



Nutri-Facts

Issue #24, November 2003

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Greetings all!

"It's 4:30 - what am I going to make for dinner?" This is a question asked by millions of people each day. If there are no plans made for dinner, it is real easy to head to the restaurant, pick up something through the drive-through on the way home, or call for pizza to be delivered. While that may be okay occasionally, research has shown that meals eaten out are often less nutritious than those prepared at home. From a food economics perspective, eating out can definitely put a dent in the wallet.

So, what is a time-restricted, nutrition-conscious, thrifty-minded consumer to do? Enter the slow cooker, also known as the Crock-Pot®. Technically, Crock-Pot® is a brand name but it is often used synonymously with slow cooker. However, for the purposes of this issue, the term slow cooker will be used.

Slow cookers are great because they essentially do the cooking while you are away. Imagine, putting the ingredients in the slow cooker, leaving for work, and coming home to a great smelling, mouth watering dinner. Sounds fool-proof, right? Almost. There are some basic safety rules that need to be followed and these will be featured in this issue.

As always, this issue includes information for agents as well as a consumer fact sheet. In addition, there is a news release that I hope you will find useful.

As always, I appreciate any comments or feedback.

Eat well!
Jenna

Nutri-Facts #24 - Agent information

What is a slow cooker?

According to the Food Safety and Inspection Service, a slow cooker is a "countertop appliance that cooks foods slowly at a low temperature, generally between 170 and 280 degrees F." The heating coils, located in the outer metal shell, become hot and stay on continuously to heat the crockery liner. The direct heat and steam generated by the slow cooker, combined with the long cooking time, make it a safe form of home food preparation.

Note: There is also another type of cooker called an intermittent cooker. This type of cooker has a heating element in the base on which the cooking container stands. The heat cycles on and off to maintain a constant temperature. If a cooker has a dial that shows temperatures in degrees, it is probably an intermittent cooker. An intermittent cooker is **not recommended for slow cooker recipes**.

Economic benefits of slow cookers

A slow cooker can save money in several ways. First, it actually takes less electricity to use a slow cooker compared to an oven. Second, it doesn't heat up your house like an oven (an added bonus during those hot summer months). Third, slow cookers are a great way to prepare inexpensive, lean cuts of meat. The moist heat generated by the cooker makes these cuts of meat more tender compared to other cooking methods. However, a slow cooker is not just limited to meats. Other foods including soups, casseroles, beverages, and cereals can also be prepared with a slow cooker. With a little practice, a slow cooker can help prepare more meals at home which can help save money.

Testing Your Slow Cooker for Accuracy

If the slow cooker in your house has been banished to the back of the cabinet for a few years, it may be a good idea to test it for accuracy. The University of Minnesota Extension Service offers the following directions for testing slow cooker accuracy:

1. Fill the slow cooker with 2 quarts (8 cups) of water.
2. Heat the water on **low** for 8 hours.
3. Check the water temperature with an accurate food thermometer. Do this quickly since the temperature in the slow cooker drops 10 to 15 degrees once the lid is removed.
4. The temperature of the water should be at least 185 degrees.

If the water temperature is less than 185 degrees, the slow cooker is not safe to use and should be replaced.

Selecting a Slow Cooker That Meets Your Needs

If you don't have a slow cooker but want to buy one, here are some things to consider:

- * Is the size of the slow cooker large (or small) enough to meet your needs?
- * Are the controls easy to reach, read, and clean?
- * How easy is it to clean the slow cooker? Is it submersible? Does it have a removable liner?

Slow Cooking Safely

It seems like slow cookers are fool-proof. Plug it in, fill it up and go, right? Not exactly. According to the Food Safety and Inspection Service, there are several food safety rules that need to be followed:

Start clean

1. Always begin with a clean cooker, clean utensils and a clean work area. Wash hands before and during food preparation.

Handle ingredients carefully

2. Keep perishable foods refrigerated until preparation time. It is okay to cut up meat and vegetables in advance, but they should be stored separately in covered containers in the refrigerator. Because slow cookers can take several hours to reach a temperature hot enough to kill bacteria, constant refrigeration prior to food preparation helps ensure that the bacteria, which can multiply quickly at room temperatures, don't get a head start during the first few hours of cooking.

3. Always defrost meat or poultry before putting it into a slow cooker. Prepare foods that have a high moisture content such as chili, soup, stew, or spaghetti sauce.

