

Electric Pressure Cookers: What You Need to Know



Introduction

Highlights

- Electric pressure cookers (EPCs) are popular and provide multiple functions beyond pressure cooking: sautéing, slow cooking, steaming, cooking rice, and preparing yogurt.
- EPCs are not the same as pressure canners, and they cannot be safely used for home canning.
- EPCs use steam and pressure to cook foods more quickly than traditional stovetop methods.
- EPCs can reduce the need for multiple appliances and save kitchen space.
- EPCs have many safeguards, and most reported injuries involve hot contents escaping under pressure, often linked to improper operation or failure to follow manufacturer instructions.

Electric pressure cookers (EPCs) are a popular kitchen appliance designed to make meal preparation easier, faster, and more efficient. On Black Friday in 2017, popular retailers experienced a surge in EPC sales, with top brands being in the top five or even top three items sold. Multiple brands manufacture EPCs, such as Instant Pot®, Ninja® Foodi, and Crock-Pot™ Express, among others (Good Housekeeping, 2024).

It is important to note that electric pressure cookers are **not** the same as pressure canners. They cannot be used safely for home canning due to inconsistent processing results (Merrill et al., 2020; Hirneisen, 2025; Brandt & Oehler, 2023). However, EPCs do offer multiple cooking functions beyond pressure cooking, including sautéing, slow cooking, steaming, cooking rice, and preparing yogurt.

How Electric Pressure Cookers Work

Electric pressure cookers typically consist of three main parts: inner pot, cooking base, and lid.



- **Inner pot:** This pot holds the food and required liquid (generally at least 1 cup, depending on the brand of EPC; users should refer to the manufacturer's manual).
- **Cooking base:** The base contains the heating element, control panel, and temperature sensors that regulate pressure and prevent unsafe conditions.
- **Lid:** The lid contains a sealing ring, a steam release valve, and a float valve that locks when the correct pressure is reached. The steam release valve controls whether the cooker is sealed for pressure cooking or venting steam. When set to "sealing," the cooker builds and maintains pressure for cooking. When set to "venting," steam escapes to release pressure after cooking or prevent pressure buildup during certain functions. This mechanism is essential for safe operation and proper cooking results. These safety mechanisms prevent the lid from opening while under pressure.

Cooking occurs when the heating element heats the liquid, causing it to boil and produce steam. With the valve sealed, steam pressure builds, allowing food to cook at a higher temperature and faster rate than traditional stovetop methods. When cooking ends, users may allow the pressure to be released naturally (slow and safe) or perform a quick release by opening the valve. Quick release is not recommended when cooking with large amounts of liquid (generally more than half the pot's capacity or recipes with broths, soups, or starchy liquids). Excess liquid can cause splattering and burns when steam escapes rapidly.

How Do Electric Pressure Cookers Compare to Other Appliances?

A *Consumer Reports* test compared an Instant Pot to the seven appliances it claims to replace (Janeway, 2018). Table 1 displays key findings.

Table 1. Comparing Electric Pressure Cooker to Other Appliances

Function	EPC results
Pressure cooking and rice cooking	It was faster and effective compared to single-function appliances.
Slow cooking and yogurt making	It was comparable in quality to dedicated appliances.
Steaming	Results were acceptable, though a traditional steamer produced firmer, more colorful vegetables.
Sautéing	This was the weakest function; the EPC struggled to properly sear meats compared to an induction burner.
Warming	While effective, it was not as consistent as a dedicated warming tray.

Overall, EPCs reduce the need for multiple appliances and save kitchen space. However, it is important to remember that EPCs cannot replace pressure canning equipment. Again, EPCs are designed for cooking, not for pressure canning, and using them for canning can lead to unsafe food preservation (Merrill et al., 2020; Hirneisen, 2025).

Safety Considerations

Stories of stovetop pressure cookers “exploding” have contributed to consumer hesitation. Modern EPCs are designed with multiple safeguards, including sensors and automatic shut-off features, to reduce risks (Roose, 2017). However, recalls have occurred due to issues such as lids opening prematurely, overheating, or incorrect markings that led to overfilling. These hazards can result in burns or property damage if the appliance is misused or defective. Most reported injuries involve hot contents escaping under

pressure, often linked to improper operation or failure to follow manufacturer instructions.

To reduce risk, users should:

- Always follow the manufacturer’s guidelines for liquid levels and venting.
- Ensure the lid and sealing components are properly positioned before cooking.
- Avoid forcing the lid open until pressure is fully released.
- Regularly inspect the appliance for wear or damage and register it so you receive safety alerts.

