HEALTH BASICS

Safe food handling

Safe food handling means preparing, cooking, and storing food in ways that limit contamination.

WHAT IT IS
Practical steps that reduce food contamination

WHERE IT COMES UP
Preparing, cooking, storing, and serving food

WHY IT MATTERS
Lowers the chance of foodborne illness

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Local public health service or primary care clinician

HOW IT IS CHECKED
Food thermometer and refrigerator thermometer

Overview

Safe food handling is a set of everyday practices used to keep food from becoming contaminated. It is not a disease or diagnosis, and it does not have symptoms.

Food can pick up harmful bacteria, viruses, parasites, allergens, or chemicals during production or preparation. Safe handling cannot remove every risk, but it can reduce many preventable risks at home.

Four basic actions cover most situations:

Some people have a higher chance of becoming seriously ill from contaminated food. This includes pregnant people, adults aged 65 or older, children younger than 5, and people with weakened immune systems. These groups may need to be especially careful about raw, undercooked, or unpasteurized foods.

- Clean: Wash hands, surfaces, utensils, and produce appropriately
- Separate: Keep raw meat, poultry, seafood, and eggs away from ready-to-eat food
- Cook: Use enough heat to kill harmful germs

- Chill: Refrigerate perishable food promptly

How it works

Cleaning helps stop germs from moving between your hands, food, utensils, and kitchen surfaces. Wash your hands with soap and running water for at least 20 seconds before preparing food and after handling raw meat, poultry, seafood, eggs, rubbish, or pets.

Wash fruit and vegetables under running water before cutting or eating them. Do not use soap, bleach, or household cleaners on food. Do not wash raw poultry. Rinsing it can splash germs onto nearby surfaces without making the meat safer.

Separating foods prevents cross-contamination , which means germs moving from one food or surface to another. Keep raw meat, poultry, seafood, and eggs apart from foods that will not be cooked. Use separate plates and utensils, or wash them thoroughly between uses. In the refrigerator, store raw animal products in sealed containers where juices cannot drip onto other food.

A similar issue is allergen cross-contact . This happens when a small amount of a food allergen, such as peanut, milk, or egg, reaches another food. Washing hands and equipment, reading labels, and preparing allergen-free food separately can reduce this risk.

Cooking food to a safe internal temperature kills many harmful germs. Appearance and colour are not reliable checks. Put a food thermometer into the thickest part of the food, away from bone.

US food safety guidance lists these minimum internal temperatures:

Chilling slows the growth of many germs. Keep the refrigerator at 40°F (4°C) or below and the freezer at 0°F (-18°C) or below. An appliance thermometer can confirm the temperature.

Refrigerate perishable food within 2 hours. If the surrounding temperature is above 90°F (32°C), refrigerate it within 1 hour. Divide large amounts into shallow containers so they cool more quickly.

Thaw food in the refrigerator, in cold water, or in a microwave. Food thawed in cold water or a microwave should be cooked promptly. Do not thaw perishable food on the counter.

- Whole cuts of beef, pork, veal, and lamb: 145°F (63°C), followed by a 3-minute rest
- Ground beef, pork, veal, and lamb: 160°F (71°C)
- Poultry, including ground poultry: 165°F (74°C)
- Fish: 145°F (63°C), or until the flesh is opaque and separates easily

- Leftovers and casseroles: 165°F (74°C)

Why it matters for your health

Contaminated food can cause foodborne illness , sometimes called food poisoning. Different germs can cause different illnesses. Examples include salmonellosis, campylobacteriosis, norovirus infection, listeriosis, and illness caused by certain strains of Escherichia coli .

You usually cannot tell whether food contains harmful germs by looking at it, smelling it, or tasting it. Food that appears normal may still be contaminated. Food that smells spoiled should be discarded, but passing a smell test does not prove that food is safe.

Temperature control is important because germs can multiply when perishable food remains warm for too long. Cooking may kill many germs, but it may not remove every toxin that germs have already produced.

Safe handling also protects people who are not involved in preparing the meal. A contaminated knife, chopping board, towel, or refrigerator shelf can transfer germs to another person's food.