4. Cut food into chunks or small pieces to ensure the food is cooked thoroughly. Do not try to cook large pieces of meat or a whole chicken in the slow cooker because the food will cook so slowly that it might remain in the danger zone (for bacterial growth) too long.

Note from Jenna: I have recently acquired several slow cooker cook books that use whole chickens or even frozen pieces of meat. These cooking directions **are not** in agreement with the food safety guidelines mentioned above. As educators, we really need to communicate these food safety guidelines to individuals who want to learn more about slow cookers.

Use the right amount of food for your slow cooker

5. Fill slow cookers between one-half and two-thirds full. Since vegetables cook slower than meat and poultry, place the vegetables in the bottom, add meat, and cover the food with liquid such as broth, water or sauce. Keep the lid on, removing only to stir the food or check for doneness.

It is often estimated that once the lid is removed, it can take up to 20 minutes to regain the lost heat and steam!

Pick the right setting

6. Slow cookers generally have two or more settings. The low setting is recommended for all day cooking or for preparing the less tender cuts of meat. If possible, let the slow cooker cook on "high" for the first hour; then switch to the low setting. If this is not possible, the Food Safety and Inspection Service says it is still safe to cook foods on low for the entire time.

Power Outages

7. If you are not home during the **entire** slow-cooking process and the power goes out, throw out the food - even if it looks done!

Note from Jenna: You can often tell if the power has gone out because many appliances, including alarm clocks, microwaves and VCRs will have the time flashing. For people who work and leave their slow cookers unattended, it might not be a bad idea to have a clock plugged in near the slow cooker to indicate if the power has gone off some time during the day (unless your stove or microwave has a clock).

If you are home when the power goes off, finish cooking the ingredients immediately by some other means: on a gas stove, on an outdoor grill, or even at another house where there is power. If this is not possible, throw out the food.

If you are home when the power goes off and if the food was already completely cooked, the food should remain safe for up to two hours in the cooker with the power off.

Test for doneness

8. Use a food thermometer to make sure that meat and poultry dishes have reached a safe internal temperature.

Poultry: 170 degrees F for breast; 180 degrees F for thigh

Ground meat: 160 degrees F

Roasts: 145 degrees F (medium rare), 160 degrees F (medium), 170 degrees F (well)

Casseroles, stuffing, and soups - 165 degrees F

Handle leftovers carefully

9. Make sure that leftovers are stored in shallow covered containers and refrigerated within two hours after the cooking is finished. Use a stove top or microwave oven for reheating leftovers. It is not recommended that one use a slow cooker to reheat leftovers.

Tips for Successful Slow Cooking

- * Spray the inside of the slow cooker with cooking spray for easy cleaning.
- * Processed cheese tends to work better than Cheddar cheese.
- * Root vegetables take longer to cook than other vegetables. Cut these vegetables into small pieces and place in the bottom of the slow cooker.
- * When time permits, brown pieces of meat before placing in the slow cooker. This adds extra flavor and allows excess fat to be removed.

- * Cook and drain ground meats before adding to the slow cooker.
- * When placing pieces of meat in the slow cooker, be sure there is space between the meat so the heat can circulate around the pieces.
- * Add crushed or ground seasonings near the end of cooking because they may become too mild during a long cooking period. Whole seasonings may withstand long cooking times and may have an intensified flavor so use only about half the amount.

3 Can Chicken

(Serves 5)

What You Need...

- 5 boneless, skinless chicken breast halves
- 1 10 1/2 ounce can cream of chicken soup
- 1 10 1/2 ounce can cream of celery soup
- 1 10 1/2 ounce can cream of mushroom soup
- 2 bay leaves
- 1 teaspoon dried thyme

How to Make It.....

1. Wash hands; make sure the slow cooker, cooking utensils and counter tops are clean.
2. Place chicken on the bottom of the cooker.
3. Add the soup on top of the chicken.
4. Cook on low for 6 to 7 hours or until internal temperature of the chicken reaches 170 degrees F.

Note: Thanks to Leanne Whitley, Secretary for the Expanded Nutrition Program here in College Station for sharing this recipe! She recommends serving it over rice.

Spaghetti with Meat Sauce

(Makes about 7 cups of sauce)

What You Need...

1 pound lean ground beef
1 clove garlic, minced
2 14.5 ounce cans Italian-style
 chopped tomatoes
1 8-ounce can tomato sauce
1 12-ounce can tomato paste
1 cup water
Cooked spaghetti

How to Make It...