When used correctly, electric pressure cookers remain a safe and efficient tool for meal preparation. Most reported accidents involved misuse or failure to follow manufacturer guidelines (Instant Pot Company, 2015).

Educational and Extension Perspectives

Across the U.S., land-grant universities and Extension professionals have developed resources to help consumers safely and effectively use EPCs. For example, the Pacific Northwest Extension produced a [peer-reviewed guide to using and caring for EPCs](#) (Buck et al., 2021). Mississippi State Extension highlights EPC efficiency, cost savings, and nutrient retention benefits (Madkin et al., 2024). [Cooking Under Pressure](#) is a hands-on program created by a team of University of Idaho Extension educators that improved consumer confidence and knowledge about EPC use (Robertson et al., 2024). These examples reflect the broad Extension consensus: EPCs are valuable tools for everyday cooking, but they are not suitable for pressure canning.

Conclusion

Electric pressure cookers offer convenience, versatility, and efficiency in everyday cooking. They are not suitable for pressure canning, as confirmed by multiple Extension research studies and national guidelines. When used properly, EPCs provide a safe and effective way to prepare meals quickly while saving counter and storage space. Extension professionals across the country continue to provide education and resources to help consumers make informed, safe, and confident choices in using EPCs.

Disclaimers

The mention or display of a trademarked product in this publication does not constitute an endorsement by Utah State University Extension or by other land-grant universities cited. References to specific companies, brands, or appliances are made solely for educational purposes. Alternative products may be suitable, and readers are encouraged to evaluate options based on individual needs and preferences.

The authors did not use generative AI in creating this content, and it is solely the work of the authors. This content should not be used for the purposes of training AI technologies without express permission from the authors.

References

Brandt, J., & Oehler, N. (2023). *Safely canning foods: Pressure canners, pressure cookers, and electric pressure cookers* (EM 9152). Oregon State University Extension. <https://extension.oregonstate.edu/catalog/pub/em-9152-safely-canning-foods-pressure-canners-pressure-cookers-electric-pressure>

Buck, J., Greenway, S., Hutchings, B., Hansen, L., & Robertson, A. (2021). *Guide to using and caring for your electric pressure cooker* (PNW 747). Oregon State University Extension; Washington State University Extension; University of Idaho Extension; U.S. Department of Agriculture. <https://extension.oregonstate.edu/catalog/pub/pnw-747-guide-using-caring-your-electric-pressure-cooker>

Good Housekeeping. (2024). *Best electric pressure cookers*. Hearst Magazine Media. <https://www.goodhousekeeping.com/appliances/pressure-cooker-reviews/g204/electric-pressure-cooker-reviews/Authors>

Hirneisen, A. M. (2025). *Canning in electric multi-cookers*. Penn State Extension. <https://extension.psu.edu/canning-in-electric-multi-cookers>

Instant Pot Company. (2015). *Instant Pot programmable electric pressure cooker: User manual*. Ontario, Canada.

Janeway, K. (2018). Countertop face-off: Can the Instant Pot replace all those other appliances? *Consumer Reports*. <https://www.consumerreports.org/kitchen-appliances/can-the-instant-pot-replace-all-those-other-appliances-countertop-face-off/>

Madkin, Q., Jolley, J., Brandon, A., & Bernardo, J. (2024). *Nutrition and wellness: Electric pressure cookers* (Publication No. P3564). Mississippi State University Extension. <https://extension.msstate.edu/publications/nutrition-and-wellness-electric-pressure-cookers>

Merrill, C., Allen, K., Haws, S., Hunsaker, T., Mathis, P., Wray, P., & Serfustini, E. (2020). *Why electric pressure cookers are not pressure canners*. Utah State University Extension. https://digitalcommons.usu.edu/extension_curall/2081/

Robertson, A., Greenway, S., Peutz, J., Buck, J., Hansen, L., Morrisroe, B., & Martinez, S. (2024). Cooking under pressure: Teaching consumers safe and effective electric pressure cooker use. *Journal of NEAFCS*. <https://neafcs.memberclicks.net/assets/documents/journal/2024-journal/Cooking%20Under%20Pressure%20Revised.pdf>

Roose, K. (2017). Inside the home of Instant Pot, the kitchen gadget that spawned a religion. *The New York Times*. <https://www.nytimes.com/2017/12/17/business/instant-pot.html>



February 2026
Utah State University Extension
Peer-reviewed fact sheet

[Download PDF](#)

Authors

Callie Adams and Emily Smith