

KEEP FOOD SAFE

It's In Your Hands!

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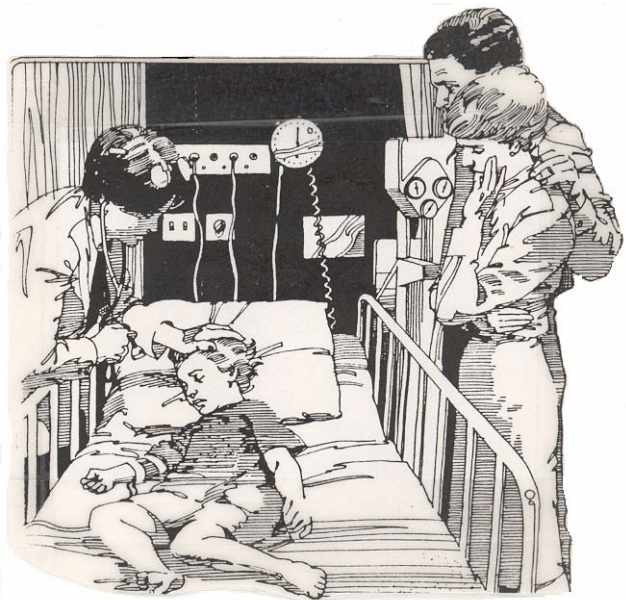
Most of the time, eating is fun. But the foods we eat can make us sick.

Foodborne illness can be the result of biological, chemical, or physical hazards. Chemical hazards (for example, pesticides, food additives, or environmental contaminants, such as lead or mercury) often receive considerable public attention. Scientists, however, consider biological hazards such as harmful bacteria, viruses, or parasites as the most risky of these hazards.

What is Food Poisoning?

When people experience diarrhea, vomiting, an upset stomach, fever, or stomach cramps, they often think they have the flu. But the real problem may be caused by harmful microorganisms (called pathogens) in the food they ate a few hours (or even weeks) ago.

In more serious cases, some bacteria may cause double vision, difficulty swallowing or breathing, and paralysis. Even death can occur. The Center for Disease Control estimates that between 4,500 to 6,000 people die each year as a result of foodborne pathogens.



Who Is at Risk for Food Poisoning?

Certain people are at greater risk of food poisoning than other people. Their immune systems are often weakened. The human immune system is the body's way of fighting infections. The people at greatest risk are:

- ☞ Senior citizens.
- ☞ Pregnant women.
- ☞ Very young children.
- ☞ People with weakened immune systems suffering from chronic illnesses, such as cancer, diabetes, liver disease, and AIDS.



What Causes Food Poisoning?

Bacteria are very, very tiny organisms that can be seen only under a microscope. They are everywhere – in the air, on kitchen counters, on clean dishes, on and in the body, and in food and water.

Most bacteria don't make people ill. In fact, some are extremely useful. They are responsible for the unique taste and texture of such foods as sauerkraut, some cheeses, and yogurt.

Any food can be contaminated with harmful bacteria; however, some foods cause more problems than others. As a general rule, foods high in protein – meat, poultry, fish, eggs, and dairy products – are more likely to be problems. Recently, foodborne outbreaks have occurred as a result of eating contaminated tomatoes, lettuce, cantaloupe, and unpasteurized cider and orange juice. But all foods should be handled as if they could cause a problem.

In the last few years, viruses have become a problem. Outbreaks have involved such foods as raw or lightly cooked shellfish, tossed salad, cake frosting, and ice. Viruses are different from bacteria in a number of ways:

- ☞ Viruses do not multiply on foods. They just sit there waiting for a human host.
- ☞ Unlike most bacteria for which thousands or millions are needed to cause illness, only a few viruses are required to cause sickness.

- ☞ Foodborne illness caused by viral contamination is transmitted only by human fecal contamination. This mainly happens because food handlers do not adequately wash their hands after going to the bathroom or through the release of inadequately treated sewage into water where shellfish are harvested.

Many people think that food which makes people ill will look spoiled, smell bad, or have an off-taste. Food containing pathogens sometimes appears spoiled, but it may also look good, smell good, and taste delicious!

How Can You Protect Yourself from Food Poisoning?

So if pathogens are everywhere and can be on any food – even food that looks good, how can people protect themselves? The three simple, basic guides to handling food safely –

- ☞ Keep food hot.
- ☞ Keep food cold.
- ☞ Keep food clean.

50 specific ways to keep food safe.

When shopping...

Keep packages of raw meat separate from other foods, particularly foods that won't be cooked before eating.

Use plastic bags to keep raw meat, poultry, or fish from dripping on other foods.

Buy packaged precooked foods only if the packaging has no tears. Buy products labeled “Keep Refrigerated” only if they are stored in a refrigerated case. This includes cartons of shell eggs.

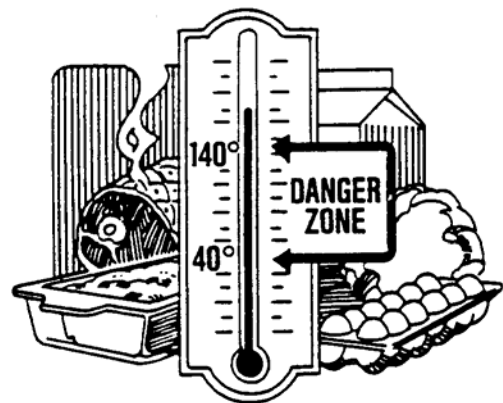
Buy unpackaged deli meat, cooked poultry, and cooked fish or seafood only if not in contact with other foods – especially raw meat, poultry, or fish products.

