Never had food poisoning? Perhaps you have, but thought you were sick with the flu. Many thousands of Americans suffer from foodborne illness each year.

Why so many? At the right temperature, bacteria you can't see, smell, or taste can multiply to the millions in a few short hours. In large numbers, these microorganisms cause illness.

You don’t have to get sick. Some 95 percent of foodborne illness cases could be avoided if people handled and prepared food properly.

When shopping . . .
Buy cold food last, get it home fast!
✓ Make grocery shopping your last errand. Select frozen and refrigerated foods last. Take food straight home to the refrigerator and/or freezer. Never leave food in a warm car!

✓ Don’t buy anything you won’t use before the use-by date.

✓ Don’t buy food in poor condition. Make sure refrigerated food is cold to the touch. Frozen food should be rock-solid. Packaged and canned foods should be intact and undamaged.

When preparing food . . .
Keep everything clean! Thaw in refrigerator!
✓ Wash hands in hot, soapy water before preparing food and after using the bathroom, changing diapers, and handling pets.

✓ Bacteria can live in kitchen towels, sponges, and cloths. Wash them often.

✓ Keep raw meat, poultry, and fish and their juices away from other food. For instance, wash your hands, cutting board, and knife in hot, soapy water after cutting up the chicken and before dicing salad ingredients.

✓ Use plastic cutting boards rather than wooden ones where bacteria can live protected in the grooves.

✓ Thaw food in the microwave or refrigerator, NOT on the kitchen counter where bacteria can grow in the outer layers of the food before the inside thaws. Marinate in the refrigerator, too.

When cooking . . .
Cook thoroughly!
✓ Eating raw or partly cooked meat, poultry, fish, or eggs is potentially dangerous. Thorough cooking is needed to kill harmful bacteria that may be present in raw animal products. From a safety standpoint, hamburger that is red in the middle is undercooked.

✓ Cook ground beef, lamb, or pork to 160°F. Cook ground turkey or chicken to 165°F. Cook beef or lamb roasts and steaks to at least 145°F. Cook fresh pork roasts and chops to at least 160°F. Cook poultry to 180°F. Use a meat thermometer to check that it’s cooked all the way through.

✓ For a visual check, red meat is done when it’s brown or grey inside. Poultry juices run clear. Fish flakes with a fork.

✓ Salmonella—a bacteria that causes food poisoning—can grow inside fresh, unbroken eggs. To avoid problems, cook eggs until the yolk and white are firm, not runny. Scramble eggs to a firm texture. Don’t use recipes in which eggs remain raw or only partially cooked. Keep shell eggs refrigerated.

Use microwave carefully!
The microwave is a great timesaver, but it has one food safety disadvantage—it sometimes leaves cold spots in food. Bacteria can survive in these spots.
Cover food with a lid or plastic wrap so steam can aid thorough cooking. Wrap should not touch food and should be vented by turning back a corner.

For even cooking, stir food and rotate the dish during cooking.

Observe the standing time called for in a recipe or package directions. This allows the food to finish cooking.

Use the oven temperature probe or a meat thermometer to check that food is done. Insert it in several spots.

When serving . . .
Keep hot foods hot and cold foods cold!

Never leave perishable food out of the refrigerator over 2 hours! Bacteria that can cause food poisoning grow quickly at warm temperatures.

Use clean dishes and utensils, not those used in preparation. Serve grilled food on a clean plate, too—not one that held raw meat, poultry, or fish.

Pack lunches in insulated carriers with a cold pack. Caution children never to leave lunches in direct sun or on a warm radiator.

Carry picnic food in a cooler with a cold pack. When possible, put the cooler in the shade. Keep the lid on as much as you can.

Keep cold party food on ice or bring out small platters from the refrigerator as needed.

Divide hot party food into smaller serving platters. Keep platters refrigerated until time to warm them up for serving.

When handling leftovers . . .
Use small containers for quick cooling!

Divide large amounts into small, shallow containers for quick cooling in the refrigerator. Don't pack the refrigerator—cool air must circulate to keep food safe.

Remove stuffing from poultry or other stuffed meats and refrigerate in separate containers.

Reheat thoroughly!

Bring sauces, soups, and gravy to a boil. Heat and stir other leftovers to 165°F.

