

FACT OR MYTH? *Pressure canning green beans is the only way to can them safely.*

FACT. Boiling water baths will not get hot enough to inactivate *Clostridium botulinum* spores.



There are no safe options for canning low-acid foods in a boiling water bath.

Acidity

Low-acid foods, or foods with a pH of 4.6 or less, do not have enough acid to prevent the growth of these bacteria. String beans are low-acid because they have a pH of 5.6. Mixtures of low- and high-acid foods probably have a pH above 4.6 unless enough acid is used to lower the pH to 4.6 or less. Adding vinegar, although it is an acid, still does not permit reduction of the processing time for canning fresh vegetables.

Temperature

Because spores are difficult to destroy at boiling water temperatures (212°F), higher temperatures seen with pressure canners are needed to destroy them more easily. Canning temperatures for

low-acid vegetables are 240-250°F using a pressure canner operating at 10-15 PSI for the appropriate length of time (20-100 min to destroy bacteria). At sea level, a pressure canner operating at 10.5 PSI sustains a temperature of 240°F.

More Information

- National Center for Home Food Preservation: <http://www.nchfp.uga.edu>
- Principles of Home Canning: <http://nchfp.uga.edu/publications/usda/GUIDE%201%20Home%20Can.pdf>
- How to Can Green Beans: http://nchfp.uga.edu/how/can_04/beans_snap_italian.html

Clostridium botulinum spores, although found on most fresh foods, are harmless on these foods. They grow rapidly in moist, low-acid environments with little or no oxygen present at temperatures between 40 and 120°F. Under these conditions, spores can produce a deadly toxin that can cause gastrointestinal distress, severe neurological damage, or death.

Canning Tips

- ❖ Check your altitude. At higher altitudes, internal canner temperatures will be lower.
- ❖ Make sure to vent your pressure canner 10 minutes before pressurizing. Trapped air can lower the temperature in a canner at 5, 10, or 15 PSI, resulting in under processing.
- ❖ Check dial gauges annually for accuracy. Gauges that overestimate lead to under processing.
- ❖ Handle parts and equipment with care. Use and clean according to manufacturer's instructions.

