



## Pressure Cookers

Learning to use a pressure cooker will allow you to cook healthier meals in a much shorter amount of time. Cooking in a pressure cooker can reduce cooking time by up to 70 percent. This method of cooking retains most of the natural vitamins and minerals that are lost during other cooking methods. Using a pressure cooker not only saves time and money, but also is more convenient and produces healthier meals.

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### Step-by-step

These basic steps serve as a simplified guide to using a pressure cooker. They are not intended, however, to be a substitute for the manufacturer's instructions which accompany your pressure cooker model. For safety and to ensure quality results, read the manufacturer's manual completely before starting to cook with your pressure cooker. If you have lost the original owner's manual that came with your cooker usually replacements are available at little or no cost by contacting the manufacturer or visiting their website.

### Before you begin

All pressure cookers have the same principles of operation. Heat produces steam in a closed container which raises the boiling point to cook foods faster. A pressure cooker cooks food in superheated steam; it is not a boiler so there is no reason to submerge foods in water.

There are two basic types of pressure cookers. The old style, first generation pressure cooker with some type of weighted, or "jiggle top" pressure regulator which sits atop the vent pipe on the lid, or the newer style, the second generation which is a closed system and uses spring valves.

Every time you use any pressure cooker it should be thoroughly inspected. The cooker should be clean, inside and out, with no food particles or debris on the rim of the pot, or the lid. There should be no sign of warping, dents or dings, or any other damage to the rim of the cooker or lid. Remove and examine the gasket. The gasket should be in good condition with no signs of cracking, tears or other deterioration such as gumminess or brittleness. Replace the rubber/silicon parts at the first sign of deterioration. The gasket should fit snugly in its place in the lid. If using a jiggle top pressure cooker always check the vent pipe to make sure it is clear and open. On a valve type cooker, lift or turn the valve to make sure it moves freely and the inside connecting screw is tight. Periodically check the handles and tightened the screws as necessary. Read more about the care and cleaning for your pressure cooker, the lid and gasket.

### Filling the Pressure Cooker

Before you cook anything in a pressure cooker there must be some sort of liquid inside the pot. For most recipes this will be water. The minimum amount of water for a jiggle top pressure cooker is 1 cup, and for the newer valve type it is 1/2 cup. This amount of water is usually sufficient for approximately 20 minutes of cooking time, but it is strongly recommend using the Test Drive to determine what is best for your brand. If your recipe takes longer, add more water accordingly.

The pressure cooker must never be filled more than 2/3 full, the unused space is needed to produce pressure. When cooking dried beans or other foods that may foam or froth, or liquids such as broth or stock, do not fill the cooker more than 1/2 full. Many recipes call for the use of a rack or trivet. This is usually a metal insert which is placed in the bottom of the cooker to raise the food above the water for steaming. Once you have placed the rack, add water to the cooker. Place the food on the rack. These basic steps serve as a simplified guide to using a pressure cooker. They are not intended, however, to be a substitute for the manufacturer's instructions which accompany your pressure cooker model.



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### Achieving pressure

If you are using a jiggle top cooker, remove the weighted pressure regulator before closing and locking the lid securely. Place the pressure cooker on the correct size burner on your stove. Do not use a super high heat setting. Set the heat on high to bring the cooker to pressure. For the jiggle top models watch for steam to come out of the vent pipe and then replace the pressure regulator on top.

You can tell when your jiggle top pressure cooker reaches cooking pressure when the pressure regulator begins to rock, or jiggle (thus the nickname). The weight should be rocking about 3 to 5 times per minute.

A more accurate means of determining pressure is found on the new valve type cookers. Marks on the valve stem indicate pressure. The first mark to appear as the stem rises is the lowest pressure setting. On standard pressure cookers these marks will indicate 10 PSI and 15 PSI. Depending on your make and model, you might have three pressure settings, this is usually 5 PSI, 10 PSI, and 15 PSI. 15 PSI is the pressure cooker standard, and the majority of pressure cookers and recipes use this setting as the de facto cooking standard. There are some pressure cookers that do not conform to this standard and use lower PSI settings so you will have to adjust any recipes accordingly. See more information about pressure settings.

