

Perfect Meals with Pressure Cooking¹

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Preparing great tasting, healthy meals can be a time-consuming task, but pressure cooking is a great way to prepare them in just minutes! Although they may seem old fashioned, pressure cookers are making a comeback because they can cook tough cuts of meats such as corned beef and stew beef to perfection and take far less time and energy than using standard boiling or steaming methods. This is a great option for today's busy families who are trying to save both time and money! Pressure cooking is also a healthy cooking option because it maintains the natural flavor and nutrients of food. Delicious, healthy meals are just minutes away with this handy device!

Types of Pressure Cookers

There are many different types of pressure cookers available now. Your choice should be determined by your budget and needs. The two main kinds of pressure cookers are stovetop and electric.

Stovetop pressure cookers use a heat source such as your stove to bring the pot up to pressure and cook food. They require a little more attention when using; once they reach the required cooking pressure, the heat should be turned down.

Electric pressure cookers have a built-in electric heat source that is regulated automatically. They are easy to use, programmable, and often have other features such as sauté and steam. This type of pressure cooker is insulated, keeping the outside of the cooker cooler than a stovetop pressure cooker.



Figure 1. Pressure cookers are a great option for today's busy families interested in making quick, healthy meals on a budget.
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Pressure cookers vary in size; therefore, determining what size is right for you should be based on what you plan to use it for. Small 3-quart cookers are good for individuals who will be cooking one food at a time. Medium 6-quart cookers are popular among small families. Cookers that hold 8 quarts or more are perfect for large families or people who want to cook large quantities of food.

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To learn more about the different brands of electric pressure cookers and multi-cookers, visit <https://www.consumer-reports.org/cro/multi-cookers/buying-guide/index.htm>.

How Pressure Cookers Work

The pressure cooker works by creating steam to build pressure. A small amount of water or other liquid is placed in the bottom of the pot and heated to boiling. The boiling liquid produces steam, which is trapped under a tightly sealed lid. This raises the pressure and temperature to very high levels so that food cooks thoroughly in just minutes. Most pressure cookers have a pressure gauge that allows you to adjust the pressure within the cooker. They also contain a release valve to release the pressure. The newest generations of pressure cookers, including electric pressure cookers, have a spring-loaded valve that pops up when the correct pressure is reached within the cooker. There are many different pressure cookers, so refer to the owner's manual before using your model.

The Benefits of Pressure Cooking

The following benefits make learning how to use a pressure cooker worth it!

Cook meals in less time. While meals prepared in slow cookers or ovens can take hours to cook, pressure cooker meals are usually ready in a half hour or sooner.

Save money. With shorter cooking times, families can save money on their energy bills every month. Grocery bills can also drop, since cheaper cuts of meat can be used in pressure cooker recipes. This can lead to big savings over the year!

Make healthier meals. Certain traditional cooking methods can destroy some of the vitamins and minerals in food. Pressure cooking preserves these nutrients because the food is cooked quickly in a sealed environment. This results in healthier meals.

Using Your Pressure Cooker Safely

Not every pressure cooker operates exactly the same way. Before using your pressure cooker, read the owner's manual for specific instructions and follow them carefully. Here are a few tips to make sure your meals are prepared safely:

- Make sure the vent pipe is free of any bits of food or other blockage. A blocked vent can result in unsafe pressure levels.

- Lock the lid properly so that it does not come open during use. Check the lid-locking mechanism carefully.
- Always use cooking liquid when you are using pressure to cook the food. Although you can brown meats in the bottom of the cooker first, you must then add liquid before sealing the lid and building pressure. Operating the pressure cooker without liquid or allowing the cooker to boil dry will damage the unit and can be dangerous. The amount of liquid required varies depending on the size of your pressure cooker.
- Never fill the cooker more than two-thirds full of liquid, or more than half full if you are cooking foods that expand, such as rice. You need enough head space for the pressure cooker to function properly and safely. Leaving adequate space helps prevent boiling liquid from seeping out of the pot.
- Brown meats before adding liquid or other ingredients to develop good flavor. When using an electric pressure cooker to brown meats, be sure to deglaze the pan (i.e., remove all the bits off the bottom) with a bit of liquid before sealing the cooker. Do NOT open the lid of the device until the pressure has completely dropped.
- Do not leave the pressure cooker unattended during use. Check the pressure gauge occasionally to be sure everything is working well.

Pressure and Cooking Time

It is important to pay attention to both the cooking time and pressure of your device while preparing meals. Specific cooking temperatures and times will vary for different pressure cookers and foods. Foods cook very rapidly under high pressure. Increasing the pressure will cook food faster and may result in overcooked food if you leave the food in for too long. Before following any recipe, you should always read your owner's manual for specific instructions on temperature, time, and pressure. We have provided a general cook time chart for some common foods.

