

Refrigerator Thermometers: *Cold Facts about Food Safety*



Chilling stored foods to proper temperatures is one of the best ways to slow the growth of dangerous bacteria.

A Refrigerator Thermometer Can Make a Big Difference

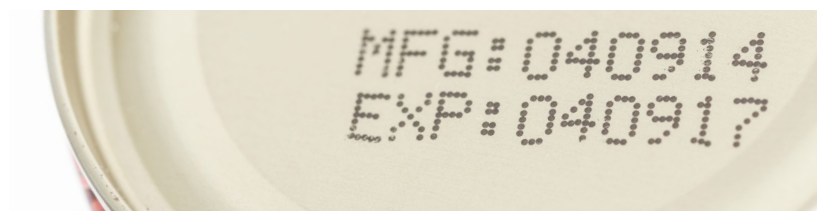
When it comes to protecting yourself and your family from foodborne illness, one of your most effective tools is the kitchen refrigerator. In fact, at room temperature, the numbers of bacteria that cause foodborne sickness can double every 20 minutes! Chilling foods to proper temperatures is one of the best ways to slow the growth of these bacteria.

To ensure that your refrigerator is doing its job, it's important to keep its temperature at 40 °F or below; the freezer should be at 0 °F. Since few refrigerator controls show actual temperatures, using an inexpensive freestanding appliance thermometer will allow you to monitor the temperature and adjust the setting of the refrigerator and/or freezer if necessary. Buy one for the fridge, one for the freezer, and check them often.

Refrigerator Strategies: Keeping Food Safe

In addition to keeping the temperature in your fridge at 40 °F, you can take additional steps to make sure your refrigerated foods stay as safe as possible.

- **Avoid “Overpacking.”** Cold air must circulate around refrigerated foods to keep them properly chilled.
- **Wipe Up Spills Immediately.** In addition to helping reduce the growth of the *Listeria* bacteria (which can grow at refrigerated temperatures), getting rid of spills — especially drips from thawing meats — will help prevent “cross-contamination,” where bacteria from one food spread to another.
- **Keep It Covered:** Store refrigerated foods in covered containers or sealed storage bags, and check leftovers daily for spoilage.
- **Check Expiration Dates On Foods.** If food is past its “use by” date, discard it. If you’re not sure or if the food looks questionable, the simple rule is: “When in doubt, throw it out.”
- **Clean The Fridge Out Frequently.** Make this task part of your kitchen cleaning routine!



Quick Chill

Whether you're dealing with leftovers or just-purchased foods, it's important to get foods that need refrigeration into your fridge quickly. Leaving perishable foods out for two hours or more allows bacteria to multiply rapidly — and can put you at serious risk of contracting foodborne illness.

- **Groceries:** When you get home from the grocery store, put your refrigerated items away as quickly as possible. Never allow raw meat, poultry, seafood, eggs, or produce that requires refrigeration to sit at room temperature for more than two hours; the limit is one hour if the air temperature is above 90 °F. (If you're not sure whether certain produce requires refrigeration, ask your grocer.) Also, keep in mind that your car is probably even hotter than typical room temperature, so it's important not to leave groceries in your car longer than absolutely necessary — and *never* more than 2 hours (or 1 hour on a hot day).
- **Leftovers:** These need to be refrigerated or frozen within two hours, as well. Despite what some people believe, putting hot food in the refrigerator doesn't harm the appliance. To help hot food cool faster, divide leftovers into smaller containers before putting them in the refrigerator.
- **Doggie Bags and Take-out Foods:** Again, the "two-hour rule" applies to carry-home foods. Leftovers from take-out or restaurant meals need to go into the refrigerator within two hours at most. If you can't get home within two hours after eating out, don't request a doggie bag.
- **Marinated Foods:** Always keep food in the refrigerator while it's marinating. Bacteria can multiply rapidly in foods left to marinate at room temperature. Also, remember this tip for marinating safely: *never* reuse marinating liquid as a sauce unless you bring it to a rapid boil first.



Thaw with Care

Because bacteria can multiply so rapidly in unrefrigerated food, it's simply unsafe to let food thaw at room temperature. If left unrefrigerated, some organisms can create toxins that will survive the cooking process even if the food is cooked to temperatures that kill the bacteria themselves.

There are three ways to thaw safely: in the refrigerator, in cold water, and in the microwave. If you thaw food in cold water, change the water every half hour to make sure it stays cold. Foods thawed in the microwave must be cooked immediately after thawing.

In Case of Disaster...

If your home loses power, how do you know what foods you can safely keep and eat?

