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# Food Safety and the Microwave

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*Food  
Safety*



*Fact  
Sheet*

## **Food Safety and the Microwave**

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**S**afety questions about use of a microwave oven for cooking usually center around damage to tissues in the body. We are assured by manufacturers and government regulators that proper use of the oven is absolutely safe. Microbial problems, however, might present another hazard to our health if specific precautions are not observed. Many of the problems are associated with uneven heating by microwaves.

### **Question: Is it safe to heat home-canned vegetables and meats in a microwave?**

A long-standing rule for safe food preparation is to simmer home-canned vegetables and meats for 12-15 minutes before eating. The recommendation is based on the destruction of botulism toxin by heat. The toxin might be produced by bacteria in home canned vegetables and meats if processing time is too short or temperature is too low. It is sort of a final check—just in case. What happens which microwave is used to heat home-canned vegetables? Is the heating even enough and at high enough temperature? It may well be. Not all microwaves are created equal. The wattage varies considerably with different models and brands. By using the microwave and becoming familiar with the settings, it is possible to have a sustained simmer for 12-15 minutes. The use of a cover and stirring or rotation of the container also results in more even heat distribution.

### **Question: Is it safe to reheat food in a microwave?**

If the food has been properly refrigerated after thorough cooking and not allowed to stand at room temperature for extended periods of time (more than 2 hours) there is no risk with reheating in a microwave. However, thorough heating to at least 165° F is very important if bacterial growth has exceeded safe limits. Otherwise, there could be gastrointestinal problems such as nausea, vomiting and diarrhea. Since microwave heating is very rapid, a few extra seconds overheats or dries out food. As a result microwave users are

advised to undercook. When reheating previously cooked food, it is necessary to heat thoroughly even if there is loss of quality.

### **Question: Is it safe to cook pork in the microwave?**

It is recommended that pork be cooked to the well done stage (165-170° F) to kill the trichinosis organism, should it be present. Uniform heating is important when cooking pork. Every portion of the meat must be thoroughly cooked. The use of a lid, cooking bags, rotation of food at midway, stirring, and rearranging are all techniques to promote more even heating. Standing time of 10-15 minutes after micro waving will distribute heat more evenly. The use of a temperature probe in the meat is also important.

### **Question: Is it safe to thaw frozen food in the microwave?**

The use of microwave cooking provides a quick way to get frozen food thawed and cooked under conditions and times which can minimize bacterial growth.

Thawing food at room temperatures for extended time is not recommended, since the outside of the food could be warm enough to promote bacterial growth while the center is still frozen. Defrosting in the refrigerator requires a long time and space in the refrigerator. Long, slow cooking methods such as low temperature ovens and slow cookers might also result in temperatures which allow bacterial growth especially if starting from the frozen state.

### **Question: What are some general recommendations for safe use of the microwave?**

Microwave cooking has a firmly established place in our lifestyles. Just remember that it is essential to use appropriate handling procedures for a safe food supply no matter what cooking methods are used.

#### **Safe Food Handling Rules**

1. Purchase fresh, wholesome products by checking the "Sell-by" date and the "Use-by" date.
2. After purchase, take food directly home and store in appropriately. During the hottest part of the summer, an ice chest in the car will protect refrigerated or frozen foods on the way home.
3. Keep perishable foods such as raw fish, poultry and ground meats no longer than 2 days before cooking or freezing them.
4. Raw eggs in their shells should be refrigerated and may be kept 3 to 5 weeks. Hard cooked eggs can be refrigerated for no more than 1 week.
5. Never leave food, either raw or cooked, outside of the refrigerator for more than a total of 2 hours, including preparation and serving time.
6. Keep a clean kitchen and wash hands frequently while preparing food.

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