out of a cupboard and be able to pronounce the name of each ingredient. Join the Master Food Preservers on Saturday, August 10 and Tuesday, August 13, for a free pressure canning class. Learn how to properly use and care for a pressure canner and watch several live demonstrations. Bring your pressure canner; Master Food Preservers will test the gauge for accuracy and examine the entire canner.

This year's annual series of free UCCE El Dorado County Master Food Preservers classes are from 10 a.m. to noon in the El Dorado County Fairground's Boardroom at 100 Placerville Drive in Placerville. Master Food Preservers are also available to answer home food preservation questions; leave a message at (530) 621-5506. For more information about the public education classes and activities, go to the Master Food Preserver website at [http://ceeldorado.ucdavis.edu/Master\\_Food\\_Preservers/](http://ceeldorado.ucdavis.edu/Master_Food_Preservers/). Sign up to receive our Master Food Preservers E-Newsletter at <http://ucanr.org/mfpenews/>.