What can go wrong

Raw food juices can contaminate salad, fruit, bread, or cooked food. A common example is placing cooked meat back on the unwashed plate that held it when raw.

Undercooking can leave harmful germs alive. This is more likely when temperature is judged only by colour, cooking time, or texture. Thick or irregularly shaped food may cook unevenly.

Poor chilling can allow germs to multiply. This may happen when leftovers stay at room temperature too long, a refrigerator is too warm, or a large pot of food cools slowly.

Food allergen cross-contact can cause an allergic reaction in someone with a food allergy. Trouble breathing, throat tightness, collapse, or swelling of the tongue or face after eating may be signs of a severe allergic reaction. Use prescribed emergency medicine if available and call emergency services immediately.

Foodborne illnesses are separate conditions, not features of safe food handling. Seek prompt medical advice if illness after eating involves bloody diarrhoea, diarrhoea lasting more than 3 days, repeated vomiting that prevents drinking, signs of dehydration, or a fever above 102°F (about 39°C). Pregnant people should contact a clinician promptly about fever or flu-like illness after eating food that may carry Listeria .

Call emergency services for severe breathing difficulty, fainting, confusion, or inability to wake

normally. Routine concerns-such as repeated mild illness linked to meals, questions about higher-risk foods, or food safety during pregnancy-can be discussed with a primary care clinician. A suspected outbreak involving several people can also be reported to the local public health service.

What you can do

Use a food thermometer rather than relying on appearance. Keep an appliance thermometer in the refrigerator, especially if its temperature display is absent or unreliable.

Make food safety easier by keeping raw and ready-to-eat foods separate from shopping through storage. Use sealed containers for raw meat and clean reusable shopping bags after leaks.

Label leftovers with the date they were prepared. USDA guidance recommends using most cooked leftovers within 3 to 4 days when refrigerated properly. Freeze them sooner if you will not eat them within that period.

Before serving food to someone with an allergy, ask which ingredient must be avoided and whether cross-contact is a concern. Check the complete ingredient label each time because recipes can change.

If you think a food caused illness, keep useful details rather than testing the food yourself. Record what was eaten, when it was eaten, when illness began, where the food came from, and whether anyone else became ill. Keep packaging or receipts if they can be stored without further exposure.

There is no home test that proves an ordinary meal is free of all harmful germs. Your practical checks are hand and surface hygiene, separation, time, storage temperature, and internal cooking temperature.

Common questions

Can I tell whether food is safe by smelling it?

No. Spoilage may change smell, taste, or appearance, but many disease-causing germs do not. Do not taste food to decide whether it is safe.

Should I wash meat or poultry before cooking?

No. Washing can splash germs around the sink and work surfaces. Proper cooking is the step that kills germs.

Can I put hot food directly into the refrigerator?

Yes. Divide large amounts into shallow containers so the food cools quickly. Leaving it on the counter to cool for several hours is not safer.

Is freezing the same as killing germs?

No. Freezing stops or slows the growth of many germs, but some survive and can become active after thawing. Handle and cook thawed food safely.

Are date labels proof that food is safe or unsafe?

Not always. Many date labels describe quality rather than safety. Follow storage instructions, food recall notices, and any label that gives a specific safety deadline. When you cannot confirm how a perishable food was stored, discarding it is the safer choice.

What should I ask when eating away from home?

If you are pregnant, immunocompromised, or managing a food allergy, ask how the food is cooked and whether unpasteurized ingredients, raw animal products, or allergen cross-contact are involved.

Sources

- US Food and Drug Administration. Safe Food Handling
- US Department of Agriculture Food Safety and Inspection Service. Steps to Keep Food Safe
- FoodSafety.gov. Safe Minimum Internal Temperature Chart
- Centers for Disease Control and Prevention. Preventing Food Poisoning
- Centers for Disease Control and Prevention. Signs and Symptoms of Food Poisoning
- US Department of Agriculture Food Safety and Inspection Service. Leftovers and Food Safety