



Under Pressure - Meals in Minutes

2021 Leader's Guide and Members' Handout

Written by Linda Leonard, KAFCE Education Program Committee

This lesson can be used along with Hearth Fire Series # 70,
"Someone's in the Kitchen.....Using Their New Gadget".

Benefits of Pressure Cooking:

- > Cook Meals in Less Time
- > Make Healthier Meals
- > Save Money

Drawbacks of Pressure Cooking:

- > Where will you store it?
- > Lots of buttons
- > Does not cook in an instant

Electric pressure cookers (also called multipots) are becoming popular. Once you get the hang of it, you can get dinner on the table in a short time. There is, however, one thing to keep in mind with all multipots, you should not expect meals in an instant. Faster, more convenient, and tasty meals, yes. But be prepared for the lag time it takes for the machine to reach and release pressure – 10 to 30 minutes – as well as the usual prep time of cooking. If a recipe calls for a pressure-cook time of only 15 minutes, the total time maybe closer to 45 minutes. However, that is faster than using a traditional oven, but by no means "instant".

Most electric pressure cookers are also multipurpose cookers, or multipots, meaning they can do many things beyond just cooking under pressure. Most pots can steam, sauté, slow-cook pressure cook and even make yogurt. The pressure function is one of the handiest because cooking foods at a lower temperature, but higher pressure allows for a faster cooking time than you would need on a stove or in the oven.

Did you know that the pressure cooker was invented in 1689? Here is some history of the multi-purpose cookers, or multipots:



Denis Papin was a French physicist, mathematician and inventor, best known for his pioneering invention of the steam digester (the forerunner of the domestic pressure cooker), and of the steam engine.

The steam digester (or bone digester, known as Papin's digester) is a high-pressure cooker invented in 1689. It is a device for extracting fats from bones in a high pressure steam environment, which also renders them brittle enough to be easily ground into bone meal.



The first home pressure cookers became popular in the early to mid-20th century. In 1918, Spain granted Jose Alix Martinez a patent for a small home pressure cooker, and he went on to publish the first pressure cookbook in 1924, titled, “360 Recipes for Cooking with a Pressure Cooker”.



By the 1939 World’s Fair, manufacturers in both the United States and Europe were competing to design the best home pressure cooker. Although housewives liked preparing food fast, there was a safety concern. The valve jiggling away on the stove was rather scary. Pressure cookers were known to blow, unsealing, and dangerously spewing their hot steam and liquid contents, resulting in great harm.



However, following much research and advancement, today’s modern multipots are extremely safe. The locking lid, the sealing gasket, and the way the valves on the lid work mean that the cooker will NOT come up to pressure unless everything is correctly in place.

What is Pressure Cooking? Pressure cooking is fun, fast, and easy — once you understand how it works.

Food and liquid are sealed into an airtight vessel, and no steam is released before the pre-set pressure is reached. The boiling point of water increases as the pressure increases, so pressure built up inside the cooker allows the liquid inside to boil at a temperature higher than 212° F.

Electric pressure cookers consist of a pressure-cooking container (inner pot), temperature & pressure sensors, and an electric heating element. Heating is controlled by a built-in microprocessor. Essentially, the cook puts all the ingredients into the inner pot and specifies the pressure-cooking time – the electric pressure cooker does the rest!

We must remember that pressure cookers are not the same thing as pressure canners, and it is important to understand the difference.

- ◆ Pressure cookers or pressure saucepans are used to rapidly cook meats, vegetables, and other foods for a family meal. But they may not maintain adequate pressure, and they heat and cool too quickly to use them to safely pressure can foods.
- ◆ Pressure canners have either dial or weighted gauges. Pressure canners are necessary to safely can foods such as meats and vegetables that are low in acid.

Pressure cookers come in various sizes – let us look at some of the most common volumes and how you might use them in determining the perfect size for your family.

5 Quarts or Less – This is the perfect size for cooking meals for one or two people. If a relative is heading off to College or a friend is moving into a new place, this can be a great and practical gift to help make cooking for one a whole lot easier.

5 to 7 Quarts – This is very much the *standard* size when it comes to pressure cookers. You are provided with more flexibility in terms of the types of meals you can cook fully within the appliance and can look to serve anywhere between 3-5 people with a single use. (6-quart size seems to be the most popular)

7 to 10 Quarts – If you are part of a big family, regularly cook for guests, or love cooking ahead of time and then storing meals for later, this is the perfect size pressure cooker for you. With this volume, you can easily serve groups of more than 6 people, and maybe still have some leftovers for the next day!