1. Wash hands; make sure the slow cooker, cooking utensils and counter tops are clean.
2. Brown meat in saucepan; drain excess fat.
3. Place meat in the slow cooker; add remaining ingredients. Stir to mix ingredients.
4. Cover slow cooker and cook on low for 8 hours.
5. Serve over cooked, hot spaghetti.

Note from Jenna: This recipe was adapted from *Mable Hoffman's Crocker Cookery*. The original recipe included oregano and basil but I used the Italian-style tomatoes (which contained spices). The original recipe also called for a cup of beef broth but I used one cup of water instead. I started the slow cooker right before leaving for work and when I came home that evening, my house smelled like an Italian restaurant. The sauce was thick and chunky. If you don't like chunks of tomatoes in your sauce, try using crushed tomatoes. Also, this recipe makes a **lot** of sauce. I have frozen the left-over sauce and plan to use it the next time I make lasagna.

Refrigerator Stew (source: "Crock-It")

(Makes 5 cups)

What You Need.....

2 pounds stew meat
1 envelope onion soup mix
1 14.5 ounce can cream of mushroom soup
1 1/2 cups water
1 onion, cut into bite-sized pieces
4 to 6 carrots, cut into bite-size pieces
3 to 4 potatoes, cut into bite-sized pieces
1 14.5 ounce can green beans
1 14.5 ounce can corn

How to Make It...

1. Wash hands; make sure the slow cooker, cooking utensils and counter tops are clean.
2. Cut meat into bite-sized pieces.
3. Place all ingredients in the slow cooker.
4. Cook on low for 8 to 10 hours.

Note from Jenna: Thanks to Jo Alexander, former CEA-FCS Wise county, for testing this recipe!

Adapting Recipes for the Slow Cooker

According to *Slow Cookers for Dummies*, written by Tom Lacalamita and Glenna Vance, the first step to adapting recipes is to find a slow cooker recipe that is similar to the traditional recipe and then use it as a guide. Unless preparing soups, sauces, chowders, or chili, use about half of the liquid that is listed in the traditional recipe. Also, remember that the liquid doesn't boil away as fast as it does in the oven or on the stove top. Below are some additional tips to remember when adapting recipes:

Vegetables:

- * Make sure vegetables are cut into pieces that are similar in size and shape.
- * Vegetables that cook quickly (such as peas) should be added during the last 20 or 30 minutes of the cooking process.

Dairy products:

- * Sour cream, milk or cream tends to break down during long cooking processes. Add them during the last 30 minutes of cooking. In some cases, you can add condensed soup in place of milk when using the slow cooker for several hours.

Rice and Pasta

- * When rice and pasta are cooked for long periods of time they become starchy and pasty. To prevent this from happening, cook rice or pasta on the stove and add them to the slow cooker a few minutes before serving.

Seafood

- * Fish and shellfish cook very fast and tend to overcook and fall apart during a long cooking process. If your recipe includes fish or shellfish, add them to the slow cooker during the final 30 to 60 minutes of cooking.

Adapting traditional cooking times to the slow cooker

When choosing recipes to adapt, select recipes that take 45 minutes to an hour to cook. That is because these recipes often include ingredients that hold up well to long cooking times. Use the following chart as a guide when adapting traditional recipes to the slow cooker. If meat or other potentially hazardous foods are in the recipe, use a food thermometer to check for doneness.

Cooking time for traditional recipes	Cooking time in slow cooker on Low Setting	Cooking time in slow cooker on High Setting
45 minutes	6 to 10 hours	3 to 4 hours
50 to 60 minutes	8 to 10 hours	4 to 5 hours

Web sites for slow cooker recipes

Note: these recipes have not been tested by Texas Cooperative Extension

<http://www.ebicom.net/kitchen/page/cpidx.htm>

<http://www.crockerykitchen.com/>

http://www.crockpot.com/support_files/recipes/recipe.asp

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Hoffman M. *Mable Hoffman's Crockery Cookery*, HP Books, New York, NY. 1995 ISBN number 1557882177.

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Fast Food with Slow Cookers

A slow cooker is a great appliance for busy people because it essentially does the cooking while you are away. If you are new to slow cooker cooking or want to get re-acquainted with one you already have, then the following information is just for you!



