U.S. FOOD & DRUG ADMINISTRATION

FOOD SAFETY

For Older Adults and People with Cancer, Diabetes, HIV/AIDS, Organ Transplants, and Autoimmune Diseases

July 2020

An Older Adult's Foodborne Illness Story

Diana was 64 years old and in fairly good health, but her age made her vulnerable to foodborne illness. This is her true story.

"My youngest daughter had been ill, and she was in the hospital. So, I was in a hurry to get something to eat for dinner because it was late in the evening. I ran to the grocery store and picked up some ground turkey and I cooked about half of it as a burger and ate it. I put the other half in the freezer.

I woke up with a really, really upset stomach. That's when my problem with diarrhea started, and by the next day, it was constant. I thought it was just a case of the flu and it had gotten severe.

My son came to see me and said, 'Mom, you just sound terrible,' and he took me to urgent care. The medical staff checked me, and my potassium was 0.5. You're supposed to die when your potassium is as low as 1.5, so the urgent care center called an ambulance and immediately transported me to the main hospital."

Diana was suffering from salmonella poisoning and struggled with constant diarrhea and dehydration.

"I was going continually because the diarrhea was nonstop. Nearly every hour, a nurse would put another IV bag up because I was losing so much fluid so rapidly. That's how I got severely dehydrated, because fluid was going out faster than they could put it in. A couple of times the doctor thought I was going to die. I couldn't lift my head off the pillow. I was so sick, and I'm just lucky I lived through it.

I look back at getting food poisoning because I had my grandson with me that day. He was little then and was a picky eater—that's the only reason he didn't eat any of the ground turkey. Just think how serious it would have been if my grandson had eaten the turkey burger and gotten sick too!"

Keeping patients safe from foodborne illness is fundamental to federal, state, and local health agencies. Having a sample of the contaminated food allowed inspectors to trace the food back to its source and find out how it had been contaminated.

"Salmonella's effect on my body was unbelievable. Usually, salmonella poisoning goes away on its own without medical treatment. But, since I was older, I ended up with a severe case of foodborne illness that I had to be hospitalized for."

"A woman from the health department called me after I'd gone home from the hospital and told me it was salmonella poisoning. I still had the other half of the ground turkey in the freezer. The health department asked if they could send a staff member to my house to get the turkey and I said 'yes.' So, I was able to give the health department a sample to analyze and confirm that the turkey was contaminated with salmonella."

The immune system tends to get weaker as people age, which increases the risk of getting a foodborne infection that can result in a serious illness requiring hospitalization or even causing death.

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Food Safety for Older Adults and People with Cancer, Diabetes, HIV/AIDS, Organ Transplants, and Autoimmune Diseases

Food safety is important for everyone – but it's extremely important for individuals with a weakened immune system, which makes them especially vulnerable to foodborne illness. This guide is intended to help older adults and people with cancer, diabetes, HIV/AIDS, organ transplants, or autoimmune diseases avoid foodborne infections.

In addition to the information in this booklet, talk with your health care provider about any foods or other products to avoid because of any special health needs you may have.

The Immune System: Its Importance

Your immune system is vital for your health because it defends your body against infectious organisms and other invaders. Spread throughout your body, the immune system is made up of a network of cells, tissues, and organs that work together to protect you. When your immune system senses disease-causing organisms and other substances that invade the body, it responds to fight them off.

As people get older, their immune systems decline. Diseases such as cancer and diabetes can weaken the immune system. Also, medications for HIV/AIDS, organ transplants, and autoimmune diseases, like rheumatoid arthritis and lupus, weaken the immune system.

Food Safety: Why It's Critical for People with a Weakened Immune System

When disease-causing bacteria, viruses, or parasites (germs) contaminate food, they can cause foodborne illness, often called food poisoning. While the food supply in the United States is among the safest in the world, it can still be a source of infection.