- If you have adequate warning that you may lose power, freeze water in quart size sealable plastic food storage bags and place them in your freezer and fridge to help food stay cold when the power goes out.
- If you do lose power, keep the doors to your fridge and freezer closed as much as possible to keep foods cold.
- Before using any foods, check your refrigerator and freezer thermometers. If the fridge is still at or below 40 °F, or the food has been above 40 °F for only two hours or less, it should be safe to eat.
- Frozen food that still has ice crystals or is at 40 °F or below (to be sure, check the appliance thermometer or use a food thermometer to check each individual food package) can be safely refrozen or cooked.
- If you're unsure how long the temperature has been at or above 40 °F, don't take a chance. Throw the food out.

How Long Is Too Long?

Even when your refrigerator and freezer are chilling foods at the right temperatures, and you've followed all the other rules for safe storage, there are limits to how long you can safely store foods in the refrigerator. (Foods will stay safe indefinitely in the freezer, but quality/taste of the food may be affected.)

More Than an “Upset Stomach” *Foodborne Illness Is Serious Business*

Foodborne diseases are far more serious than many people realize. The Federal government estimates that there are about 48 million cases of foodborne illness annually — the equivalent of sickening 1 in 6 Americans each year. And each year these illnesses result in an estimated 128,000 hospitalizations and 3,000 deaths.

- **Salmonella**, for example, causes millions of cases of foodborne illness annually and is the leading cause of foodborne deaths.
- **E. coli O157:H7** is a bacterium that can produce a deadly toxin. Infections from *E. coli* O157:H7 are estimated to be between 20,000 and 40,000 cases per year.
- The **Clostridium botulinum** bacterium produces a deadly toxin that causes botulism, a disease characterized by muscle paralysis.
- Illnesses caused by **Campylobacter**, **noroviruses**, **Shigella**, and other organisms can create severe health problems, particularly for children, the elderly, and people with chronic illness or suppressed immune systems.

You may be surprised to learn that food can make you very sick even when it doesn't look, smell, or taste spoiled. That's because foodborne illnesses are caused by *pathogenic* bacteria, which are different from the *spoilage* bacteria that make foods “go bad.”

Many pathogenic organisms are present in raw or undercooked meat, poultry, seafood, milk, and eggs; unclean water; and even on fruits and vegetables. Keeping these foods properly chilled will slow the growth of bacteria; following the other recommended food handling practices (clean your hands, surfaces and produce, separate raw foods from ready-to-eat foods, and cook to safe temperatures) will further reduce your risk of getting sick.

Safe Food Handling: Four Simple Steps

CLEAN



SEPARATE



COOK








CHILL







CLEAN

Wash hands and surfaces often

-  Wash your hands with warm water and soap for at least 20 seconds before and after handling food and after using the bathroom, changing diapers, and handling pets.
-  Wash your cutting boards, dishes, utensils, and counter tops with hot soapy water after preparing each food item.
-  Consider using paper towels to clean up kitchen surfaces. If you use cloth towels, launder them often in the hot cycle.
-  Rinse fresh fruits and vegetables under running tap water, including those with skins and rinds that are not eaten. Scrub firm produce with a clean produce brush.
-  With canned goods, remember to clean lids before opening.





SEPARATE

Separate raw meats from other foods

-  Separate raw meat, poultry, seafood, and eggs from other foods in your grocery shopping cart, grocery bags, and refrigerator.
-  Use one cutting board for fresh produce and a separate one for raw meat, poultry, and seafood.
-  Never place cooked food on a plate that previously held raw meat, poultry, seafood, or eggs unless the plate has been washed in hot, soapy water.
-  Don't reuse marinades used on raw foods unless you bring them to a boil first.






COOK

Cook to the right temperature

-  Color and texture are unreliable indicators of safety. Using a food thermometer is the only way to ensure the safety of meat, poultry, seafood, and egg products for all cooking methods. These foods must be cooked to a safe minimum internal temperature to destroy any harmful bacteria.
-  Cook eggs until the yolk and white are firm. Only use recipes in which eggs are cooked or heated thoroughly.
-  When cooking in a microwave oven, cover food, stir, and rotate for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking. Always allow standing time, which completes the cooking, before checking the internal temperature with a food thermometer.
-  Bring sauces, soups and gravy to a boil when reheating.

CHILL

Refrigerate foods promptly

-  Use an appliance thermometer to be sure the temperature is consistently 40° F or below and the freezer temperature is 0° F or below.
-  Refrigerate or freeze meat, poultry, eggs, seafood, and other perishables within 2 hours of cooking or purchasing. Refrigerate within 1 hour if the temperature outside is above 90° F.
-  Never thaw food at room temperature, such as on the counter top. There are three safe ways to defrost food: in the refrigerator, in cold water, and in the microwave. Food thawed in cold water or in the microwave should be cooked immediately.
-  Always marinate food in the refrigerator.
-  Divide large amounts of leftovers into shallow containers for quicker cooling in the refrigerator.