

Microwave Cooking

Why cook with a microwave?

Microwave cooking helps you:

- save time
- save energy because cooking is fast
- retain color, flavor, texture, and nutrients in foods, especially in vegetables
- with less clean up, since foods can be served in the cooking container

How do microwaves cook food?

Microwave ovens have "tubes" that change regular electricity into high-frequency microwaves. Ovens have a fan, usually at the top of the oven, that circulate the microwaves.

Water, fat, and sugar absorb microwaves, causing food particles to vibrate or move very fast. This produces heat, which cooks your food.



Quick Hints for Microwaving

COOKING TIMES:

Compact and other low-wattage microwave ovens (600 watts or less) may need longer cooking times than what is listed on some recipes and packages.

EVEN COOKING:

Rotate, stir or re-arrange large amounts of food once or twice during microwaving. Microwave ovens with a carousel feature do this automatically.

STANDING TIME:

Food removed from a microwave oven need "standing time" to finish cooking. Wait a few minutes before serving and eating.

CLEANING UP:

Keep your microwave oven clean. Wipe spills and splatters right away, especially around the door and seals. Food spills can affect cooking time and oven efficiency.

To keep food with skin from exploding, poke holes with a fork before cooking.

KEEPING SAFE: - See "**Safety Tips**" on last page.

The Microwave: Vegetables' Best Friend

Cooking vegetables in a microwave oven saves time and nutrients by needing little or no water, and can be deliciously low in fat without added butter or oil.

Keep a few tips in mind:

- Be sure the pieces are about the same size for even cooking.
- Season vegetables after heating. Salt may leave brown spots during cooking.
- Cover vegetables for even heating; uncover after cooking.
- If crisper vegetables are preferred, reduce cooking time.

For a 700-800 watt microwave oven, follow these approximate cooking times:

	<u>Size</u>	<u>Amount</u>	<u>Power</u>	<u>Minutes</u>
small pieces		1 serving	high	1-2
		2 servings	high	2-3
		4 servings	high	3-4
large pieces		1 serving	high	2-2½
		2 servings	high	3-3½
		4 servings	high	4-4½
		1 can/16 oz.	high	4½

serving size: ½ cup

small pieces: peas, bean, corn kernel, etc.

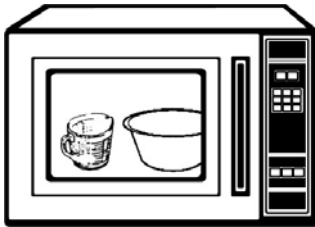
large pieces: broccoli, asparagus, corn on cob, etc.

Containers for Microwaving

Choose rounded containers for even cooking. Choose containers that allow microwaves to reach the food to cook it. Best choices are glass ceramics and heat-proof glassware and plastic. Pottery, plastic, and china should be used only if labeled "safe for microwave use".

Microwave Test #1: Is a container safe?

If you are not sure, try this simple test.



Place the empty dish in the microwave oven next to 1 cup of water in a glass measure. Microwave on high for 1 minute. If the dish stays cool, it is safe to microwave. If the dish gets warm or hot to the touch, it should *not* be used for microwaving.

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Do *not* use jars and bottles since these may crack or break during heating.

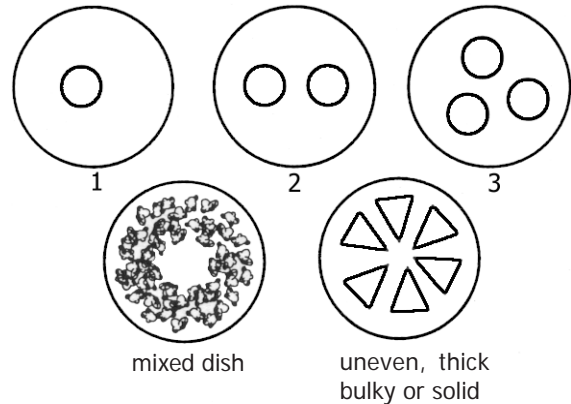
Do *not* use cold storage containers, like margarine tubs, whipped topping bowls, and cheese containers. These can warp or melt from the heat and cause chemicals to go into your food. Plastic foam plates and cups are also not good for microwaving.

Wax paper, oven cooking bags, parchment paper and white microwave paper towels should be safe to use. Avoid letting plastic wraps and thin plastic storage bags touch foods during microwaving. Make a hole or vent in the plastic wrap to allow steam to escape during cooking. *Never use* brown grocery bags or newspapers in the microwave oven.

Arranging Food for Microwaving

Arranging food appropriately is needed for even cooking in a microwave.