### Cooking & timing

Once pressure is reached, you must immediately lower the heat to a setting that will just maintain pressure. If you've done the Test Drive then you have marked this setting on your stove. Begin timing the recipe at this point. Find out more about the pressure cooking times for individual food items by referring to the cooking time charts (pressure cooker manual). As in many other forms of cooking, such as frying, broiling, or grilling, the pressure cooker should not be left unattended. It may be necessary to periodically adjust the heat setting to maintain the desired pressure, this is especially true of the jiggle top pressure cookers, or cookers that do not have the 3 ply base for even heat distribution.

Begin timing after lowering the heat, and ALWAYS use a bell timer when using a pressure cooker. Do not overcook. A couple of extra minutes could turn your recipe into mushy baby food. When the cooking time is up, remove the pressure cooker from the heat source.

**How to release pressure** You cannot remove the lid from a pressure cooker until all the pressure inside has been released. There are three methods to lower the pressure, and you must not attempt to take off the lid if there is pressure inside. Never try to force open the lid of a pressure cooker as this usually indicates there is still pressure inside. Pressure cooking recipes will state a particular method to release the pressure to complete the cooking process. There are three ways to do this. The longest method is called the natural release method which allows longer cooking foods like roasts to continue cooking while the pressure gradually reduces on its own. This could take anywhere from 10 to 20 minutes. The next method is the fastest way of reducing pressure, this is the cold water release, which means taking the cooker to the sink and running a stream of cold water over the lid until the pressure drops. Do not run the water directly over the vent or pressure regulator, and do not use this method if you have an electric pressure cooker. The third method is the quick release method, which is a feature found on some first-generation cookers and all second generation cookers. This method uses a release valve that is located on the lid to manually release the pressure and takes less time than the natural release method, but longer than the cold water release method.



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You can easily tell when all the pressure has been removed from inside the cooker. On a jiggle top, if you move the pressure regulator there will be no sound of escaping steam. Once all the pressure has been removed from the pressure cooker it is now safe to open the lid. First remove the weight to avoid dropping it and then open the lid.

On a valve type or second-generation pressure cooker there will be no sound of escaping steam when the valve stem is moved. Once all the pressure has been removed from the pressure cooker it is now safe to open the lid.

### Common questions

*I have a recipe with directions that say COOK 0 MINUTES, is this an error or what does it mean?*

If the recipe directions say COOK 0 MINUTES, this means to cook food only until cooking pressure, 15 pounds, is reached, then remove cooker from heat and cool according to recipe.

*My recipes tell me to cook certain dishes at 15 pounds and others at 8 pounds, what does this mean?*

Some cookbooks will indicate 8 and 15 pounds, or low and high pressure, but most recipes will just say cook at "high pressure". So 8 psi (pounds per square inch) would correspond to 235 degrees F. The 15 psi equals 254 degrees F. New generation cookers allow you to adjust cooking pressure to either setting. The 'jiggle' top models will only have one setting, most often this will be high (15psi), but check your instruction book.

*Can I convert some of my regular cooking recipes for use in my new pressure cooker?*

Absolutely! You don't need to change the way you cook, just change the time. Food is cooked about 3 times faster under pressure. To convert any standard recipe, divide the time by 3. So a recipe that would take 30 minutes will only take 10 minutes in your cooker. If you are not sure about your timing remember you can release pressure any time and check the progress of your food. If more time is needed bring the cooker back to pressure can cook for a few minutes more.

*How do I adjust the cooking times for high altitude?*

In order to compensate for the lower external pressure at elevations above 2000 feet, the cooking times in a pressure cooker must be altered according to the formula below: For every 1000 ft above 2000 ft elevation, increase cooking time by 5%.

### Pressure cooker benefit – vitamins

How foods are cooked can have a big impact on their nutrient content. The best way to destroy vitamins is to cook your food in an open pot of boiling water. To retain the most nutrients possible, most experts recommend that you use as little water as possible and cook foods rapidly because many vitamins are sensitive to water, heat and air exposure (vitamin C, the B vitamins and folate in particular) and water used for cooking can dissolve and wash away water soluble vitamins, while the heat deteriorates them.

