

# Slow Cooking from Start to Finish

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## About Slow Cookers

### Basic, Convenient, Affordable

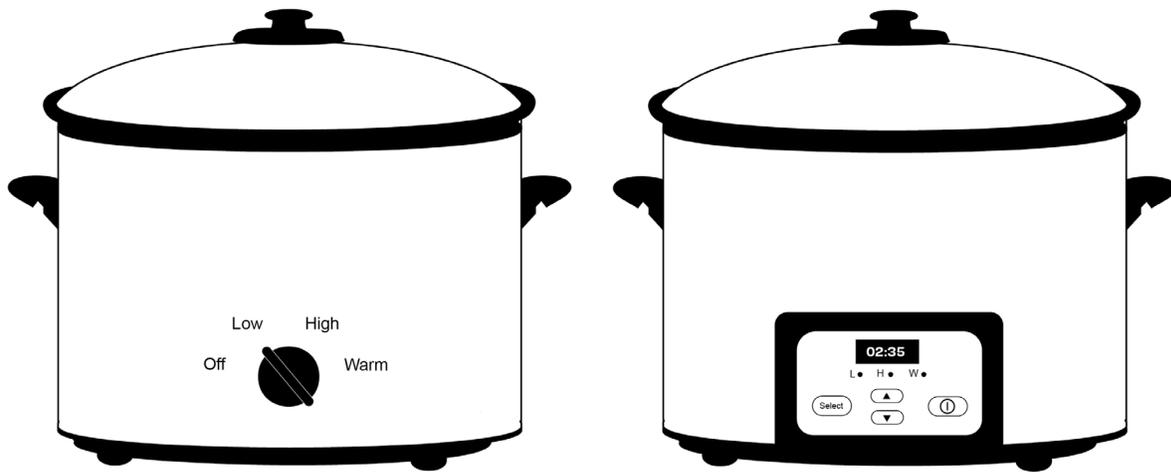
FROM ENTRÉES TO DESSERTS, breakfast to dinner, a slow cooker enables you to make a variety of flavorful dishes that will save time, energy, and money. First, its use requires only basic cooking skills, making it possible for anyone to safely cook a meal. Second, it is convenient. By planning ahead, you can leave the slow cooker on while away for several hours and return home to a meal that is ready to serve. Finally, it is an economical countertop appliance that makes possible home-cooked meals, which are typically easier on the budget and more nutritious. A slow cooker thus can strengthen any family unit, whose interconnections will likely improve after eating wholesome meals more frequently at a dining room table. To be sure, the benefits from using a slow cooker are significant and quite diverse.

### How it Works

Typically, a slow cooker includes an inner stoneware or ceramic container (known as a crock), a removable tight-fitting lid, an outer heating base with wrap-around heating elements within the metal casing, and a power cord. When you plug in and turn on a slow cooker, the heat and steam created within its crock can cook food at a low temperature (between 170°F and 280°F) for several hours. This slow-cooking process makes the food tender and flavorful while also helping to destroy bacteria (United States Department of Agriculture Food Safety and Inspection Service [USDA FSIS] 2013, “Slow Cookers”).

### Why Use a Slow Cooker?

A slow cooker is energy efficient year-round and uses less electricity than an oven. It is useful no matter the outside temperature. The aroma of a thick hearty soup on a cold winter day entices and welcomes, bringing your family together to enjoy a hot meal at the end of a long day. In



**Figure 1.** Comparison of manual and programmable slow cookers.

the summertime, when fresh garden vegetables and herbs give slow-cooker meals extra flavor and nutrition, a slow cooker won't heat up the kitchen the way an oven does.

A slow cooker also enables simple food preparation. You can prepare the ingredients ahead of time and place them in a slow cooker the next day. This saves you time and cuts down on the cleanup. Furthermore, if you plan and prepare in bulk, you can have leftovers that are perfect for a hectic schedule.