According to the Centers for Disease Control and Prevention, 48 million persons — or 1 of every 6 people get foodborne infections each year. Of those, 128,000 are hospitalized, and 3,000 die from their foodborne illness. People who have a weakened immune system have a higher risk for food poisoning. People with weakened immune systems are more likely to have a lengthier illness, undergo hospitalization, or even die as a result of foodborne disease.

- **Older Adults** — People 65 and older are at a higher risk for hospitalization and death from foodborne illness. This increased risk is because organs and body systems change as the body ages.
    - The digestive system holds food longer, allowing bacteria to grow while the stomach may not produce enough acid to limit the number of intestinal bacteria.

- The liver and kidneys may not properly rid the body of foreign bacteria and toxins.
- Between 50 and 60, the immune system in most people begins to decline. After age 75, many adults have an immune system so weakened that their risk for contracting a foodborne illness increases while the ability of their bodies to fight the infection is lowered.

- **People with Cancer** — If it spreads into the bone marrow, cancer can weaken the immune system. Also, most cancer patients undergo therapy such as radiation, chemotherapy, and/or medications to help fight the disease. A side effect of these treatments is that they may weaken the immune system, making patients more vulnerable to infections like foodborne illnesses.
- **People with Diabetes** — The immune systems of the millions of people with diabetes in the United States may not readily recognize the bacteria and viruses that cause food poisoning. This delayed response places a person with diabetes at increased risk for infection. Also, diabetes may damage the cells that create stomach acid and the nerves that help the stomach and intestines move food through the normal digestive process. As result, the digestive tract may hold on to food for a longer time, allowing harmful bacteria and viruses to multiply. In addition, diabetes may cause the kidneys, which work to cleanse the body, to hold on to harmful bacteria, toxins, and other pathogens.
- **People with HIV/AIDS** — When the Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) damages or destroys the immune system, individuals become more vulnerable to developing an infection, including a foodborne infection.
- **People with Organ Transplants** — A healthy immune system will try to reject or destroy an organ or bone marrow transplant – in the same way that the immune system works to clear infection from the body. Therefore, transplant recipients commonly take medications to keep rejection from happening. These drugs are called immunosuppressants because they suppress a person's immune system to keep it from attacking, or rejecting transplanted organs or bone marrow. A side effect of immunosuppressants is that they leave patients more susceptible to developing infections – like those that can be brought on by the bacteria and viruses that cause foodborne illness.
- **People with Autoimmune Diseases** — Autoimmune diseases, such as multiple sclerosis, inflammatory bowel disease, and lupus are conditions in which the immune system mistakenly attacks the body. People with autoimmune diseases are often treated with immunosuppressants, and they are more likely to get a foodborne illness because their immune systems can't fight infection effectively.

The good news is that taking steps to select and prepare foods safely can often help people avoid foodborne infections.

Eating at Home: Making Wise Food Choices

Some foods are riskier than others. The foods most likely to contain harmful bacteria or viruses fall into two categories:

- **Uncooked** fresh fruits and vegetables.
- **Some animal products**, such as unpasteurized (raw) milk; soft cheeses made with raw milk; raw or undercooked eggs; raw meat, raw poultry, raw fish, raw shellfish and their juices; luncheon meats; and deli salads (without added preservatives) prepared on site in a deli-type store or restaurant.

The risk these foods pose depends on the origin or source of the food and how the food is processed, stored, and prepared.

Follow these guidelines (see chart below) for safe selection and preparation of your favorite foods.

