Description:

Do you own an Electric Programmable Pressure Cooker (EPPC)? Over the last few years, these small appliances have been gaining in popularity with home cooks. Electric Programmable Pressure Cookers are versatile multi-cookers that can do the job of a pressure cooker, slow cooker, rice cooker, steamer, and more. It can save you counter space and money. How can one appliance be a rice cooker and a cake maker at the same time, you ask? That’s the magic of the appliance, which comes with preset programs that are specifically designed to cook food to perfection, whether it be a cheesecake, a stew, or oatmeal.

Objectives:

Participants will identify the benefits of cooking under pressure
Participants will be able to tell how the electric pressure cooker works
Participants will understand safety concerns while using an electric pressure cooker

Introduction

Electric Programmable Pressure Cookers (EPPC’s) are great for the preparation of many foods. From main dishes to dessert, EPPC’s perform well. Since the pressure cooker cooks foods at such a high temperature, things that are naturally tougher or take a long time to cook with other methods tend to do well cooked under pressure.

Examples of perfect pressure cooker foods include, but are not limited to:

- Cuts of meat like chicken thighs or pork chops
- Roasts like rump roast or pork loins
Grains like brown rice  
Dried beans or lentils  
Vegetables such as beets, carrots, potatoes, or winter squash  
Hardboiled eggs

Not Your Grandmother's Pressure Cooker

Today’s EPPCs are not the same pressure cookers your mother or grandmother used back in the day. The new EPPCs have several safety features designed specifically to ensure that nothing except your taste buds explode when using the appliance. BUT you still need to follow the directions for your own appliance. New safety features may include:

- Automatic lid lock and lid detection features (meaning it’s impossible for users to open the lid of the cooker until pressure has been released)
- An anti-blockage vent that ensures food particles don’t block steam from being released during the cooking process
- Automatic temperature controls that keep the inside temperature within a safe range at all times

Benefits of Electric Programmable Pressure Cookers

The benefits of cooking under pressure include:

- Health: Better nutrient retention. 90-95% of nutrients are better kept than other cooking methods
- Fast: Cooks food in less time (can cut 1/3 of the time); can cook from frozen; can cook tougher cuts of meat which get better tenderized when cooking under pressure; easy clean up
Green: Less pots and pans, uses less energy because it requires less energy to cook—could save about 70% of energy, which is comparable to energy-saving light bulbs, shorter cook times, cooler house

Easy: Built-in safety features, convenience, consistent results, keep warm setting, easy clean up

Safe: locking lid, back-up safety valve, emergency release

How the Pressure Cooker Works

The benefits can seem obvious, but what exactly is pressure cooking? It’s a food-preparation method that seals the food inside a vessel with liquid, using heat to create steam, which increases the pressure in the vessel. The appliance then traps or releases steam to control the level of pressure. With more pressure, the boiling point of the liquid rises, and the food cooks faster at a higher temperature.

How the Pressure Cooker Works

1. Lid seals, trapping steam.
2. Trapped steam builds pressure.
3. Higher temp & moisture cooks food fast.

Which One to Buy?

There are some things to consider when purchasing your electric programmable pressure cooker. Different brands and sizes can offer different features. Cost can also play into your decision.

When considering what size to buy, estimate 1 quart per person in your household. 4-quart vessels can be great for singles or couples, 6-quart vessels are the most popular size, and 8-quart vessels can be great for larger families or recipes that produce larger quantities.

Most brands cost $70-$300. Besides cost and size, think about which features are important to you (do you desire basic cooking features, or do you want one that has the capability to make yogurt?). Do you have the space to add another gadget to your kitchen? Are you seeking this appliance to replace multiple other appliances? Consider the inside lining. Is it easy cleaning, non-stick, or stainless steel?

Basic settings that will be present in most models include:

- Slow cooker
COOKING UNDER PRESSURE

- Pressure cooker
- Rice cooker
- Steamer
- Sauté/ browning
- Warming mode

Devices will also feature a timer or temperature control with various settings. Not all machines or settings allow you to choose a temperature, so it’s important to consider what you’ll be making in your EPPC to know if this feature will be missed. Many models also come with additional programs, including a yogurt feature, hard-cooked egg feature, and cake maker. Depending on the size and type of your EPPC, you may be able to insert certain types of cooking vessels directly into the appliance, including cupcake molds or spring form pans. Always follow the manufacturer’s instructions for your specific EPPC. Not all models recommend the use of additional dishes or pans.

How to Use Your Electric Programmable Pressure Cooker

It’s normal to be nervous about using your EPPC for the first time. In general, to use the EPPC safely:

1. Read the instructions that came with your EPPC model and be sure you know the proper way to operate your specific model. If you bought the cooker used or no longer have the instruction manual, check online. You most likely will be able to find it there.

2. Add food and liquid per recipe (at least 1 to 1 ½ cups liquid). Always use the minimum recommended amount of liquid. If you don’t want your food item in the liquid you can use the included rack or another approved insert to elevate your food. Never fill the pressure cooker past the “fill line”. The pressure cooker releases excess pressure automatically to keep the pressure constant inside. If the cooker is too full these parts cannot function properly. In general, do not fill the pressure cooker more than 2/3 full (for most foods). When cooking foods that expand significantly like rice, beans, dried vegetables, and grains, do not fill the cooker more than half full and follow the recommended instructions for cooking these items in your specific owner’s manual or recipe.