This time-saving device not only helps you to cook soups, stews, and chili but a variety of other, more complex meals—casseroles, breakfast dishes, even desserts. Along the way, it will help you stretch your food dollar and eat more healthily as a family. You can choose to cook with less expensive cuts of meat, because the cooker's ability to cook at a low temperature for many hours breaks down connective tissue and tenderizes any cut, no matter its original quality. You can also experiment with a variety of ingredients, such as beans, legumes, whole grains, fruits, vegetables, and lean protein with less sodium and solid fats, any and all of which can increase the nutrition value of a meal.

## Selecting a Slow Cooker

Slow cookers have been around since the early 1970s. They come in different types and brands with a variety of sizes and features to consider.

The basic *manual* slow cooker provides different heat settings—generally High, Low, and Off. Some offer a

Warm setting that is handy when needing to delay a meal, although you will have to turn the switch to this mode. But all lack a digital timer and hence manual cookers require time monitoring.

A *programmable* slow cooker, however, comes with electronic controls and a digital timer, thus providing users more options, such as the ability to set cooking times or specific temperatures. Another convenient feature of a programmable slow cooker is that it automatically switches to a Warm setting when a designated cooking time elapses.

## Capacity

Slow cookers vary in size, with capacities that range from 1.5 to 8.5 qts. The size you need to use depends on the number of servings you estimate you need. A 3–4 qt slow cooker will feed four or fewer people; for five or more, or if you plan to have leftovers, a 5–8 qt slow cooker is best. Smaller-sized cookers are ideal for dips or sauces; larger ones are great for handling soup or large cuts of meat, though an oval-shaped crock accommodates roasts or other large cuts of meat better than a round slow cooker.

## Features

Slow cookers come with a variety of features depending on its model. Some come with a hinged lid that makes serving up food easier. Others offer locking lids, which help to prevent food from spilling when being transported to parties, although avoid locking the lid while cooking, as it may lead to lid breakage. Also, a few models have temperature

probes that allow you to cook foods to a target temperature.

## Price

According to Consumer Reports (Anon. 2019), prices for slow cookers range from \$30 to \$170. The cost difference is primarily due to added features and convenience, not overall cooking performance.

## Using Your Slow Cooker

### Before You Begin

- **Wash your hands.** Wash your hands for twenty seconds with soap and rinse with warm water before, during, and after food preparation.
- **Start clean.** Before beginning any food preparation, clean your work area, the slow cooker, and any utensils you intend to use.
- **Thaw completely.** Never cook frozen foods in a slow cooker. Frozen foods have the potential to stay in the temperature danger zone (40°F–140°F) for a long period of time, thus risking the transmission of a foodborne illness. Always thaw foods completely before cooking them in a slow cooker.
- **Separate meat and vegetables.** Keep perishable foods in the refrigerator until preparation time. If you prepare ingredients in advance, store meat and vegetables separately in the refrigerator.
- **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. Prior to putting dried beans in the slow cooker, soak the beans for at least five hours, then rinse and boil them on the stovetop for at least thirty minutes to kill the toxin. If you use canned beans, you can omit this step and add the beans directly to the slow cooker.
- **Check product manuals.** Always follow the slow-cooker manufacturer’s use and care instructions.

### When Cooking

- **Cook in the crock, not the heating base.** Do not cook directly in the outer heating base. Cook only in the stoneware/ceramic crock.

- **Assemble.** Place the stoneware in the heating base. Add the vegetables first, followed by the meat and/or poultry. Add the desired amount of liquid suggested in the recipe, such as water, broth, or sauce, and cover with the lid. (Note: Fill the slow cooker between ½–¾ full for the best results.)
- **Start on High or use a preheated cooker.** If possible, turn on the High setting for the first hour of cooking (especially if using meat or poultry), or preheat the crock before adding ingredients to ensure a rapid heat start and to shorten the time food is exposed to the temperature danger zone (40°F–140°F).
- **Don’t “cook” on the Warm setting.** Do not use the Warm setting to cook food. It is designed to keep cooked food hot at 140°F or above for serving.
- **Keep the lid on.** Lifting the lid causes a cooker’s internal temperature to drop 10°–15°, which slows the cooking time by thirty minutes. Consequently, remove the lid only to check temperature and doneness.
- **Be cautious when opening the lid during or after cooking.** Open the lid away from you to avoid getting burned by escaping steam.
- **Check the internal temperature (Table 1).** This will allow you to confirm that the food has reached a safe temperature.

