



Non-Ionizing Radiation Used in Microwave Ovens

Microwave ovens use radiofrequency radiation in the microwave range.

- Microwaves don't make food radioactive.
- Follow the manufacturer's manual and make sure your microwave functions properly.
- Avoid standing directly against or in front of the oven while using it.

About Non-Ionizing Radiation Used in Microwave Ovens

Microwave ovens use electromagnetic waves that penetrate food, causing its water molecules to vibrate and generate heat within the food to cook it very quickly.

The microwaves produced inside the oven are reflected by its metal interior. These reflected waves are absorbed by food and produce heat that cooks the food.

Remember: Microwaves do not make food radioactive.

Microwave radiation leaks are hard to detect because you can't smell or see microwaves. It is important that microwave oven doors seal properly to make sure that the microwave radiation stays inside the oven. Old or faulty door seals are the most common cause of leaks. Routinely slamming the door, a buildup of dirt, or simple wear and tear can cause door seals to leak. The U.S. Food and Drug Administration, which regulates radiation-emitting products such as microwave ovens, advises against standing directly in front of or up against the oven while it is operating. This will avoid harm from any possible leaks.



Rules and Guidance

U.S. HEALTH AND HUMAN SERVICES (HHS), U.S. FOOD AND DRUG ADMINISTRATION (FDA)

FDA's Center for Devices and Radiological Health (CDRH) sets and enforces standards of performance for electronic products that emit radiation. The standards ensure that radiation emissions do not pose a hazard to public health. These standards can be viewed on FDA's Code of Federal Regulations on Microwave Ovens.¹

FDA establishes performance standards for microwave ovens. All microwave ovens must have a label stating that they meet these performance standards. FDA requires that all ovens have a label that explains how to use them safely.

What you can do

- Follow the manufacturer's instruction manual and safety precautions for your oven model.
- Never operate a microwave oven if you can't shut the oven door or it doesn't seal well.
- As an added safety precaution, don't stand directly against or in front of an oven while it is operating.

Where to learn more

You can learn more about microwave ovens by visiting the resources available on the following webpage: <http://www3.epa.gov/radtown/microwave-ovens.html#learn-more>.

ⁱ <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=1030.10>