Make sure leftovers are heated thoroughly when using the microwave. Use a lid or vented plastic wrap to ensure uniform heating.

When you question food safety . . .
If in doubt, throw it out!

Never taste food that looks or smells strange to see if you can still use it. Discard it where pets and children cannot reach it.

Is it moldy? The poisons that molds can form are found under the surface of the food. Most moldy food should be discarded. Sometimes, hard cheese and salamis and firm fruits and vegetables can be salvaged by cutting out the mold and a large area around it.

Check your freezer

Without power, a full upright or chest freezer will keep everything frozen for about 2 days. A half-full freezer will keep food frozen 1 day.

If power will be coming back on fairly soon, you can make the food last longer by keeping the door shut as much as possible.

If power will be off for an extended period, take food to friends' freezers or a commercial freezer. Dry ice can be used; follow handling directions carefully.

Check your refrigerator-freezer combination

Without power, the refrigerator section will keep food cool 4 to 6 hours, depending on the kitchen temperature.

A full, well-functioning freezer unit should keep food frozen for 2 days. A half-full freezer unit should keep things frozen about 1 day.

Block ice can keep food on the refrigerator shelves cooler.

Dry ice can be added to the freezer unit. You can't touch dry ice and you shouldn't breathe the fumes, so follow handling directions carefully.

Thawed food?

Food that still contains ice crystals or that feels refrigerator-cold can be refrozen.

Discard any thawed food that has warmed to room temperature and remained there 2 hours or more.

Immediately discard anything with a strange color or odor.

When to worry . . .
Is it food poisoning?

Nausea, vomiting, diarrhea, fever, or cramps can indicate food poisoning. Depending on the illness, symptoms can appear anywhere from 30 minutes to 2 weeks after eating bad food. Most often, though, people get sick within 4 to 48 hours.

In more serious cases, food poisoning victims may have nervous system problems like paralysis, double vision, or trouble swallowing or breathing.

If symptoms are severe or the victim is very young, old, pregnant, or already ill, call a doctor or go to the hospital right away.

Should you report it?

You or your physician should report serious cases of foodborne illness to the local health department.

Report any food poisoning incidents if the food involved came from a restaurant or commercial outlet. Give a detailed, but short account of the incident. If the food is a commercial product, have it in hand so you can describe it. If you're asked to keep the food refrigerated so officials can examine it later, follow directions carefully.
# Cold storage guidelines

These short but safe time limits will keep refrigerated food from spoiling or becoming dangerous to eat. These time limits will keep frozen food at top quality.