Common Foods: Select the Lower Risk Options

Type of Food	Higher Risk	Lower Risk
Meat and Poultry	Raw or undercooked meat or poultry	Meat or poultry cooked to a safe minimum internal temperature (Safe Food Handling)
Seafood *Tip: Use a food thermometer to check the internal temperature. See the Safe Minimum Internal Temperatures chart on page 7.*	• Any raw or undercooked fish, or shellfish, or food containing raw or undercooked seafood, e.g., sashimi, found in some sushi or ceviche • Refrigerated smoked fish • Partially cooked seafood, such as shrimp, and crab	• Previously cooked seafood heated to 165°F • Canned fish and seafood • Seafood cooked to 145°F
Milk	Unpasteurized (raw) milk	Pasteurized milk
Eggs *Tip: Pre-made foods from grocery stores, such as Caesar dressing, cookie dough, or eggnog that say made with pasteurized eggs/pasteurized egg products are lower risk.*	Foods that contain raw/ undercooked eggs, such as: • Homemade Caesar salad dressings • Homemade raw cookie dough • Homemade eggnog	*At home:* • Recipes that call for raw or undercooked eggs are made with pasteurized eggs. *When eating out:* • Ask if pasteurized eggs were used.
Sprouts	Raw sprouts (alfalfa, bean, or any other sprout)	Cooked sprouts
Vegetables	Unwashed fresh vegetables, including lettuce/ salads	• Washed fresh vegetables, including salads • Cooked vegetables
Cheese	• Soft cheeses made from unpasteurized (raw) milk, such as: • Feta • Brie • Camembert • Blue-veined • Queso fresco	• Hard cheeses • Processed cheeses • Cream cheese • Mozzarella • Soft cheeses that are clearly labeled “made from pasteurized milk”

Common Foods: Select the Lower Risk Options (cont.)

Type of Food	Higher Risk	Lower Risk
Hot Dogs and Deli *Tip: You need to reheat hot dogs, deli meats, and luncheon meats before eating them because Listeria monocytogenes bacteria grow at refrigerated temperatures (40ºF or below). These bacteria may cause severe illness, hospitalization, or even death. Reheating these foods until they are steaming hot destroys these dangerous bacteria and makes these foods safe for you to eat.*	Hot dogs, deli, and luncheon meats that have not been reheated	Hot dogs, luncheon meats, and deli meats reheated to steaming hot or 165ºF
Deli Salads	Deli salads prepared without preservatives in a deli-type store or restaurant	Deli salads freshly prepared at home
Pâtés	Unpasteurized, refrigerated pâtés or meat spreads	Canned or shelf-stable pâtés or meat spreads

A Note on Flour and Raw Dough

Flour, regardless of the brand, can contain bacteria that cause disease. An outbreak of illness caused by bacteria called *E. coli* sickened dozens of people across the country. Ten million pounds of flour were recalled, including unbleached, all-purpose, and self-rising varieties.

Some of the recalled flours had been used by restaurants that allow children to play with dough made from raw flour while waiting for their meals. However, the Federal government advises restaurants not to give customers raw dough.

Flour is ground from raw grain. It may be bleached, but it isn't usually treated to kill bacteria like *E. coli*. So, follow these tips to keep yourself and your family healthy:

- Do not eat or taste any raw cookie dough, cake mix, batter, or any other raw dough or batter product that is supposed to be cooked or baked.
- Follow package directions for cooking products containing flour at proper temperatures and for specified times.
- Wash hands, work surfaces, and utensils thoroughly after contact with flour and raw dough products.
- Keep raw foods separate from other foods while preparing them to prevent any contamination that may be present from spreading. Be aware that flour may spread easily due to its powdery nature.

- Follow label directions to chill products containing raw dough promptly after purchase until baked.

Taking Care: Handling and Preparing Food for People with Immune Systems Weakened by Age, Illness, or Medication

Foodborne germs are sneaky. Food that looks, smells, or tastes fine can contain pathogens – disease-causing bacteria, viruses, or parasites – that can make you sick. **Never taste a food to see if it is safe to eat.**

It's important for anyone handling and preparing food to always be careful. For people with weakened immune systems, and anyone fixing food for them, it's vital! The proven way to do this is to know and follow the four basic steps to food safety – *clean*, *separate*, *cook*, and *chill*.

Four Basic Steps to Food Safety

1. Clean: *Wash hands and surfaces often.*

Bacteria, viruses, and parasites can spread throughout the kitchen and get onto your hands, cutting boards, utensils, countertops, and food.