10 Tips for Safe Slow Cooking

Make sure your slow cooker cooks safe food for you and your family. Use these simple rules to help prevent foodborne illness:

1. Always start with a clean cooker, utensils and work area.
2. Wash hands before and during food preparation, especially after handling raw meat and poultry.
3. Refrigerate perishable foods until preparation time. You can chop meat and vegetables in advance, but they must be stored separately in covered containers in the refrigerator.
4. Use only thawed meat or poultry.
5. Do not place large pieces of meat or a whole chicken in the slow cooker. Instead, cut into small pieces. Otherwise, the food will cook so



slowly that it could stay in the danger zone (for bacterial growth) too long.

6. Fill the cooker between 1/2 and 2/3 full. Vegetables cook slower than meat or poultry so place them on the bottom, add the meat, then cover with liquid (broth or sauce).
7. Don't peek! Every time you remove the lid, it can take 20 minutes to regain the lost heat.
8. If you are not home during the **entire** slow-cooking process and the power goes out, throw out the food, even if it looks done!
9. Use a food thermometer to make sure meat and poultry dishes have reached a safe internal temperature.
10. Store leftovers in shallow covered containers and refrigerate within two hours after cooking.



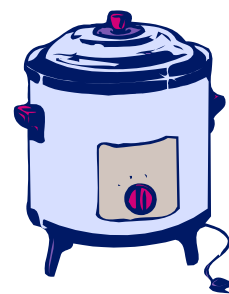
Testing Your Slow Cooker

If your slow cooker has been living in the back of a cabinet for a while, you may want to test it for accuracy. The University of Minnesota Extension Service offers the following directions for testing slow cooker accuracy:

1. Fill the cooker with 8 cups of water. Heat the water on **low** for 8 hours.
2. Check the water temperature with a food thermometer. Do this quickly as the temperature drops 10 to 15 degrees once the lid is removed.
3. If the temperature is less than 185 degrees, the cooker is not safe to use and should be replaced.

Tips for Successful Slow Cooking

1. Spray the inside of the cooker with cooking spray for easy cleaning.
2. Processed cheese tends to work better than Cheddar cheese.
3. When possible, brown pieces of meat before placing them in the cooker. This adds flavor and allows excess fat to be removed.
4. Cook and drain ground meats before adding to the cooker.
5. When possible, add crushed or ground seasonings near the end of cooking as they may become too mild during a long cooking period.



Adapting Traditional Recipes for the Slow Cooker

Converting traditional recipes for use in a slow cooker takes a little practice and patience, but can be done. The key to adapting recipes is to find a slow cooker recipe that is similar to the traditional recipe and then use it as a guide. Here are some additional tips:

1. Unless preparing soups, sauces, chili, or chowders, use half of the liquid listed in the traditional recipe.
2. Vegetables that cook quickly (such as peas) should be added during the last 20 or 30 minutes of the cooking process.
3. If the traditional recipe calls for rice or pasta, cook rice or pasta on the stove and add to the slow cooker a few minutes before serving.
4. Fish and shellfish cook very fast and tend to overcook and fall apart during a long cooking process. Add them to the cooker during the final 30 to 60 minutes of cooking.

When adapting a recipe to the slow cooker, choose a recipe that traditionally takes 45 to 60 minutes to cook. These recipes usually contain ingredients that hold up well to long cooking times. Use the following chart as a guide when adapting traditional recipes to the slow cooker. If using meat or other potentially hazardous foods in the recipe, be sure to use a food thermometer to check for doneness.

Cooking time for traditional recipes	Cooking time in slow cooker on Low Setting	Cooking time in slow cooker on High Setting
45 minutes	6 to 10 hours	3 to 4 hours
50 to 60 minutes	8 to 10 hours	4 to 5 hours

References:

Driessen S, *Slow Cookers - How to Test for Accuracy*. University of Minnesota Extension Service, 2003.

Food Safety and Inspection Service, United States Department of Agriculture. *Slow Cooker Safety*, July 2000.

Accessed 8/4/03 at <http://www.fsis.usda.gov/OA/pubs/slocookr.htm>

Prepared by Jenna D. Anding, Ph.D., R.D., L.D., Assistant Professor & Extension Nutrition Specialist, 12/03. *Educational programs of Texas Cooperative Extension are open to all people without regard to race, color, sex, disability, religion, or national origin.*

Easy Slow-Cooker Recipes

3 Can Chicken

(Serves 5)

What You Need...