### Handling Leftovers

- **Cool properly.** Do not cool food or refrigerate leftovers in the crock. The thick insulating walls

**Table 1.** Safe internal temperatures for different food items.

| 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                      |

of the stoneware will keep food from cooling down quickly enough.

- **Use proper storage.** Store leftovers in shallow containers and refrigerate them within two hours after you've finished cooking.
- **Don't reheat leftovers in a slow cooker.** Reheat leftovers on a stovetop, in a microwave, or in an oven until the internal temperature of the food reaches 165°F.
- **Power outage?** If you are not at home during the cooking process and the power goes out, throw the food away even if it looks well cooked. You never know how long the food may have been left in the danger zone (40°F–140°F).

## Other Helpful Tips

### Cooking Hints

- **Browning.** While slow cookers are designed to make meals as convenient as possible, they do not brown food. Brown meat or sauté onions and garlic before adding them to the crock.
- **Don't forget vegetables.** Include a variety of vegetables in your recipe. If using delicate vegetables such as tomatoes, peppers, peas, and summer squash, add them towards the end of the cooking time to keep them from getting mushy.
- **What about rice and pasta?** Cook rice and pasta on the stovetop and add them to the slow cooker at the end of the cooking time just long enough to be heated through.
- **Add liquid.** If the original non-slow-cooker recipe does not include liquid or sauce of any kind, add ½ cup of water to the slow cooker to produce steam for cooking.
- **Thickening.** If you want to thicken a sauce, stir in cream, sour cream, shredded cheese, or a mixture of cornstarch and cold water. Add milk, cheese, or other dairy products in the last 30–60 min of cooking time.
- **Use herbs and spices to boost flavors (Table 2).** Instead of salt, try different spices and seasonings to enhance the flavor.

**Table 2.** Suggested flavor combinations, using herbs and spices.

| Flavor             | Herbs and Spices                                     |
|--------------------|--|
| Ranch style        | Garlic and onion powder, black pepper, dried parsley |
| Dilly Lime         | Lime juice, dried dill                               |
| Southwest Lime     | Lime juice, cumin, chili powder                      |
| Lemon Thyme        | Lemon juice, dried thyme, parsley                    |
| Italian            | Garlic and onion powder, dried oregano, dried basil  |
| Yellow Curry       | Garlic and onion powder, curry powder, cumin         |
| Mild Red Hungarian | Garlic and onion powder, dried paprika               |

## Time Conversion Chart

Most recipes that bake in the oven or simmer on the stovetop can be converted for slow cookers (Table 3).

**Table 3.** Time conversion chart for slow cooking.

| Oven/Stovetop Time | Slow-Cooker Setting Low | Slow-Cooker Setting High |
|--------------------|-------------------------|--------------------------|
| 15–30 min          | 4–6 hrs                 | 1½–2 hrs                 |
| 35–45 min          | 6–10 hrs                | 3–4 hrs                  |
| 50 min–3 hrs       | 8–16 hrs                | 4–6 hrs                  |

Note: These are estimates, since heat may vary from brand to brand.

## High-Altitude Cooking

At high altitudes, water and other liquids boil at a lower temperature and evaporate quickly, making the cooking process longer and more difficult for food to reach safe temperatures that will destroy bacteria. As a result, allow a longer cooking time when using a slow cooker at high altitudes. Also, check the manufacturer's instructions. If you have a programmable slow cooker with an adjustable temperature control, set it at 200°F or higher. If your slow cooker has both a High and Low setting, start on High for the first hour and switch to the Low setting for the remainder of the cooking time.

It is important not to remove the lid during cooking because it may lengthen the time needed to

regain the lost steam and heat. You may also place aluminum foil on top of the food being cooked in a slow cooker (and under the lid) to reflect heat back to the food (USDA FSIS 2013, “High Altitude”).

