ALL ABOUT SLOW COOKING

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EXTENSION

Using a slow cooker is very easy; just add the food, cover, turn on the heat, and cook all day. Slow cooker appliances cook foods slowly at a lower temperature, so vitamins and minerals are retained, tougher cuts of meat are tenderized, and meats shrink less.

Advantages

- The extended cooking times allow better distribution of flavors in many recipes.
- Tougher cuts of meats (chuck, flank, brisket, rump, and round) and poultry are tenderized through the long cooking process. The slow cooker is a good choice for cooking wild game dishes.
- The slow cooker frees the oven and stove top for other uses and should definitely be considered as an option for large gatherings or holiday meals.
- The lower temperatures lessen the chance of scorching of foods which tend to stick to the bottom of a pan and burn easily in an oven.
- Convenience! A slow cooker can usually be left unattended all day for many recipes.

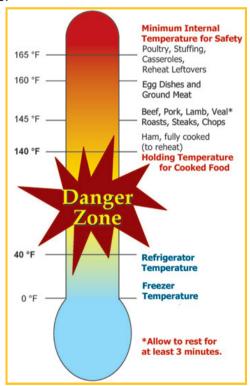
To qualify as a safe slow cooker, the appliance must be able to cook slowly enough for unattended cooking yet fast enough to keep food above the danger zone temperature of 135°F. The LOW setting is about 200°F, and the HIGH setting is about 300°F. WARM is a holding temperature once the food has been cooked.

When you purchase a new slow cooker, use it the first few times, on HIGH and on LOW, before leaving it unattended. Also, remember to place the cooker on a cookie sheet, granite countertop, the stovetop, or a similar heat-resisitant surface. The bottom can get quite hot.

Test Slow Cooker

To determine if a slow cooker will heat to a safe temperature:

- 1. Fill cooker with 2 quarts of water.
- 2. Heat on low for eight hours or desired cooking time.
- 3. Check the water temperature with a food thermometer quickly, as it drops 10 to 15 degrees when the lid is removed.
- 4. The temperature of the water should be at least 185°F. Temperatures below 185°F may indicate the cooker does not heat food high enough or fast enough to avoid food borne illness.



Tips for Success

A slow cooker is a safe process for cooking foods as long as correct procedures are followed.

- Read and follow the safety directions for your slow cooker if possible.
- Always start with a clean slow cooker, clean utensils, a clean work area, and clean hands.

- Thaw frozen meat or poultry before adding them to the slow cooker. You may add frozen vegetables since they thaw more quickly.
- For best results, ground meats must be cooked in a skillet before cooking in the slow cooker.
- Large pieces of meat can be browned before cooking in the slow cooker, but this step isn't necessary. Most meats require 8 hours of cooking on LOW. Lean cuts of meat have less fat, which makes them more suited to slow cooker cooking. Moist, long cooking times result in tender meats.
- Remove skin from poultry, and trim excess fat from meats. Fats will melt with long cooking times and will add an unpleasant texture to the finished dish. Fatty foods will also cook too quickly.
- Slow cookers don't brown food. (Therefore, you may want to sear meats or poultry in a skillet. This is optional but gives extra flavor and added eye appeal.)
- Fill your slow cooker between half-full and two-thirds full. Place slow-cooking vegetables (carrots, potatoes, winter squash) in first on the bottom and around the sides. Then add the meat and cover with liquid such as broth, water, or sauce.
- If using a commercially frozen slow cooker meal, prepare it according to the manufacturer's instructions.
- The U.S.D.A. recommends cooking on HIGH heat for the first hour to quickly bring the temperature up to 135°F. Then turn the dial to LOW and finish cooking. If prep time is limited, it is safe to cook foods on low for the entire time.
- One hour on HIGH is equal to two hours on LOW.
- Keep the lid on the slow cooker, removing it only to stir, add ingredients, or check the temperature.
- Seafood and fish should be added during the last hour of cooking time, or it will overcook and have a rubbery texture.

- Beans used in soups don't need to be soaked before using if you are going to cook the soup on high for 3-4 hours before being turned down to low. Sugar and foods high in acid, such as tomatoes, will have a hardening effect on beans. Therefore, always soften the beans thoroughly before using in such recipes as chili or baked beans.
- Soak and boil dried beans before cooking. Dried beans (especially kidney beans) contain a natural toxin that can make you sick if you do not cook them properly. Before putting dried beans in the slow cooker, soak them for at least 5 hours in the refrigerator, then rinse and boil them on the stovetop for at least 30 minutes to kill the toxin. You can omit this step if you use canned beans.
- Pasta and rice can be cooked in a slow cooker.
 Pasta needs lots of liquid to cook properly and should be added during the last hour of cooking time, depending on the consistency of doneness preferred. Pasta will become very glutinous if added to a slow cooker when dry. It's best to parboil pasta to the tender but not completely cooked stage, then add it.
- Rice can be more difficult to cook. Use brown or wild rice for better results. Make sure there is enough liquid in the recipe so the rice becomes tender. Use long grain "converted" rice for best results in all-day cooking.