This lesson is written with information pertinent to the Instant Pot. In 2009, Robert Wang and a couple of his friends started working on designs for the Instant Pot. Wang had been the chief scientist at a mobile messaging company he had co-founded in 2000, but the company's CEO shut down Wang's division, putting Wang out of a job. So, Wang decided to turn his attention toward solving a personal problem for some time: dinner. The result of his attention was the "Instant Pot". The best Instant Pot models of 2020 according to Kitchen Appliance Experts is the Instant Pot Lux. This is the basic version of the Instant Pot with fewer bells and whistles which makes it super easy to use. It does the work of 6 appliances and has 12 smart built-in programs. However, this pressure only cooks on high setting.

Many people talk about how long they have had an Instant Pot sitting around, because of their fear of opening the box and actually using it. A little reading, a careful study of the manual that comes with the pot, and the many online tutorials can help alleviate the stress.

Do not be intimidated! Let us get started using your electric pressure cooker.

- Step 1: Take it out of the box.
- Step 2: Remove the packaging
- Step 3: Read the manual, or at least look over it.
- Step 4: Plug your Instant Pot in and do the water test. The water test will make sure that your pot is working properly and can reach pressure. Here is how you do it:
 - * Pour 3 cups of water in the Instant Pot inner pot.
 - * Cover the pot and secure the lid. Make sure the valve is pointing to "sealing", not "venting"
 - * Set the STEAM button to 2 minutes (use the + and - button to adjust the time). The pot will take about 10 minutes to come to pressure and then it will start counting down the 2 minutes.
 - * Once the pot beeps after the 2 minutes is up move the valve to "venting".
 - ^ Make sure you **DO NOT** have your hands or face over the valve as the steam is being released. Don't release pressure under hanging cabinets, which can be damaged by the steam.
 - ^ Once all the steam is released remove the lid. You are not ready to start using your Instant Pot.

Before you start cooking, let us go over some Instant Pot vocabulary. When you read a recipe a lot of times, they will use the terms "natural pressure release" and "quick release". Here is what it means:

A **quick pressure release (QR or QPR)** is when you open the valve and allow the steam to release quickly.

If you are using an Instant Pot, you turn the valve from sealing to venting to release the pressure.

When the pressure is fully released, the float valve (the little silver piece next to the venting valve) will drop and the lid will unlock to open. *The pressure cooker will not open until the float valve has dropped.*

A **natural pressure release (NR or NPR)** is when the cooking time is over, and you leave the valve closed and allow the pressure to decrease without doing anything.

A natural pressure release can take from 5 to 30 minutes. When the pressure is fully released, the float valve will drop, and the lid will unlock and open.

Some recipes will use a combination of natural release and finish with the quick release.

Now that you have learned some of the basics, the first thing I would suggest making is:

Instant Pot Hard Boiled Eggs

Ingredients: Eggs and 1 cup water

Directions:

- Place a steamer basket or stainless-steel trivet (this should have come with your Instant Pot) in the bottom of the Instant Pot. Add 1 cup of water into the bottom of the pot.
- Place as many eggs as you want on the trivet (do not fill higher than halfway full).
- Secure the lid and turn the sealing vent to “Seal”
- Press the MANUEL button/PRESURRE COOK button and adjust the time to 5 minutes.
- Once the timer beeps, let it sit for 5 minutes and then turn the valve from “Sealing” to “Venting”. (Display will say LO:05. The L stands for lapsed time.)
- Remove the lid and use tongs to place the eggs in ice water.
- When they are cool, feel free to eat them or store in refrigerator.

Other recipes that are great to try is cooking rice, shredded chicken, browning hamburger, or roast. It is much easier to advance to making food where you just pour all items in the pot at one time instead of having several steps to accomplish. Once you get the hang of these simple recipes, you are ready to spread your wings. Enjoy discovering the world of Instant Pot cooking.

Acknowledgements:

Kathy McEwan, Family and Consumer Sciences Agent, Foods & Nutrition, SNAP-Ed Coordinator,
Southwind Extension District – Iola, KS Office

Various internet food and video sites:

Instant Pot LUX Series, User Manual

Six Sisters Stuff (website & videos), <https://www.sixsistersstuff.com>

<https://www.365daysofcrockpot.com>

<https://foodsafety.wisc.edu/consumer/factsheet>

<https://www.paintthekitchenred.com>

<https://www.onegoodthingbyjillee.com>

<https://www.thespirationedit.com>

<https://mycrazygoodlifeo.com>

<https://www.usu.edu>