3. Secure the lid, ensuring a smooth and tight fit. Be sure the silicone sealing ring is placed correctly. Position the steam release valve to “pressure”. Choose the proper cooking program and time on the display per recipe or manual. The buttons are programmed to be preset with suggested cook times for specific items. Be aware that programmed times may not produce the quality or tenderness you’re looking for. For some products, like beans, you may have to manually increase the cooking time to get your desired results. Refer to your recipe or user manual for specific guidance. Remember that most recipe times do not include the minutes your EPPC will take to build pressure before cooking actually begins, or the time it takes to depressurize. Each of these steps can take an additional 5-10+ minutes. If pressure drops inside the vessel during cooking, cooking time will halt as the machine brings itself back up to pressure. The display will count down cooking time. The EPPC will beep when cooking time has ended. Some find it beneficial to set a timer to know when their cooking is complete since the beeping that signals the end of cooking time can be hard to hear.
4. At the end of cooking time, the appliance will automatically switch to a “keep warm” setting. The display may show “00” or dashes. Your EPPC will begin to depressurize naturally (natural release). Natural pressure release is when you leave the steam release valve in the sealed “pressure” position after the cook time ends. This lets the pressure slowly dissipate on its own, depressurizing as heat gets released from the metal parts of the cover. This takes 10-30 minutes, depending on the amount of food and liquid inside. Foamy foods like rice or dishes with a lot of liquid are best left to the natural release method.

The quick pressure release is when you turn the steam release valve to the venting or “release” position and let the steam escape at the end of the cook time. There will be a strong jet of HOT steam coming from the steam release valve, so use caution. It is recommended you use a wooden spoon to turn the valve, and be sure that the EPPC is not underneath any cabinets (so steam can dissipate freely). Be sure to use protection with the quick release method.

The Water Test

You may get to know how to use your electric programmable pressure cooker by pressure cooking with just water.

To perform a water test:
- Add a two cups of water to the inner cooking pot
- Ensure the gasket is placed correctly. Lock the lid in place, and make sure the valve is in the sealing/pressure cooking position.
- Select a pressure cooking button with a short cook time, or manually increase cooking time to 5 minutes. It will take 5-10 minutes for the machine to build pressure; when pressure is reached the time will start counting down.
- When cooking time has ended, choose to either depressurize naturally or use the quick release method.

Cleaning

It is important to inspect the various parts of your EPPC before each use, and to properly clean your machine after each use to keep your EPPC is proper working order.

For daily clean-up, wash the inner pot, any additional inserts used, and the removable pieces of the lid, which may include silicone sealing ring, with hot soapy water. Wipe down the exterior housing unit, outer pieces of the lid, and cord with a damp cloth. You may need to clean the inside heating mechanism with a damp cloth. Always ensure all pieces are fully dried before using the machine again. Do not submerge vessel in water, and do not use abrasives such as SOS or metal scouring pads on any part of your EPPC.

Small parts, such as the pressure valve, drip catcher, and anti-block shield on the lid, can get dirty over time. They may need a good once-over to remove any stubborn residue or food particles that may be lingering.

If you have a stainless steel inner pot that becomes discolored, scrub with a white vinegar solution. Allow the vinegar to sit in the bottom of the pot for ~5 minutes and then rinse with water. Stubborn stains or cooking remnants (such as if food becomes burnt on the bottom), you may also try scrubbing with baking soda and then soaking with vinegar. Always finish cleaning with hot, soapy water and allow to air dry.
If the silicone sealing ring becomes odorous, try eliminating that odor by soaking the ring in a vinegar solution.

NOTE: IF you replace the silicone ring, replace with the correct manufacturer’s ring for your specific EPPC. Call the customer service line for assistance in choosing the right piece. EPPCs will not be able to operate safely or correctly with the wrong piece.

YOUR EPPC IS NOT A PRESSURE CANNER!

You CANNOT preserve foods in the EPPC. Some recipes and models claim that you can process home-canned goods in the EPPC, but it’s important to note that this is not a USDA approved method for safely preserving food. Your food may end up under processed, and therefore, not safe to eat. Under processed foods can result in foodborne illnesses, including botulism. ALWAYS follow an approved canning method with an approved recipe.

For more information on safe food preservation techniques, please visit the National Center for Home Food Preservation (https://nchfp.uga.edu/), or speak to your local Extension Educator.

Other Safety Concerns

Consider general food safety while cooking in your electric programmable pressure cooker.

It is not recommended to pressure cook large pieces of frozen meats or poultry (such as a whole chicken). You may consider adding smaller cuts of frozen meats and poultry for pressure cooking, and you can easily pressure-cook frozen vegetables. To pressure cook frozen pieces of meat or poultry, you may need to add up to one-third more than the normal cooking time, and results will vary. To enhance cooking and flavor, it is recommended to pressure cook with thawed meats and poultry, or to brown meat beforehand.

In every step of food preparation, follow the four guidelines from the USDA to keep food safe:

- Clean: Wash hands and surfaces often
- Separate: Separate raw meat from other foods, especially those that need no further cooking
- Cook: Cook to the correct temperature recommended by the USDA (see chart for proper cooking temperatures)
- Chill: Refrigerate food promptly

Safe steps in food handling, cooking, and storage are essential in preventing foodborne illnesses. Remember that you cannot see, smell, or taste harmful bacteria that may cause an illness.

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