

# Ask Leyla: Are microwave ovens safe?



**Q:** Do you think microwave ovens are safe? Do you use them?

**A:** I do own a microwave oven and use it mostly to reheat leftovers. I don't use it to thaw or cook proteins such as meat or chicken because I don't like the texture or consistency of the food.



However, I will use it to cook vegetables like broccoli in a pinch if I don't have time to steam or roast them.

I never, ever use plastic products in the microwave. (I assume you already know not to use metal, right?) I would even consider BPA-free containers *unsafe* for microwave use. I always use a microwave safe container like glass—Pyrex is a good choice, but not much else. And despite its relative safety, I don't stand within 3 feet of the microwave while it's on.

The FDA has stringent standards in place regarding microwave oven safety. Here is an excerpt:

*Through its Center for Devices and Radiological Health (CDRH), the FDA sets and enforces standards of performance for electronic products to assure that radiation emissions do not pose a hazard to public health.*

A Federal standard (21 CFR 1030.10) limits the amount of microwaves that can leak from an oven throughout its lifetime to 5 milliwatts (mW) of microwave radiation per square centimeter at approximately 2 inches from the oven surface. This limit is far below the level known to harm people. Microwave energy also decreases dramatically as you move away from the source of radiation. A measurement made 20 inches from an oven would be approximately 1/100th of the value measured at 2 inches from the oven.

The standard also requires all ovens to have two independent interlock systems that stop the production of microwaves the moment the latch is released or the door is opened. In addition, a monitoring system stops oven operation in case one or both of the interlock systems fail.

All ovens must have a label stating that they meet the safety standard. In addition, the FDA requires that all ovens have a label explaining precautions for use. This requirement may be dropped if the manufacturer has proven that the oven will not exceed the allowable leakage limit even if used under the conditions cautioned against on the label.

To make sure the standard is met, FDA tests microwave ovens in its own laboratory. The FDA also evaluates manufacturers' radiation testing and quality control programs at their factories.

To put your mind a little more at ease about microwave cooking, take a look at this very balanced article by Chris Kresser.

To your health!

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