To ensure that hands and surfaces are clean, be sure to:

- Wash hands in warm soapy water for at least 20 seconds before and after handling food, using the bathroom, changing diapers, or handling pets.
- Wash cutting boards, dishes, utensils, and countertops with hot soapy water between the preparation of raw meat, poultry, and seafood products and preparation of any other food that will not be cooked.
    - An added precaution is to run plastic cutting boards through the wash cycle in your dishwasher. Or, sanitize cutting boards and countertops by rinsing them in a solution made of one tablespoon of unscented liquid chlorine bleach per gallon of water.
    - Use paper towels to clean up kitchen surfaces. If using cloth towels, wash them often in the hot cycle of the washing machine.

- Wash produce. Rinse fruits and vegetables and use a clean vegetable brush to scrub firm-skinned fruits and vegetables under running tap water, including those with skins and rinds that are not eaten.
- Don't wash meat, poultry, fish, or eggs. If water splashes from the sink in the process of washing, it can spread bacteria.
- Clean the lids on canned goods before opening.

2. Separate: *Don't cross-contaminate.*

Cross-contamination occurs when germs are spread from one food product to another. This is especially common when handling raw meat, poultry, seafood, and eggs. The key is to keep these foods – and their juices – away from vegetables and fruit that will be eaten raw and any other ready-to-eat foods.

To prevent cross-contamination, remember to:

- Separate raw meat, poultry, seafood, and eggs from other foods in shopping carts, grocery bags, and in the refrigerator. Place raw meat, poultry, and seafood on the lowest shelf in the refrigerator so their juices won't drip on foods that will not be cooked.
- Never place cooked food on a plate or cutting board that previously held raw meat, poultry, seafood, or eggs without first washing the plate/cutting board with hot soapy water.
- Consider using one cutting board only for raw foods and another only for ready-to-eat foods, such as bread, fresh fruits and vegetables, and cooked meat.
- Don't reuse marinades used on raw foods unless they are brought to a boil first.

3. Cook: *Cook to safe temperatures.*

Foods are safely cooked when they are heated to the recommended safe minimum internal temperatures, as shown on the chart on page 7.

To ensure that your foods are cooked safely, always:

- Use a food thermometer to measure the internal temperature of cooked foods. Check the internal temperature in several places to make sure that the meat, poultry, seafood, or egg product is cooked to safe minimum internal temperatures.
- Bring sauces, soups, and gravy to a boil when reheating. Heat other leftovers to 165ºF.
- Reheat hot dogs, luncheon meats, bologna, and other deli meats until steaming hot or, better, to 165ºF.
- Allow rest time for fresh beef, veal, lamb, pork, and ham (see the chart on page 7), which completes the cooking, before checking the internal temperature with a food thermometer. Food is done when it reaches the recommended safe minimum internal temperature.
- 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. Do not ignore the after-cooking standing time recommended on the packaging to complete the cooking.

U.S. Department of Agriculture/U.S. Food and Drug Administration
Recommended Safe Minimum Internal Temperatures

Category	Food	Temperature (°F)	Rest Time
Ground Meat & Meat Mixtures	Beef, Pork, Veal, Lamb	160°F	None
	Turkey, Chicken	165°F	None
Fresh Beef, Veal, Lamb	Steaks, Roasts, Chops	145°F	3 minutes
Poultry	Chicken & Turkey, Whole	165°F	None
	Poultry Breasts, Roasts	165°F	None
	Poultry Thighs, Legs, Wings	165°F	None
	Duck & Goose	165°F	None
	Stuffing (Cooked Alone or in Bird)	165°F	None
Pork & Ham	Fresh Pork	145°F	3 minutes
	Fresh Ham (Raw)	145°F	3 minutes
	Precooked Ham (To reheat)	140°F	None
Eggs & Egg Dishes	Eggs	Cook until yolk and white are firm.	None
	Egg Dishes	160°F	None
Leftovers (of any kind) & Casseroles	Leftovers (of any kind)	165°F	None
	Casseroles	165°F	None
Seafood	Fin Fish (Cod, Snapper, Tilapia)	145°F or cook until flesh is opaque and separates easily with a fork.	None
	Shrimp, Lobster, & Crabs	Cook until flesh is pearly and opaque.	None
	Clams, Oysters, & Mussels	Cook until shells open during cooking.	None
	Scallops	Cook until flesh is milky white or opaque and firm.	None

4. Chill: *Refrigerate promptly.*

Cold temperatures slow the growth of harmful bacteria. Keeping a constant refrigerator temperature of 40°F or below is one of the best ways to lower the risk of foodborne illness. Use an appliance thermometer to be sure the refrigerator temperature is consistently 40°F or below and the freezer temperature is 0°F or below.