When cooking more than 1 piece, place food in a circle. See the pictures below. Avoid putting food in the center of the container. Leave about 1 inch of space between each food item for even cooking. Arrange food in a single layer rather than in a pile. Foods that are uneven in shape should be placed in the container with the thickest sides to the outside of the dish. Broccoli with thick stalks should be arranged with the buds or tips meeting in the center and the tougher stem ends to the outside of the dish.



Even Cooking

Microwaves go through foods up to about 2 inches thick. Cut pieces into equal sizes and shapes for even cooking. Stir or rotate food once or twice during microwaving. Food may also cook unevenly, depending on its ingredients.

Microwave Test #2: Does your oven heat evenly? Place a fully wet piece of smooth paper towel, the size of the oven tray, in the microwave oven. Microwave on high (100% power) for 30-45 seconds. Notice where the paper is still damp. In these areas, foods will take longer to cook. **Caution:** Paper will burn if left too long. Do *not* leave oven unattended during this test.

Seasoning and Colors

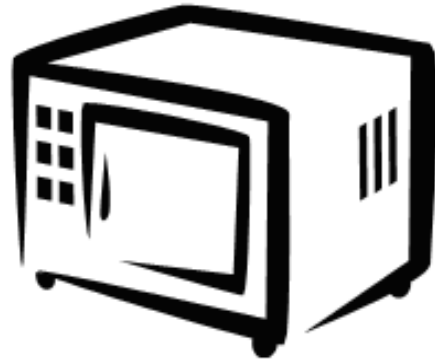
Salt pulls liquid out of food and interferes with the microwaves. Salt should be added to food after it is microwaved. Other seasonings can be added before microwaving.



Microwaved foods do not usually brown, so you may want to use sauces, bastes, or toppings for color.

Steaming

Microwave steamers and roasters require a quarter-inch of water, broth or other liquid at the bottom of the cookware dish. You need to watch some foods during the cooking process, and add more water or liquid to prevent the food from drying or burning.



Reheating Foods

Use all of the techniques previously recommended. Food should be steaming and hot to the touch. Loosely cover foods to hold in moisture and provide safe, even heating.

Standing Time

Standing time is very important in microwave cooking. Microwaves make food particles vibrate very fast, and they do not stop as soon as the oven is turned off. Cooking continues even after the food is no longer being exposed to the microwaves. Foods may continue to cook for another 5 to 20 minutes. Standing time is important for large, dense (thick) foods and dishes.



Seasoning and Colors

Microwaving can be like magic when it comes to defrosting. It is fast and a safe way to thaw frozen food.

Defrosting can be done at any power level, but a low power level (about 30%) is best so that the food does not start to cook on the outside before it has thawed on the inside. Many ovens have a setting labeled "defrost," usually about 30-40% power level, with the power cycling on and off.

The key to defrosting is even microwave heat. Cover the food, and leave plenty of space between pieces. Place the thicker portions to the outside of the dish. Stir, break up, or re-arrange the food during defrosting.

Food needs to be cooked immediately and thoroughly after defrosting in the microwave.

Wattage Power and Cooking Time

Cooking times depend on the wattage power of your microwave oven. Larger amounts of food need more heating time. Generally, if you double the amount of food, you need to increase cooking time by 50-60%. Most microwave recipes are for a 600-700 watt oven. Using recipes from the owner's manual is the easiest way to learn how to cook with your microwave oven. Microwave ovens usually range between 400-1200 watts. Check the owner's manual to find the wattage of your oven. The power listed is for the maximum "high" setting.

Microwave Test #3: What is the power of your microwave oven?

Fill a glass measure with 1 cup of room temperature water and microwave on **high** (100% power) until the water comes to a boil; note how long this took. A 600-700 watt oven will boil water in 2½ to 3 minutes. An oven with more wattage will boil water in less time.

Safety Tips

Do *not* tamper with safety interlocks on the oven door. Exposure to microwaves can be harmful. Do *not* run the oven without food in it.

Keep your oven clean, especially around the door seals. Do *not* use your microwave oven if the door glass is broken. Repairs should be done only by qualified service person.

Metal and microwaves do not mix. Avoid microwaving:

- metal cooking containers
- dishes trimmed with metals like gold or silver
- utensils with metal screws, bands or handles
- twist ties
- foil-lined containers

Unless otherwise labeled, microwave cookware should *not* be used in conventional ovens, on rangetops, or under browning elements (like a broiler).

Do *not* use the microwave oven for canning, deep-frying, or heating baby bottles. Temperatures cannot be controlled well enough.

Potential Fire Hazards

In case of fire, unplug the oven and keep the door closed.

Use caution when cooking high-fat foods (such as beef and pork products). Spattering may result and cause the container to melt or start a fire.

Do *not* overcook foods. Watch the oven during short, high-powered cooking of foods with little moisture or liquid.

Do *not* dry clothing or other articles; fire and chemical reactions can occur.

