

# Watch out for botulism when home canning

Editor's note: This article and several others like it to be printed in the upcoming summer months stem out of a report by the Cooperative Extension Service of Pennsylvania State University and the U.S. Department of Agriculture

that people use researched methods to insure preserved foods which will be safe for the family.

These organizations point out that many homemakers are still using methods no longer recognized as safe,

and these methods are passed on to novice canners who don't know where to find reliable information.

Botulism is the food poisoning feared most by people who do home canning. Since 1925 there have been

more than 700 deaths attributed to botulism associated with eating home canned foods. Last year there were seven deaths, one in Pennsylvania. If that one Pennsylvanian would have been a member of your

family, it would have been one too many.

If you ignore or abuse factors which control the development of toxins in food such as not following accurate and up-to-date canning procedures, toxins or botulism can result. Botulism is an illness caused by eating foods which contain a potent toxin produced by a bacterial species called *Clostridium Botulinum*.

If *Clostridium Botulinum* bacteria are not killed during processing of canned foods, they survive and in the absence of air in the jar, produce poisonous toxins which cause botulism. Even with modern medical treatment, these toxins are generally fatal to one-third of the people eating the affected foods.

Botulism toxins will grow in low acid foods such as corn, lima beans, carrots, squash, peas, green beans, and meats, if they are not processed using modern methods and time tables.

To prevent chances of botulism, use correct methods and equipment. The pressure canner is the only safe way to can all meats and all vegetables, except tomatoes and pickled beets.

The temperature of 240 F inside the pressure canner at 10 pounds pressure at the specified time is enough heat to destroy heat-resistant bacteria that causes botulism, that may be on low acid vegetables and meats. This heat process schedule also destroys other microorganisms on these foods and on canning jars and lids. A boiling water bath only reaches a temperature of 212 F which is not high enough to destroy botulism producing bacteria.

A pressure canner is a heavy, deep kettle with a rack in the bottom and a tight fitting lid that locks into place when in use. A gasket fits between the canner and the lid so pressure can be built up inside the canner. When pressure is built up the internal temperature is higher than that of boiling water. At 10 pounds pressure the temperature should be 240 F. This temperature when heat processed for the

specified times is enough to destroy heat-resistant bacteria that may be on low acid vegetables and meats.

For canning fruits, tomatoes, pickled beets and pickles, a boiling water bath canner is necessary. Also, jellies that will be sealed with the two-piece metal lids should be processed in the boiling water bath canner. The boiling water bath temperature of 212 F is high enough to process these acid foods using modern time schedules. The canner must be deep enough so that the water will cover the jars for one inch—preferably two inches—and be able to boil rapidly.

The processing time depends on the kind of food or whether it was packed raw or hot in the jars, and size of jars. Always follow processing time recommended in a modern canning timetable. Processing food in the boiling water bath for 15 minutes or longer destroys micro-organisms on the jars and lids as well as on the food. If you are processing foods for less than 15 minutes, such as pickles and jellies, sterilize the jars.

The only jars recommended for home canning are "Mason-type" jars, identified with the manufacturer's name on the front. Jars without this identification are made for commercially produced foods such as mayonnaise, pickles and instant coffee. These commercial type jars are referred to as "one-way-trip" jars and are not to be used in home canning.

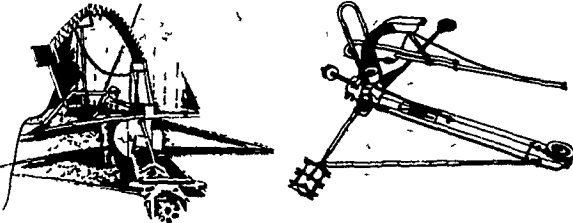
Canning jars should be free of all cracks and chips. Even very fine hairline cracks indicate a weakness in the jar and it is likely to break in the canner.

Carefully examine the sealing surface of each jar for nicks, scratches, or other defects by holding jar at eye level and running your finger over the entire sealing surface. If there is any kind of bump or depression on the top sealing edge of the jar, it probably will not seal.

If you are using old jars make sure there are no

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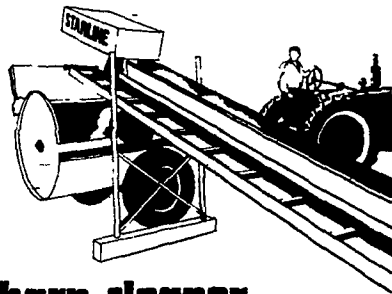
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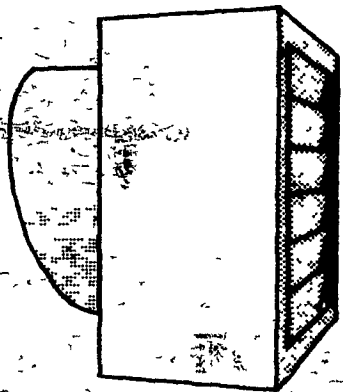
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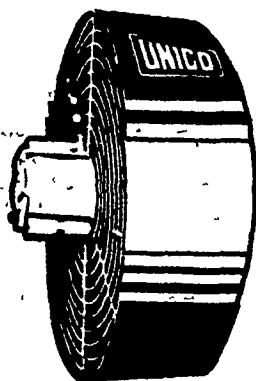
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