Food Items	Safe Internal Temperatures	
Fish	145°F	
Roasts, Steaks, Chops	145°F	
Ground Meats	160°F	
Egg Dishes	160°F	
Poultry, Whole or Ground	165°F	
Casseroles	165°F	
Leftovers	165°F	

- Potatoes can be prevented from darkening by rinsing in one cup of water and ½ teaspoon cream of tartar.
- Add tender vegetables like tomatoes, mushrooms, and zucchini during the last 45 minutes of cooking time so they don't overcook.
- Dairy products should be added during the last 30 minutes of cooking time unless the recipe states otherwise.
 - Natural cheeses tend to break down, so they should be replaced with processed or other melting cheese. Natural cheeses can be added near the end of cooking time.
 - Milk will curdle over long cooking times, but you can substitute evaporated milk or stir in heavy cream or sour cream near the end of cooking.
- Fresh herbs are recommended. Use whole herbs and spices instead of crushed or ground forms for better flavor. Add them in the last 30 minutes of cooking.
 - Pepper, cayenne pepper, and Tabasco sauce tend to become bitter if cooked for long periods of time. Use small amounts and add toward the end of the cooking time.
- Liquids do not boil away in the slow cooker, so if making a recipe that wasn't specifically developed for the slow cooker, reduce the liquid by ½ to ½ unless you are cooking rice, pasta, or soup.
- When thickening sauces near the end of cooking time, turn the heat setting to high to speed up the process. Taste the liquid first if it lacks flavor, it may be best to reduce by simmering several minutes uncovered.
- You can make cakes and desserts in the slow cooker! Use a small round rack or vegetable steamer to lift the cake pan off the bottom of the slow cooker so that heat circulates evenly around the pan. A 5-quart slow cooker will hold an 8" or 9" cake pan or spring form pan.
- If you live at a high altitude, you may need to increase cooking times.

Adapting Recipes

Many recipes can be converted to cooking in the slow cooker.

Reduce the amount of liquid a recipe calls for since liquids do not evaporate during slow cooker cooking. However, if you are cooking rice, beans, or pasta, don't reduce the liquid called for in the recipe. You generally need twice as much liquid as the product to cook these ingredients. Here are basic conversion times:

Time Chart for Adapting Recipes		
If the recipes says:	Cook on LOW :	Cook on HIGH :
15-30 minutes	4-6 hours	1 1/2-2 hours
35-45 minutes	6-10 hours	3-4 hours
50 minutes to 3 hours	8-16 hours	4-6 hours

Handling Leftovers

Follow these important food safety tips for handling leftovers:

- Do not reheat leftovers in the slow cooker. Reheat leftovers on a stove, microwave or oven until the food reaches the proper internal temperature of 165°F as measured with a food thermometer.
- Place the hot food in a preheated slow cooker to keep it hot for serving at least 140°F as measured with a food thermometer.
- Store leftovers in shallow, covered containers and refrigerate within two hours after cooking is finished.



Cleaning and Care

Here are a few tips to protect your slow cooker cooking surface and easy clean-up tips:

- Use a nonstick spray Even though most slow cookers already have a non-stick coating on the insert, it's still important to spray it with a nonstick spray before cooking.
 Otherwise you'll find you'll have to soak and scrub the food off after slow cooking your food.
- Use spoons that are silicone or wood If you stir or remove food with a metal spoon, you'll damage the nonstick surface and have a tough time cleaning the insert in the future.
- Don't preheat your slow cooker Preheating may cause food to stick and burn to the surface of the insert. Only turn the slow cooker on after it's filled with ingredients. If you do want to preheat, you can first fill up the insert with water for an hour. Then add your food.
- Use slow cooker liner bags These bags look like plastic bags but are really made from heat-resistant nylon. You'll find them in the zipper baggie aisle of your local grocery store. You place the liner of your slow cooker before you start cooking. After cooking, spoon your ingredients into a food container and slowly take out the liner. It may not be best to use them for recipes that call for cooking times of 8 10 hours.
- Remove mineral stains with vinegar Fill your slow cooker with 1 cup white vinegar and ¾ full with hot water. Cover and cook on high for 2 hours. Then, let the slow cooker cool, soak, and clean as described above.
- Remove water marks with vegetable oil If you have those ugly watermarks on your glazed insert, rub the surface with vegetable oil and let stand for 2-3 hours. Then, fill with hot, soapy water, rub the surface, and scrub with a nylon netpad. Rinse and dry well.

- Handle stuck food properly Every now and again, no matter how much precaution you take, you'll find the food sticking. This is when having a slow cooker with a removable insert comes in handy. Let the appliance cool down, bring your insert to the sink, and give it a 15-20 minute soak in hot soapy water. You can scrub it with a nylon net pad, brush, or cloth. Do not use a harsh abrasive cleaner, stainless steel soap pad, or metallic scoring pad. Rinse well in hot water and dry. If food is stuck, fill the slow cooker with water and put it on high for an hour.
- Do not immerse the base Never immerse the heating base in water or other liquid.
 Clean with a damp cloth and warm, soapy water. Wipe dry.

The slow cooker is one of the best time saving appliances in the kitchen. It's great for beginning cooks because all you have to do is fill it and turn it on. Hours later, you come home to a house filled with wonderful smells and dinner ready for the table. And once you become an expert at using this appliance, the time you spend in the kitchen will be greatly reduced!

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Sources:

Cooking Safely With a Slow Cooker (2022). Michigan State University Extension.

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