Food	Cooking Time in Minutes	Amount of Cooking Liquid
Beef, corned, 3 pounds	50–60	2 cups
Pork roast, 3 pounds	40–45	1½ cups
Pork, ham shank, 3 pounds	30	1½ cups
Chicken, whole, 2–3 pounds	15–20	1 cup
Chicken, pieces, 2–3 pounds	8–10	¾ cup
Corn on the cob	3	½ cup
Potatoes, new, small whole	5	1 cup
Turnips, quartered pieces	3	½ cup
Okra, small pods	2–3	½ cup
Collard greens, chopped	5	1 cup

Canning in an Electric Pressure Cooker

It is not recommended to use an electric pressure cooker for canning, even if your electric pressure cooker states that it can be used for this purpose. According to the USDA, foods may end up being underprocessed and unsafe in an electric pressure cooker. Electric pressure cookers were not tested for canning, and the time, temperature, and pressure combination may not be sufficient to kill harmful bacteria. Each step in the canning process kills bacteria; this includes the time it takes the canner to come to pressure and temperature, the process time, and the cool-down time. Electric pressure cookers hold less water and have less metal, so they come to pressure more quickly than a pressure canner. They also cool more quickly than a pressure canner. As a result, the food product experiences a shorter heating period, and harmful bacteria may still be present.

Conclusion

Learning how to use a pressure cooker may take some time, but in the end, it will save you more than time. Pressure-cooked food can be delicious and nutritious. Tasty meals can be prepared in very little time while preserving nutrients and saving energy. So get creative and get cooking... pressure cooking, that is!

For More Information

To learn more about pressure cooking, contact your local UF/IFAS Extension Family and Consumer Sciences (FCS) educator (look in the blue pages of your telephone book). In Florida, find your local UF/IFAS Extension office at <http://sfyl.ifas.ufl.edu/find-your-local-office/>.

Reference

Jones, N. H. (n.d.). Pressure Cooking: Safety 101. Accessed on November 9, 2011. Retrieved from <http://cleveland.ces.ncsu.edu/index.php?page=news&ci=FOOD+14>

Recipes for the Pressure Cooker

Pot Roast

INGREDIENTS

- ¾ teaspoon black pepper
- ¾ teaspoon table salt
- ¼ teaspoon garlic powder (not garlic salt)
- 1 beef chuck roast (about 3 pounds), boneless
- 2 tablespoons canola oil
- 1 medium onion, chopped fine

- 1 small carrot, cut into small dice
- 1 small rib celery, cut into small dice
- 1 cup low-sodium chicken broth
- 3 medium red potatoes, peeled and cut into eighths
- 4 medium carrots, peeled and cut into 2-inch chunks

INSTRUCTIONS

Rub the salt, pepper, and garlic powder into the roast. Heat oil in pressure cooker over medium-high heat. Put roast in pot and brown thoroughly on all sides, maintaining heat so fat sizzles briskly but does not smoke, about 15 minutes. Transfer the roast to a dish. Add onion, small diced carrot, and diced celery to pot and sauté 2 to 3 minutes or until softened. Add the broth and increase heat to high. Lower rack into pot; set browned roast on rack. Cover the cooker and fasten the lid, then bring to high pressure. Reduce heat to maintain high pressure and cook 1 hour. Quick-release the pressure according to the instructions for your cooker.

When pressure has dropped, carefully remove lid, tilting it away from you, and test the meat. It should be fork-tender. Remove the meat, wrap in aluminum foil, and set aside. Remove rack from cooker and reserve vegetables that were cooked with meat. Add potatoes and medium carrots to the cooker. Once again, cover cooker and fasten the lid. Bring to high pressure. Reduce heat to maintain high pressure and cook 4 minutes. Quick-release the pressure according to the instructions for your cooker. When pressure has dropped, carefully remove lid, tilting it away from you. Transfer vegetables to large dish; cover with foil. Cut pot roast into thin slices. Arrange on platter and surround with vegetables.

Mixed Vegetable Stew

INGREDIENTS

- 3 tablespoons olive or vegetable oil
- 1 large onion, chopped
- ¼ teaspoon garlic powder
- 2 medium red potatoes, peeled and diced
- 2 large carrots, peeled and diced
- 1 cup peas, fresh or frozen
- 1 pound lima beans, shelled
- ½ pound fresh green beans, trimmed and cut in half
- 2 teaspoons flour
- 1 cup chicken broth or vegetable stock
- Salt and pepper to taste

INSTRUCTIONS

Heat oil over medium-high heat. Add onion and garlic and sauté 4–5 minutes, or until onion is soft. Stir frequently so that onions do not brown. Add the other vegetables and cook 2 minutes, continuously stirring. Sprinkle in the flour, salt, and pepper and stir; add the stock. Position the lid and lock it in place. Raise the heat to high and bring to high pressure. Adjust the heat to stabilize the pressure and cook for 4 minutes. Remove from heat and lower pressure using the cold water-release method. Open the pressure cooker and add salt and pepper to taste.