<table>
<thead>
<tr>
<th>Product</th>
<th>Refrigerator (40° F)</th>
<th>Freezer (0° F)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eggs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh, in shell</td>
<td>3 weeks</td>
<td>Don't freeze</td>
</tr>
<tr>
<td>Raw yolks, whites</td>
<td>2-4 days</td>
<td>1 year</td>
</tr>
<tr>
<td>Hard cooked</td>
<td>1 week</td>
<td>Don't freeze</td>
</tr>
<tr>
<td>Liquid pasteurized eggs or egg substitutes, opened</td>
<td>3 days</td>
<td>Don't freeze</td>
</tr>
<tr>
<td>unopened</td>
<td>10 days</td>
<td>1 year</td>
</tr>
<tr>
<td><strong>Mayonnaise, commercial</strong></td>
<td>Refrigerate after opening</td>
<td>2 months</td>
</tr>
<tr>
<td><strong>TV Dinners, Frozen Casseroles</strong></td>
<td>Keep frozen until ready to use</td>
<td>3-4 months</td>
</tr>
<tr>
<td><strong>Deli &amp; Vacuum-Packed Products</strong></td>
<td>Store-prepared (or homemade) egg, chicken, tuna, ham, macaroni salads</td>
<td>3-5 days</td>
</tr>
<tr>
<td>Pre-stuffed pork &amp; lamb chops, chicken breasts stuffed with dressing</td>
<td>1 day</td>
<td>These products don't store well</td>
</tr>
<tr>
<td>Store-cooked convenience meals</td>
<td>1-2 days</td>
<td>freeze well</td>
</tr>
<tr>
<td>Commercial brand vacuum-packed dinners with USDA seal</td>
<td>2 weeks, unopened</td>
<td></td>
</tr>
<tr>
<td><strong>Soups &amp; Stews</strong></td>
<td>Vegetable or meat-added</td>
<td>3-4 days</td>
</tr>
<tr>
<td><strong>Hamburger, Ground &amp; Stew Meats</strong></td>
<td>Hamburger &amp; stew meats</td>
<td>1-2 days</td>
</tr>
<tr>
<td>Ground turkey, veal, pork, lamb and mixtures of them</td>
<td>1-2 days</td>
<td>3-4 months</td>
</tr>
<tr>
<td><strong>Hotdogs &amp; Lunch Meats</strong></td>
<td>Hotdogs, opened package</td>
<td>1 week</td>
</tr>
<tr>
<td>unopened package</td>
<td>2 weeks</td>
<td>In freezer wrap,</td>
</tr>
<tr>
<td>Lunch meats, opened</td>
<td>3-5 days</td>
<td>1-2 months</td>
</tr>
<tr>
<td>unopened</td>
<td>2 weeks</td>
<td></td>
</tr>
<tr>
<td><strong>Bacon &amp; Sausage</strong></td>
<td>Bacon</td>
<td>7 days, 1 month</td>
</tr>
<tr>
<td>Sausage, raw from pork, beef, turkey</td>
<td>1-2 days</td>
<td>1-2 months</td>
</tr>
<tr>
<td>Smoked breakfast links, patties</td>
<td>7 days</td>
<td>1-2 months</td>
</tr>
<tr>
<td>Hard sausage—pepperoni, jerky sticks</td>
<td>2-3 weeks</td>
<td>1-2 months</td>
</tr>
<tr>
<td><strong>Ham, Corned Beef</strong></td>
<td>Corned beef</td>
<td>Drained, wrapped</td>
</tr>
<tr>
<td>In pouch with pickling juices</td>
<td>5-7 days</td>
<td>1 month</td>
</tr>
<tr>
<td>Ham, canned</td>
<td>Label says keep refrigerated</td>
<td>6-9 months</td>
</tr>
<tr>
<td>Ham, fully cooked—whole</td>
<td>7 days</td>
<td>1-2 months</td>
</tr>
<tr>
<td>Ham, fully cooked—half</td>
<td>3-5 days</td>
<td>1-2 months</td>
</tr>
<tr>
<td>Ham, fully cooked—slices</td>
<td>3-4 days</td>
<td>1-2 months</td>
</tr>
</tbody>
</table>
### Refrigerator (40° F)  
### Freezer (0° F)

#### Fresh Meat
- Steaks, beef: 3-5 days, 6-12 months
- Chops, pork: 3-5 days, 4-6 months
- Chops, lamb: 3-5 days, 6-9 months
- Roasts, beef: 3-5 days, 6-12 months
- Roasts, lamb: 3-5 days, 6-9 months
- Roasts, pork & veal: 3-5 days, 4-6 months
- Variety meats—tongue, brain, kidneys, liver, heart, chitterlings: 1-2 days, 3-4 months

#### Meat Leftovers
- Cooked meat and meat dishes: 3-4 days, 2-3 months
- Gravy and meat broth: 1-2 days, 2-3 months

#### Fresh Poultry
- Chicken or turkey, whole: 1-2 days, 1 year
- Chicken or turkey pieces: 1-2 days, 9 months
- Giblets: 1-2 days, 3-4 months

#### Cooked Poultry, Leftovers
- Fried chicken: 3-4 days, 4 months
- Cooked poultry dishes: 3-4 days, 4-6 months
- Pieces, plain: 3-4 days, 4 months
- Pieces covered with broth, gravy: 1-2 days, 6 months
- Chicken nuggets, patties: 1-2 days, 1-3 months

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For more information . . .  
Check these Web sites.

Iowa State University Extension Food Safety Project:  
http://www.extension.iastate.edu/foodsafety

Food and Drug Administration Center for Food Safety and Applied Nutrition:  
http://www.foodsafety.gov

Iowa State University Extension publications:  
http://www.extension.iastate.edu/Pages/pubs

This publication was adapted from *A Quick Consumer Guide to Safe Food Handling* (H&G 248) by Patricia Redlinger and W. S. LaGrange, former extension food science specialists, and Diane Nelson, extension communication specialist.