To chill foods properly:

- Refrigerate or freeze meat, poultry, eggs, seafood, and other perishables within 2 hours of cooking or purchasing. Refrigerate within 1 hour if the temperature is above 90°F.
- Never thaw food at room temperature, such as on the countertop. It is safe to thaw food in the refrigerator, in cold water, or in the microwave. If you thaw food in cold water or in the microwave, you should cook it immediately.
- Divide large amounts of food into shallow containers for quicker cooling in the refrigerator.
- Follow the recommendations in the Cold Storage Chart below.

U.S. Department of Agriculture/U.S. Food and Drug Administration
Cold Storage Chart

These time limit guidelines will help keep refrigerated food safe to eat. Because freezing keeps food safe indefinitely, recommended storage times for frozen foods are for quality only.

Category	Food	Refrigerator (40°F)	Freezer (0°F)
Eggs	Fresh, in shell	3 to 5 weeks	Don't freeze
	Hard cooked	1 week	Don't freeze well
Liquid Pasteurized Eggs, Egg Substitutes	Opened	3 days	Don't freeze well
	Unopened	10 days	1 year
Deli & Vacuum-Packed Products	Egg, chicken, ham, tuna, & macaroni salads	3 to 5 days	Don't freeze well
Hot Dogs	Opened package	1 week	1 to 2 months
	Unopened package	2 weeks	1 to 2 months
Luncheon Meats	Opened package	3 to 5 days	1 to 2 months
	Unopened package	2 weeks	1 to 2 months
Bacon & Sausage	Bacon	7 days	1 month
	Sausage, raw – from chicken, turkey, pork, beef	1 to 2 days	1 to 2 months
Hamburger & Other Ground Meats	Hamburger, ground beef, turkey, veal, pork, lamb, & mixtures of them	1 to 2 days	3 to 4 months
Fresh Beef, Veal, Lamb, Pork	Steaks	3 to 5 days	6 to 12 months
	Chops	3 to 5 days	4 to 6 months
	Roasts	3 to 5 days	4 to 12 months
Fresh Poultry	Chicken or turkey, whole	1 to 2 days	1 year
	Chicken or turkey, pieces	1 to 2 days	9 months
Seafood	Lean fish (flounder, haddock, halibut, etc.)	1 to 2 days	6 to 8 months
	Fatty fish (salmon, tuna, etc.)	1 to 2 days	2 to 3 months
Leftovers	Cooked meat or poultry	3 to 4 days	2 to 6 months
	Chicken nuggets, patties	3 to 4 days	1 to 3 months
	Pizza	3 to 4 days	1 to 2 months

In the Know: Safe Shopping

Safe Food-handling Practices

Follow these safe food-handling practices when shopping:

- Put raw packaged meat, poultry, or seafood into a plastic bag before placing it in the shopping cart so that its juices will not drip on – and contaminate – other foods. If the meat counter does not offer plastic bags, pick some up from the produce section before you select your meat, poultry, and seafood.
- Buy only **pasteurized** milk, cheese, and other dairy products from the refrigerated section. When buying fruit juice from the refrigerated section of the store, be sure that the juice label says it is **pasteurized**.

- Purchase eggs in the shell from the refrigerated section of the store. (Note: Store the eggs in their original carton in the main part of your refrigerator once you are home.)

  For recipes that call for eggs that are raw or undercooked, when the dish is served – homemade Caesar salad dressing and homemade ice cream are two examples – use either shell eggs that have been treated to destroy *Salmonella* by pasteurization or pasteurized egg products. When consuming raw eggs, using pasteurized eggs is the safer choice.