## Cleaning and Care

- **Unplug.** Before cleaning, turn off the slow cooker, and unplug it from the electrical outlet.
- **Cool completely.** Allow the crock, lid, and heating base to cool completely before washing. Do not wash the crock or lid with cold water when either is hot to avoid cracking due to rapid temperature changes.
- **Do not immerse base.** Never immerse the heating base in water or other liquid. Clean with a damp cloth and warm, soapy water. Wipe dry.
- **Dishwasher safe.** The lid and crock are dishwasher safe. You can also hand clean them with hot, soapy water using a nonabrasive cleaner or vinegar to remove stains and spots.
- **Deep cleaning.** For deep cleaning, fill the crock with water. Add ½ cup of distilled white vinegar to a 3 qt slow cooker and pour in ½ cup of baking soda. Double the amount of vinegar and baking soda for a 6 qt slow cooker. Cover and set to Low for one hour. When the hour is up, remove the lid and clean the crock with a soft sponge as needed. Allow it to cool and wash with warm, soapy water. Rinse well and dry.

## Recipes

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### Slow-Cooker Applesauce

Makes 10 servings (½ cup per serving)

#### Ingredients

- 4 lbs (10–12) apples, peeled, sliced, and cored
- ¼ cup unsweetened apple cider
- Juice of 1 medium-sized lemon or about 1 Tbsp lemon juice
- 1 tsp ground cinnamon
- ½ tsp ground ginger (optional)



#### Directions

1. Add all ingredients to slow cooker.
2. Cover and cook on Low for five hours OR on High for three hours, until apples are soft.
3. Mash apples to desired consistency. (Optional: use a food processor or blender for a smoother texture.)
4. Allow to cool before eating.

## Slow-Cooker Fruit Crisp

Makes 10 servings

### Ingredients

- 2 cans (15 oz each) sliced peaches, drained
- 2 cans (15 oz each) sliced pears, drained
- 1 jar (23 oz) unsweetened applesauce
- 1 cup dried fruit (raisins, Craisins, dried apricots, cherries, or any other dried fruit)
- ½ tsp ground cinnamon
- ½ tsp ground nutmeg

For the cinnamon-oat topping:

- 1 cup old-fashioned oats
- ¾ cup whole wheat flour
- ¼ cup packed light brown sugar
- 1½ tsp ground cinnamon
- ¼ tsp salt
- ½ cup cold unsalted butter (cut into cubes)



### Directions

1. Add sliced peaches, sliced pears, applesauce, dried fruit, ground cinnamon, and ground nutmeg to a slow cooker and stir to combine.
2. Place the topping ingredients in a medium bowl and stir to combine until crumbly. Sprinkle evenly over the fruit mixture.
3. Cover and cook on High for two hours. Remove cover and continue cooking uncovered until the topping is browned and crisp and the fruit tender, about 20–30 minutes more.
4. Turn off the heat. Let the crisp cool down uncovered before serving.

## Slow-Cooker Stuffed Bell Peppers

Makes 6–8 servings

### Ingredients

- 6 bell peppers, tops removed and seeded
- 3 Tbsp water
- 1 lb ground beef, browned, drained, and cooled
- 2 cups cooked rice, cooled
- 1 can (8 oz) tomato sauce
- 1 cup cheddar cheese, shredded
- 1 tsp garlic powder
- ½ Tbsp onion powder
- ½ tsp Worcestershire sauce
- ½ tsp salt
- ½ tsp black pepper
- 2 Tbsp chopped fresh parsley (or 2 tsp dried parsley)
- Optional: extra shredded cheese as a topping



### Directions

1. Combine all ingredients, except peppers and water, in a mixing bowl. Stir well.
2. Divide filling among peppers and place the tops back on.
3. Pour 3 Tbsp of water into the slow cooker.
4. Arrange stuffed peppers in the slow cooker. Top with more shredded cheese if desired.
5. Cover and cook on Low for seven hours OR on High three hours.

