

## Microwave Food Safety

There are traits unique to microwave cooking that affect how evenly and safely food is cooked. “Cold spots” can occur because of the irregular way the microwaves enter the oven and are absorbed by the food. If food does not cook evenly, bacteria may survive and cause foodborne illness. Simple techniques ensure that food is microwaved safely.

### Defrosting Food

- Remove food from its store wrap before defrosting in the microwave oven. Foam trays and plastic wraps are not heat stable at high temperatures. Melting or warping from hot food may cause chemicals to leach into food.
- Cook meat and poultry immediately after microwave thawing. Some areas of frozen food may begin to cook during the defrosting time. Holding partially cooked food is not recommended because any bacteria present would not have been destroyed.
- Remember to take food out of the microwave. Do not forget about a food item that has been thawing in the microwave. Food should not be left out of refrigeration more than two hours.

### Utensils Safe to Use

If you are not sure if pottery or dinnerware is microwave safe, place the empty utensil in the microwave alongside a cup of water in a glass measure. Microwave on high for 1 minute. If the dish remains cool, it is safe to microwave. If the dish gets warm or hot to the touch, do not use.

**Safe Utensils for Microwave Cooking:** These include glass and glass ceramic cookware and those labeled for microwave use. Do not use metal or aluminum foil containers in the microwave. They can get too hot and burn.

**Wraps & Bags:** Wax paper, oven cooking bags, parchment paper and white microwave paper towels are safe to use. Put microwave-safe plastic wrap loosely over food so that steam can escape, and do not let it directly touch your food. The moist heat will help destroy harmful bacteria. Never use brown paper or plastic grocery bags, newspapers, aluminum foil, or thin plastic storage bags in the microwave.

**Containers Not Intended for the Microwave Oven:** Margarine tubs, whipped topping bowls, cheese containers and others can warp or melt from hot food, possibly causing harmful chemicals to get in the food. Do not use carry-out containers from restaurants or Styrofoam for the same reason. Foam insulated trays and plastic wraps on fresh meats in grocery stores are not intended for the microwave oven. Discard containers that hold prepared microwavable meals after you use them because they are meant for one-time use.

### Reheating Foods

- Foods that were cooked and stored safely can be reheated to any temperature.
- Reheating foods that were not cooked to proper temperatures or not stored safely must be thrown out. Reheating them will not make them safe to eat.
- Cover foods to hold in moisture and provide even heating. Covering food helps protect against contamination, keeps moisture in, and allows food to cook evenly.

- Microwaving baby food and formula is not recommended because uneven heating can result in scalding a baby's mouth. If microwaved, stir food, shake bottles and test for lukewarm temperature.

### **Microwave Safe Cooking Basics**

- Arrange food items evenly in a covered dish and add a little liquid. Cover the dish loosely with a microwave-safe lid or plastic wrap to allow steam to escape. Steam helps destroy bacteria and ensures uniform heating. Oven cooking bags also promote safe, even cooking.
- Foods and liquids are heated unevenly in the microwave, so stir or rotate food midway through cooking, and turn large food items upside down. This prevents cold spots where harmful bacteria can survive.
- Pierce hot dogs and baking potatoes with a fork before putting them into the microwave oven to keep them from exploding. Reheat hot dogs until they are hot and steaming.
- To prevent burns, carefully remove food from the microwave oven. Use potholders and uncover foods away from your face so steam can escape.
- Always allow the recommended standing time to complete cooking.

### **Microwaving Meat & Poultry**

- All raw meat, poultry and egg dishes cooked in a microwave oven must be cooked to at least 165 °F in all parts of the food and allowed to stand covered for at least two minutes. Use a food thermometer or the oven's temperature probe and check food in several places. Cooking times may vary because microwave ovens vary in power and efficiency.
- De-bone large pieces of meat. Bone can shield the meat around it from thorough cooking.

- Cook large pieces of meat on medium power (50 percent) for longer times. This allows heat to conduct deeper into meat without overcooking outer areas. Turn large food items upside down so foods cook more evenly and safely.
- Do not microwave whole, stuffed poultry. Cooking of meat is so rapid, the stuffing inside might not reach a sufficient temperature to be safe.
- Never partially cook raw meat or poultry to finish cooking later. When microwaving food partly done to finish cooking on the grill or conventional oven, transfer the microwaved food to another heat source immediately.

For more information on microwave safety, see [HGIC 3610, Food Safety Tips for Kids](#).

#### **Source:**

1. FDA. *Food Code 2009*. <http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/ucm186451.htm>
2. USDA Food Safety and Inspection Service. May 2011. *Cooking Safely in the Microwave Oven*. [http://www.fsis.usda.gov/factsheets/cooking\\_safely\\_in\\_the\\_microwave/index.asp](http://www.fsis.usda.gov/factsheets/cooking_safely_in_the_microwave/index.asp)
3. USDA/FSIS (Sept. 2004.). *Home Alone? After School Snacks and Food Safety USDA Quiz for Parents and Kids*. [http://www.fsis.usda.gov/News\\_&\\_Events/NR\\_090704\\_01/index.asp](http://www.fsis.usda.gov/News_&_Events/NR_090704_01/index.asp)

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