- **Never buy** food that is displayed in unsafe or unclean conditions.
- When purchasing canned goods, make sure that they are free of dents, cracks, or bulging lids. (Once you are home, remember to clean each lid before opening the can.)
- Buy produce that is not bruised or damaged.

Food Product Dating

Many consumers misunderstand the purpose and meaning of the date labels that often appear on packaged foods. Confusion over date labeling accounts for an estimated 20 percent of consumer food waste.

Except for infant formula, manufacturers are not required by Federal law or regulation to place date labels based on safety or quality on packaged food.

There are no uniform or universally accepted descriptions used on food labels for open dating (calendar dates) in the United States. As a result, there are a wide variety of phrases used for product dating.

The U.S. Food and Drug Administration supports efforts by the food industry to make “Best if Used By” the standard phrase to indicate the date when a product will be at its best flavor and quality. Consumers should examine foods for signs of spoilage that are past their “Best if Used by” date. If the products have changed noticeably in color, consistency, or texture, consumers may want to avoid eating them.

If you have questions or concerns about the quality, safety, or labeling of the packaged foods you buy, reach out to the company that produced the product. Many packaged foods provide the company’s contact information on the package.

Manufacturers apply date labels at their own discretion and for a variety of reasons. The most common is to inform consumers and retailers of the date to which they can expect the food to retain its desired quality and flavor.

To learn how best to store foods and how long they will keep safely, access the FoodKeeper at here. The FoodKeeper is a complete guide to how long virtually every food available in the United States will keep in the pantry, in the refrigerator, and in the freezer.

Bringing Groceries Home

Follow these tips for safe transporting of groceries:

- Pick up perishable foods last, and plan to go directly home from the grocery store.
- Always refrigerate perishable foods within 2 hours of cooking or purchasing.
- Refrigerate perishable foods within 1 hour if the temperature is above 90°F.
- In hot weather, take a cooler with ice, insulated bags, or another cold source to transport perishable foods safely.

Tips: Transporting Food to a Picnic or a Party

- Keep cold food cold, at 40°F or below. To be sure, put cold food in cooler with plenty of ice or frozen gel packs. Cold food should be at 40°F or below the entire time you are transporting it.
- Hot food should be kept at 140°F or above. Wrap the food well and place in an insulated container.

Being Smart When Eating Out

Eating out can be enjoyable – to make sure it is, follow some simple guidelines to avoid foodborne illness. Don't hesitate to ask questions before you order and let your server know you don't want any food item containing raw meat, poultry, seafood, sprouts, or eggs. Servers can be quite helpful if you ask how a food is prepared.

Basic Rules for Ordering

- Ask whether the food contains uncooked ingredients such as eggs, sprouts, meat, poultry, or seafood. If in doubt, make another selection!
- Don't order meat cooked "rare."
- Ask how the foods have been cooked. If the server does not know the answer, ask to speak to the chef to be sure your food has been cooked to a safe minimum internal temperature.

- If you plan to take home leftovers to eat later, refrigerate perishable foods as soon as possible and always within 2 hours after purchase or delivery. If the leftover is in temperatures above 90°F, refrigerate within 1 hour.

Make Safe Menu Choices

Higher Risk:	Lower Risk:
Soft cheese made from unpasteurized (raw) milk.	**Hard or processed cheeses.** Soft cheeses only if they are made from pasteurized milk.
Refrigerated smoked seafood and raw or undercooked seafood.	**Fully cooked fish or seafood.**
Cold or improperly heated hot dogs.	**Hot dogs reheated to steaming hot.** If the hot dogs are served cold or lukewarm, ask to have them reheated until steaming, or choose something else.
Sandwiches with cold deli or luncheon meat.	**Grilled sandwiches** in which the meat or poultry is heated until steaming.
Raw or undercooked fish, such as sashimi, non-vegetarian sushi, or ceviche.	**Fully cooked fish** that is firm and flaky.
Soft-boiled or "over-easy" eggs, as the yolks are not fully cooked.	**Fully cooked eggs** with firm yolk and whites.
Salads, wraps, or sandwiches containing raw (uncooked) or lightly cooked sprouts.	Salads, wraps, or sandwiches containing **cooked sprouts.**

Stay Safe: Traveling Internationally

Discuss your travel plans with your healthcare provider before traveling to other countries. He or she may have specific recommendations for the places you are visiting and may suggest extra precautions or medications to take on your travels.