# Chipotle Flank Steak Street Tacos

Makes 16 tacos

## Ingredients

- 2 lbs beef flank steak, cut into one-inch pieces
- 1–4 chipotle peppers in adobo sauce, chopped (Note: this can get spicy, so start with one chipotle pepper and add more if desired)
- ½ medium-sized onion, chopped
- 1½ Tbsp chili powder
- 2 tsp garlic powder
- ½ tsp ground cumin
- 1 can (6 oz) tomato paste
- 1 cup low-sodium beef broth
- 16 corn tortillas

Topping ideas: *produce tastes best in season!*

- Chopped cilantro
- Chopped onion
- Sliced bell peppers
- Sliced radishes
- Shredded red cabbage
- Sliced avocado
- Lime wedges
- Plain yogurt

## Directions

1. In a slow cooker, combine the first eight ingredients.
2. Cover and cook on Low for 6–8 hours or until meat is tender.
3. Prepare a “bar” of taco toppings (see topping ideas).



## Slow-Cooker Meatless Chili

Makes 8– 10 servings

### Ingredients

- 3 cans (15 oz each) canned beans (any variety), rinsed and drained
- 2 cans (14.5 oz each) diced tomatoes (undrained)
- 1 cup canned corn, rinsed and drained
- 1 red bell pepper, chopped
- 1 cup low-sodium vegetable broth
- ½ onion, chopped (or 2 tsp onion powder)
- 1 Tbsp garlic powder
- 1–2 Tbsp chili powder
- 1 tsp cumin
- ½ tsp cayenne pepper (optional)
- 1 tsp dried thyme
- 1 tsp dried oregano
- ½ tsp salt
- ½ tsp black pepper

Topping ideas: avocados, cilantro, cheese, sour cream



### Directions

1. Add all ingredients to a slow cooker.
2. Cover and cook on High for four hours OR Low for eight hours.
3. Top with your favorite toppings.

## Chicken Veg Slow-Cooker Stew

Makes 6 servings

### Ingredients

- 2 boneless, skinless chicken breasts, cut into ½ inch long strips
- 1 large potato, chopped
- 2 carrots, chopped
- ½ onion, chopped
- 1 cup sliced mushrooms
- 2 stalks celery, chopped
- 1 Tbsp dried basil
- 1 tsp thyme
- 1 tsp turmeric (optional)
- ½ tsp salt
- ½ tsp black pepper
- 4 cups low-sodium chicken broth



### Directions

1. Place all ingredients in slow cooker and stir.
2. Cover and cook on Low for 8–10 hours OR on High for 4–5 hours.
3. Take out and shred chicken, and place back into the slow cooker.

## Sweet Potato Chili Beans

Makes 6–8 servings

### Ingredients

- 1 sweet potato, scrubbed well and cut into cubes (about 1 cup)
- 1 carrot, chopped
- 1 celery stalk, chopped
- 1 large bell pepper, chopped
- 2 garlic cloves, chopped (or 1½ tsp garlic powder)
- ½ onion, chopped (or 1 tsp onion powder)
- 1 Tbsp chili powder
- 1 tsp ground cumin
- ½ tsp smoked paprika
- 1 can (15.5 oz) beans, rinsed and drained
- 1 can (14.5 oz) diced tomatoes (undrained)
- 1 can (8 oz) tomato sauce
- 1 can (14.5 oz) green beans, rinsed and drained

Topping ideas: grated low-fat shredded cheese, low-fat plain yogurt, lime wedges, chopped green onions

### Directions

1. Add all ingredients to slow cooker and stir to combine.
2. Cover and cook on Low for six hours.

Serving suggestions: set up a baked potato bar with chili and toppings.



# Canned Chicken Pozole

Makes 6 servings

## Ingredients

- ½ onion, chopped
- 2 garlic cloves, finely chopped
- 2 cans (15 oz each) hominy, undrained
- 2 cans (12.5 oz each) canned chicken, undrained
- ½ cup low-sodium chicken broth
- ¼ tsp black pepper
- ½ tsp oregano
- 1 bay leaf

Topping ideas: avocado, chopped cabbage, chopped cilantro, sliced radishes, and a squeeze of lime

## Directions

1. Combine all ingredients in a slow cooker and cook on High for three hours.
2. Serve with toppings.



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## Further Reading

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