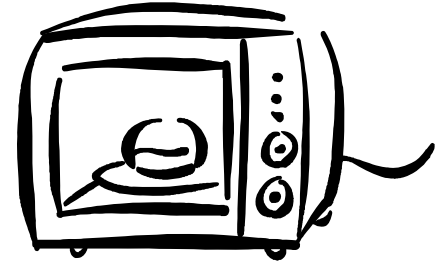




Microwave Cooking: Keeping it Safe

By Jeanne Pennypacker, Nutrition Educator

How do you use your microwave? Do you boil water, pop popcorn, and reheat leftovers or do you use it to prepare your family's meals? Do you use the proper settings and follow your manual's instructions? This may not seem important, but it is. The power or wattage of microwave ovens varies, which affects the cooking time. Microwave cooking can help you prepare a quick nutritious meal but if you are not using the correct amount of time for your oven's wattage, you may get a form of food-borne illness, resulting in vomiting and diarrhea. It is always recommended that you check your meat, poultry, fish, casseroles and leftovers for the correct internal temperatures before eating.



The higher the wattage of a microwave oven, the faster it will cook food; the lower the wattage the more time it will take to make it safe to eat. So it's important for food safety to know the wattage of your oven when using cooking directions from various sources. If you don't know the wattage of your microwave oven, try looking on the inside of the oven's door, on the serial number plate on the back of the oven, or in the owner's manual. You can also do a "Time-to-Boil" test to estimate the wattage.

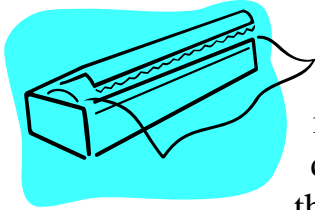
Time to Boil Test:

Measure a cup of water in a 2-cup glass measure. Add ice cubes; stir until water is ice cold. Discard ice cubes and pour out any water more than 1 cup. Set the microwave on high 4 minutes, but watch the water through the window to see when it boils.

- If water boils in less than 2 minutes, it is a very high wattage oven -- 1000 watts or more.
- If water boils in 2 1/2 minutes, it is a high wattage oven -- about 800 watts or more.
- If water boils in 3 minutes, it is an average wattage oven -- 650 to 700 watts or more.
- If water boils in more than 3 minutes or not by 4 minutes, it is a slow oven -- 300 to 500 watts.

Use the minimum cooking time given if you have a high wattage oven, and the maximum cooking time for slow ovens. The minimum cooking time may need to be reduced for very high wattages.





Using a microwave oven for everyday cooking can cut your time in the kitchen in half and save on the clean up. It helps to keep the kitchen cool in the hot summer months instead of heating the oven for cooking. But what dishes should you use? For microwave use, I use ceramic dishes made for the microwave that can go from oven to table and look good enough to use for company. If you do not have dishes like this to use in your microwave, it is important to know that there are certain containers that are safe for microwave use and materials that should not be used in the microwave.

Container safety

Safe materials to use in the microwave oven:

- When cooking or reheating food in the microwave, select glass, ceramic or plastics that are labeled for microwave oven use. If you are not sure if pottery or dinnerware is microwave safe, place the empty container in the microwave alongside a cup of water in a glass measuring cup and microwave on high for one minute. If the dish remains cool, it is safe to microwave. If the dish gets warm or hot to the touch, do not use.
- Use microwave plastic wraps (those specifically manufactured for microwave use), wax paper, parchment paper, cooking bags, and microwave-safe paper towels or lids when microwaving; they are all safe to use, however, do not let plastic wrap touch food.

Materials that should not be used in the microwave:

- Do not use foam trays, plastic wraps, or one-time use containers such as margarine tubs; take out containers or whipped topping bowls. They are not heat stable at high temperatures, and may melt or warp and may cause harmful chemicals to migrate into food.
- Never use thin plastic storage bags, brown paper or plastic grocery bags, newspapers, or aluminum foil in the microwave oven.

Have you ever cooked a microwave dinner that instructs you to stir half way through cooking? This is because microwave ovens do not heat foods evenly. If you were heating a frozen dinner, and you thought, “Oh, I don’t need to waste my time stirring”, you probably had frozen food in the middle of the dish when you thought it was done. This also happens when you try to cook fresh





food. Most people are under the misconception that the center of the plate cooks first. This is not true. Food around the outside of the plate cooks first and is often cooked sooner than the middle.

You may also notice this when you defrost meat in the microwave, that some of the outside pieces cook before the inside is fully defrosted. Besides being annoying when you find some of your food is still cold, it is also a health concern because improperly cooked food can cause food-borne illness and getting sick is not fun. What can you do about this?

Microwave Defrosting and Cooking Tips:

- Remove food from packaging before defrosting. Do not use foam trays and plastic wraps because they are not heat stable at high temperatures. Melting or warping may cause harmful chemicals to migrate into food.
- Cook meat, poultry, egg casseroles, and fish immediately after defrosting in the microwave oven because some areas of the frozen food may begin to cook during the defrosting time. Do not hold partially cooked food to use later.
- To eliminate cold spots where harmful bacteria can survive, stir or rotate food midway through the microwaving time. This will provide more even cooking.
- Cook large cuts of meat on medium power (50%) for longer periods of time. This allows heat to reach the center without overcooking the outer areas.
- Arrange food items evenly in a covered dish and if needed, add a small amount of liquid. Cover the dish with a microwave safe lid; loosen to vent and let some steam escape. The moist heat created inside the dish will help destroy harmful bacteria and ensure uniform cooking.
- When partially cooking food in the microwave oven for grilling or use in a conventional oven, transfer the microwave food to the other heat source immediately. Never partially cook food to store for later use.
- Always use a food thermometer to verify that your food has reached a safe internal temperature.
- Be sure to follow cooking and standing times appropriate for your microwave.

Now that you know the proper method of cooking in your microwave, check out this link for some great microwave recipes.



Information was adapted from:

http://www.fsis.usda.gov/fact_sheets/Microwave_Ovens_and_Food_Safety/index.asp