Buy frozen foods only if they seem frozen to the touch.

Don't buy cans or glass jars with dents, cracks, or bulging lids. This can be a sign the food contains food-poisoning organisms.

Shop for meat, poultry, and fish last; pack in ice chest if time from store to home will be longer than 1 hour, especially in hot weather.

Report problems with packaging, products, storage, or sanitation to store management; if problems are not corrected, notify local health authorities.



Keep hot foods hot and cold foods cold.

When storing...

Keep your refrigerator and freezer clean.

Check refrigerator and freezer temperatures often. Maintain the temperature at 40°F or below in the refrigerator; 0°F or below in the freezer.

Refrigerate all products with “Keep Refrigerated” labels.

Keep raw meat, poultry, and fish separate from other foods. Use plates, plastic bags, or covered containers to keep meat, poultry or fish juices from dripping on other foods or refrigerator surfaces.

Use freezer wrap, freezer bags, or aluminum foil over commercial wrap for freezer packages.

If refrigerator or freezer compartment fails, keep door closed and find other cold storage. Hold refrigerated foods at 40°F, or cook and serve within a few hours.

If freezer fails, keep door closed and find alternate storage. Refreeze meat or poultry still containing ice crystals, or cook and serve the product.

Store canned goods in a cool, dry place for use within a year. Never put them above the stove, under the sink, on in a garage or damp basement.

When preparing...

Wash hands with soap and water for 20 seconds before beginning food preparation and after handling raw meat, poultry, or fish; touching animals; using the bathroom; or changing diapers.

Wash hands, countertops, equipment, and utensils after working with raw meat, poultry, or fish.

Wear clear plastic gloves over skin cuts, particularly when handling cooked products.

Use clean dish clothes and towels. These items are perfect for bacteria to loiter!

Use a plastic cutting board instead of a wooden one. Bacteria can hide in grooves on wooden boards and multiply. They are difficult to sanitize.

Thaw foods only in refrigerator, under cold water changed every 30 minutes, or in microwave oven followed by immediate cooking.

Stuff meats just before cooking. Avoid buying fresh, prestuffed, whole poultry. Buy fully cooked, prestuffed, whole poultry only if it will be served within two hours.

Don't taste or eat raw or partially cooked meat, poultry, fish, shellfish, eggs, or dairy products.



Wash hands and utensils often.

Marinate raw products in the refrigerator, not on counter.

Do not reuse marinade. To serve marinade on the side, prepare extra that is not used on the product.

Don't let juices from raw meat or poultry come in contact with any other foods – raw or cooked.

Cover raw meat, poultry, fish, or seafood when microwaving.

Check temperature of microwaved foods in at least three places. If your microwave has a temperature probe, use it.

Rotate food manually during microwaving unless using a rotating tray or microwave pad.

Let microwaved foods stand for recommended time before serving.

Use a meat thermometer to judge safe internal temperature of meat or poultry more than 2 inches thick (160°F or above for meat, 180°F or above for poultry).

Cook hamburgers to 160°F or above.

For other meat or poultry less than 2 inches thick, clear juices and no pink in the center are signs of doneness. Fish flake easily when completely done.

When using smokers or slow cookers, start with fresh, rather than frozen foods; chunks, rather than roasts or large cuts; and be sure the recipe includes a liquid. Check internal temperature in three spots to be sure food reaches 160°F.



Avoid interrupted cooking. Never partially cook products then finish at a later time on the grill or in the oven.

Cook meat, poultry, seafood, or fish in oven temperatures of 325°F or greater. Avoid “cooking without a heat source.” For example, don't preheat the oven, place food in oven, and then turn off oven.

When serving...

Serve cooked foods on clean plates, with clean utensils. For example, never put barbecued chicken back on the platter that held raw chicken.

Keep hot foods above 140°F.

Keep cold foods below 40°F.

When the temperature reaches 90°F or warmer, hold cooked foods no longer than one hour before reheating, refrigerating or freezing. Below 90°F, hold the food no longer than two hours.

For buffets, keep cold food on ice or use small serving dishes and replenish from the refrigerator. For hot foods, use a heating dish or reheat small servings from the refrigerator to replenish the buffet.

When cleaning up...

Remove stuffing before cooling or freezing poultry, meat, or fish. Refrigerate or freeze cooked leftovers in small, shallow containers within two hours after cooking.

Promptly refrigerate food after meals; don't just let it sit out on the table or counter.

Divide food into small containers for quick cooking in the refrigerator. Internal temperature of refrigerated or frozen foods should reach 45°F within four hours.

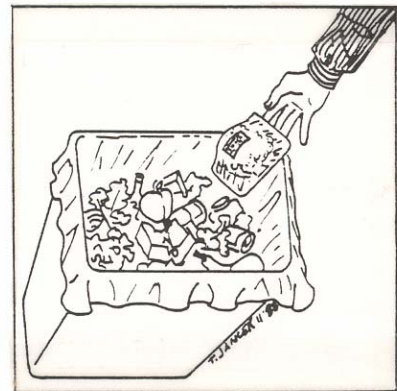
Date packages of leftovers and use within safe period.

When using leftovers...

Cover and reheat leftovers thoroughly before serving (rolling boil for sauces, soups, gravies, other liquid foods; 165°F for all others).

Don't taste leftovers to determine safety.

If in doubt, throw it out. Discard outdated, unsafe, or questionable leftovers in garbage disposal or in tightly wrapped packages that cannot be consumed by people or animals.



Some material adapted from *Plate It Safe*, Kansas State University Cooperative Extension and *Safe Food – It's Up to You!*, Penn State Cooperative Extension.

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