FARMERS MARKETS

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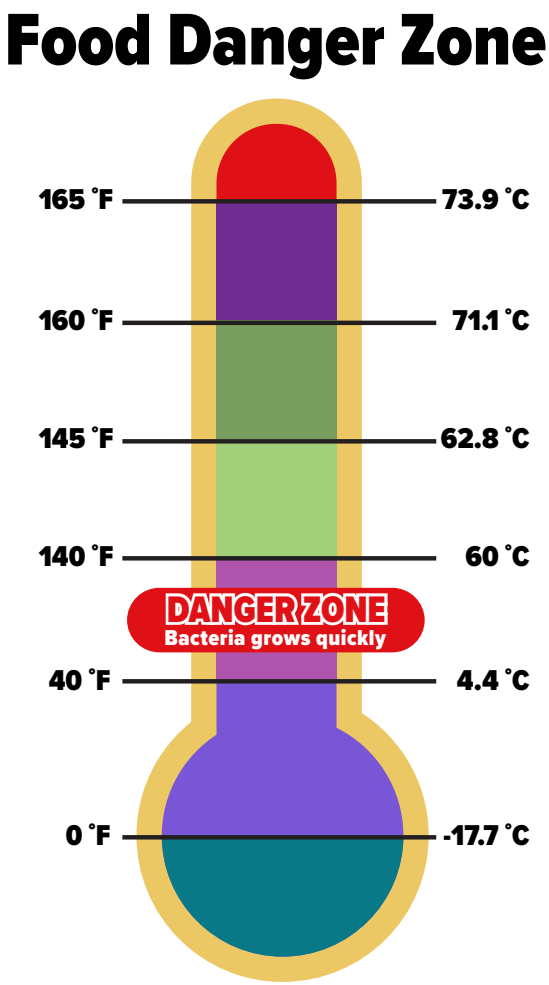
Temperature Danger Zone (40 F - 140 F)

Food safety requires you to reach and maintain correct temperatures while preparing food. Pathogens can thrive in food if it is prepared or served at certain temperatures for an extended period of time, causing various illnesses. Between the time food is finished cooking and the time it is served, it is vital to keep an eye on the temperature of the food, whether the food is hot or cold.



Identifying the danger zone

The temperature danger zone is the range between 40 F and 140 F in which bacteria grows rapidly. In this temperature zone, bacteria in perishable foods can reach unsafe levels that can make you sick. Food at any temperature within this zone experiences the growth of bacteria, but they multiply even more quickly between 70 F and 125 F. The longer food is exposed to the temperature danger zone, the more bacteria will grow on it.

Why is the temperature danger zone important?

All food handlers are responsible for recognizing the importance of the temperature danger zone to protect consumers from foodborne illness. Bacteria may develop to unhealthy levels if food is allowed to enter the temperature danger zone. This type of dangerous bacterial growth can occur without any visible signs of spoilage. Therefore, it is extremely critical to understand the temperature danger zone and keep food out of it by keeping perishable food cold or hot, as necessary. Time-temperature abuse can be more problematic than temperature abuse alone. Allowing food to sit in the danger zone for an extended period increases the food safety risks.

Two-hour rule

All perishables left out at room temperature for more than two hours should be discarded. Moreover, food should not be left out for more than one hour if the room or outdoor temperature is above 90 F. Foods can be consumed, reheated or refrigerated within the two-hour time restriction to bring them back to food-safe temperatures. Checking the temperature of your food using a food thermometer every hour will allow you to regulate the temperature and help you perform necessary actions.

How to keep food out of the temperature danger zone?

- Use a food thermometer to check the temperature while cooking, cooling and holding food.
- Keep cold perishable food at or below 40 F by storing it in a refrigerator or in cold-holding equipment, such as a cooler with ice. Use a refrigerator thermometer to check if the temperature is at or below 40 F. Do not rely on the temperature display of the equipment alone.
- Store hot perishable food in hot-holding equipment, such as crockpots, chafing dishes or other appropriate heaters, to keep food at or above 140 F. Remember hot-holding equipment cannot be used to reheat food; it can only be used to maintain the required temperature. Always heat food to a safe temperature before placing it in holding equipment.
- Discard the food that has been kept out at room temperature or in the temperature danger zone for more than two hours. Throw out the food that has been sitting out in the danger zone at 90 F or above for more than one hour.

How to cool hot foods below the danger zone?

If you are preparing food and do not intend to serve it soon, you must bring the temperature of the food down to the safe range. It might be a challenge to cool food below 40 F without letting it sit in the danger zone for a long time. Additionally, placing hot food directly in the refrigerator can raise the temperature inside the refrigerator. This can increase the risk that food that is already in the refrigerator may enter the danger zone. You can follow some of these steps to lower the temperature of hot food without promoting the growth of bacteria:

- Fill a pot, container or sink basin halfway with ice to make an ice bath. Containers of hot meals can be quickly cooled in an ice bath to temperatures of 40 F or lower. Make sure the sink or the container is properly sanitized before use. Do not let the water from the ice bath enter the food.
- Store food in shallow containers to ensure that the temperature is distributed evenly.
- If possible, divide large portions of food into smaller amounts and refrigerate.
- Use a cooling paddle to frequently stir hot liquids, such as soups, sauces and stews.
- Use a blast chiller to quickly cool meals and reduce the time food sits in the danger zone.

Safe minimum internal temperature

Food must be cooked to a minimum internal temperature to make food safe for consumption. A food thermometer should be used to check if the food has become hot enough to destroy hazardous bacteria that can cause food poisoning. The minimum internal temperature at which pathogens are destroyed depends upon the type of food. Use the following table to cook food to these minimum internal temperatures. You can choose to cook food at a higher temperature depending on your preference.

Food	Internal Temperature (F)
Pork, ham, beef, veal, lamb (steaks, chops and roasts)	145 (3 minutes rest time)
Poultry	165
Ground meat	160
Ground poultry	165
Pre-cooked ham packaged in USDA-inspected plant (to reheat)	140
Pre-cooked ham (others)	165
Fish with fins and shellfish	145 (until flesh is opaque)
Eggs	160
Leftovers and casseroles	165

Source: Foodsafety.gov

Reference

FoodSafety.gov. (2022). Cook to a Safe Minimum Internal Temperature Food Safety Charts. Retrieved from https://www.foodsafety.gov/food-safety-charts/safe-minimum-internal-temperatures

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