Many vitamins such as "B's" and "C" are water soluble and the simple act of washing them takes away some of the vitamins. Vitamins "D" and "E" are fat soluble. Fat soluble vitamins are stored and metabolized with the fat in our bodies. Fat soluble vitamins are not as volatile as water soluble vitamins and are not as readily "cooked away".



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The longer the cooking time and the higher the temperature, the worse it becomes. It is best to choose the cooking method that most optimizes and preserves the nutrients in food. In a study published by Journal of the Science of Food and Agriculture, researchers investigated effects of various means of cooking broccoli. Up to 97 percent of certain antioxidant compounds were destroyed by microwaving, while steaming the broccoli caused only 11 percent loss. Therefore, any cooking that minimizes the time, temperature, and water will help to preserve nutrients. Pressure cooking under steam is one of the methods best because it minimizes time and requires little water.

### Select the best cooking method

The super-heated steam which is produced by high temperatures inside a pressure cooker makes the food cook quickly and intensifies the natural flavors. This allows cooks to use less salt, sugar, and use less costly herbs and seasonings and still get a better taste. Pressure cooking creates an airless environment that retains more nutrients than other cooking methods. As the foods get cooked quickly with very little liquid, more vitamins, minerals, and other nutrients are preserved and not boiled away during cooking. Since, foods are cooked in a steam atmosphere; it is virtually fat free cooking as well. There are a few other tricks you can employ to preserve nutrients. Minimize the surface area of food by leaving vegetables in big pieces. That way fewer vitamins are destroyed when they are exposed to air. Always cover your pot to hold in steam and heat. This will also help to reduce cooking time. Use any leftover cooking water for soups, sauces, and stews, or vegetable juice drinks. The longer food is exposed to these factors, the greater the nutrient loss.

### Pressure Cooking Function

The pressure cooking program drastically reduces cooking time. Food will maintain its natural color and flavor, while cooking your meals in up to 70% less time. Choose between high and low pressure to prepare a great variety of healthy meals in minutes; from appetizers to entrées and even desserts. Learning to use a pressure cooker will allow you to cook healthier meals in a much shorter amount of time. Cooking in a pressure cooker can reduce cooking time by up to 70 percent. This method of cooking retains most of the natural vitamins and minerals that are lost during other cooking methods. Using a pressure cooker not only saves time and money, but also is more convenient and produces healthier meals.

### Preparing the Pressure Cooker

- Step 1: Insert the rack into the pressure cooker if needed for the specific recipe.
- Step 2: Pour the amount of liquid that is required by the recipe into the pressure cooker, and then add the food.
- Step 3: Check the cover vent pipe for any clogs by looking into it as you are holding it up to a light.
- Step 4: Place the cover onto the pressure cooker and make sure the cover handle and the body handle line up evenly.
- Step 5: Put the cover onto the pressure cooker and close it securely.
- Step 6: Attach the pressure regulator onto the vent pipe of the pressure cooker.

### Cooking With the Pressure Cooker

- Step 1: Heat the ingredients in the pressure cooker, watching for the pressure regulator to begin to rock slowly.
- Step 2: Adjust the level of heat so that the pressure regulator is rocking in a slow, steady motion. This is the point where cooking time begins.
- Step 3: Follow the directions for the specific recipe, cooking for the correct amount of time and reducing the pressure as directed.
- Step 4: Remove the regulator from the pressure cooker when the cover lock air vent drops.
- Step 5: Take off the cover of the pressure cooker and the food is ready to serve.



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### **Tips & Warnings**

Always follow any specific directions for your particular pressure cooker.

“Cool cooker at once” in a recipe means to immediately put it under a cold running faucet or pour cold water over the pressure cooker.

“Let pressure drop of its own accord” means to let the pressure cooker cool on its own off of the heat source.

There are many different types of pressure cookers. These directions apply for cookers with a regulator.