For more information about safe food and water while traveling abroad, access the Federal Centers for Disease Control and Prevention Traveler's Health page.

Foodborne Illness: Know the Symptoms

Despite your best efforts, you may find yourself in a situation where you suspect you have a foodborne illness. Foodborne illness often presents itself with these symptoms:

- Nausea
- Diarrhea
- Vomiting
- Fever
- Abdominal Cramps

If you have a weakened immune system, you are at increased risk for a severe case of food poisoning. If you suspect that you have a foodborne illness, take these four key steps:

1. Contact your healthcare provider immediately if you develop symptoms or think you may be at risk for food poisoning.
2. Keep the food.
    - If a portion of the suspect food is available, wrap it securely, label it to say "DANGER," and freeze it.

- The remaining food may be used in diagnosing your illness and in preventing others from becoming ill.

3. Save all the packaging materials, such as cans or cartons.

   - Write down the food type, the date and time consumed, and when the onset of symptoms occurred. Write down as many foods and beverages you can recall consuming in the past week (or longer), since the onset time for various foodborne illnesses differ.

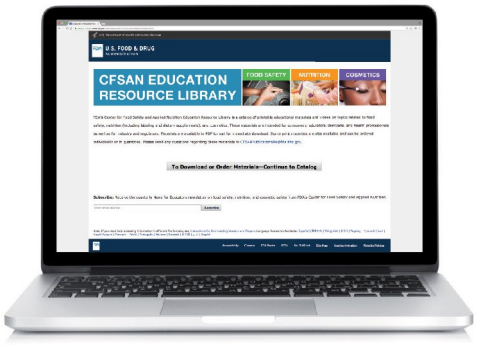
   - Save any identical unopened products and the sales receipt, if you have it.
   - If the suspect food is a United States Department of Agriculture (USDA)-inspected meat, poultry, or egg product, call the USDA Meat and Poultry Hotline, **1-888-MPHotline (1-888-674-6854)**.
   - For all other foods, call the Food and Drug Administration Office of Emergency Operations at **1-866-300-4374 or 301-796-8240**.

4. Call your local health department if you believe you became ill from food you ate in a restaurant or other food establishment.

   - The health department staff will be able to assist you in determining whether any further investigation is warranted.
   - To locate your local health department, visit Health Guide USA.

More Information from U.S. Food and Drug Administration

- U.S. Food and Drug Administration's Food and Cosmetics Information Center, **1-888-SAFEFOOD (1-888-723-3366)** for information on nutrition and food, cosmetic, and dietary supplement safety. This hotline is available Monday through Friday from 10 a.m. to 4 p.m. ET (except Thursdays from 12:30 PM to 1:30 PM ET and Federal holidays).



- To order or download publications on food safety, nutrition, dietary supplements, and cosmetics materials, or to find videos on these topics, visit the CFSAN Education Resource Library.

Additional Food Safety Information

- FoodSafety.gov, The gateway to Federal Government Food Safety Information, including all food recalls and FDA alerts.
- Partnership for Food Safety Education
- For questions about the safety and safe handling of meat and poultry, call the United States Department of Agriculture Meat and Poultry Hotline, **1-888-MPHotline (1-888-674-6854)**, available Monday through Friday from 10 a.m. to 4 p.m. ET.
- Centers for Disease Control and Prevention 1-800-232-4636 (24-hour recorded information)
    - Travel Health Notices
    - Food and Water Safety
- U.S. Environmental Protection Agency, Office of Water

Notes

Four Steps to Food Safety

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.

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July 2020

AR07