- 5 boneless, skinless chicken breast halves
- 1 10 1/2 ounce can cream of chicken soup
- 1 10 1/2 ounce can cream of celery soup

- 1 10 1/2 ounce can cream of mushroom soup
- 2 bay leaves
- 1 teaspoon dried thyme

How to Make It.....

1. Wash hands; make sure the slow cooker, cooking utensils and counter tops are clean.
2. Place chicken on the bottom of the slow cooker.
3. Add the soup on top of the chicken.
4. Cook on low for 6 to 7 hours or until internal temperature of the chicken reaches 170 degrees F.

Spaghetti with Meat Sauce

(Makes about 7 cups of sauce)

What You Need...

- 1 pound lean ground beef
- 1 clove garlic, minced
- 2 14.5 ounce cans Italian-style chopped tomatoes
- 1 8-ounce can tomato sauce
- 1 12-ounce can tomato paste
- 1 cup water
- Cooked spaghetti

How to Make It...

1. Wash hands; make sure the slow cooker, cooking utensils and counter tops are clean.
2. Brown meat in saucepan; drain excess fat.
3. Place meat in the slow cooker; add remaining ingredients. Stir to mix ingredients.
4. Cover slow cooker and cook on low for 8 hours.
5. Serve over cooked, hot spaghetti.

Easy Beef Stew

(Makes 5 cups)

What You Need.....

- 2 pounds stew meat
- 1 envelope onion soup mix
- 1 14.5 ounce can cream of mushroom soup
- 1 1/2 cups water
- 1 onion, cut into bite-sized pieces
- 4 to 6 carrots, cut into bite-size pieces
- 3 to 4 potatoes, cut into bite-sized pieces
- 1 14.5 ounce can green beans
- 1 14.5 ounce can corn

How to Make It...

1. Wash hands; make sure the slow cooker, cooking utensils and counter tops are clean.
2. Cut meat into bite-sized pieces.
3. Place all ingredients in the slow cooker.
4. Cook on low for 8 to 10 hours.



News Release

It's 5:30 pm. What's for dinner? Each day, millions of people are faced with this question. If no plans have been made, fast food and home-delivered pizzas start to look pretty good. While eating out occasionally is okay, meals eaten out tend to be less nutritious than those prepared at home. Plus, frequent eating out can put a dent in the wallet.

So, what's the solution for a time-restricted, nutrition-conscious, budget-minded individual? Look no further than the slow cooker. "Slow cookers are great because they essentially do the cooking while you are away," says Dr. Jenna Anding, Assistant Professor and Nutrition Specialist with Texas Cooperative Extension. "It's almost like having your own personal chef."

In addition to preparing great tasting meals, a slow cooker can also help save money. First, it takes less electricity to use a slow cooker than an oven. Second, slow cookers don't heat up your house like an oven (an added bonus during those hot summer days). Finally, slow cookers are a great way to prepare inexpensive, lean cuts of meat. The moist heat generated by the slow cooker makes these cuts of meat more tender compared to other cooking methods.

"Another feature of slow cookers is the ease of use," notes Anding. For the most part, all one has to do is place the ingredients in the slow cooker, plug it in, and turn it on. However if important food safety recommendations are ignored, food prepared in a slow cooker could cause a foodborne illness. To reduce the risk of foodborne illness, the Food Safety and Inspection Service offers the following tips for safe slow cooking:

1. Always start with a clean cooker, utensils and work area.
2. Wash hands before and during food preparation
3. Refrigerate perishable foods until preparation time. You can chop meat and vegetables in advance, but they must be stored separately in covered containers in the refrigerator.
4. Use only thawed meat or poultry.
5. Do not place large pieces of meat or a whole chicken in the slow cooker. Instead, cut the meat or poultry into small pieces. Otherwise, the food will cook so slowly that it could stay in the danger zone (for bacterial growth) too long.
6. Fill the cooker between 1/2 and 2/3 full. Root vegetables such as carrots and potatoes cook slower than meat or poultry so place them on the bottom, add the meat, then cover with liquid (broth or sauce).

7. Don't peek! Every time the lid is removed, it can take 20 minutes to regain the lost heat.
8. If you are not home during the **entire** slow-cooking process and the power goes out, throw out the food, even if it looks done!
9. Use a food thermometer to make sure meat and poultry dishes have reached a safe internal temperature.
10. Store leftovers in shallow covered containers and refrigerate within two hours after cooking.

If you are new to slow cooking or want to get reacquainted with the one you have, contact _____, county Extension Agent at _____(phone number).