

Basics of Safe Food Handling

Bacteria that contaminate food and cause foodborne illnesses are everywhere. Follow these four basic safety tips to keep your food safe.

- Wash hands and surfaces often.
- Don't cross-contaminate.
- Keep foods out of the temperature "Danger Zone."
- Cook foods thoroughly.

KEEP HANDS AND SURFACES CLEAN

Bacteria like *Staphylococci* are found on hair, skin, mouth, nose and throat. A cough or sneeze can transmit thousands of microorganisms that may cause disease. The best prevention is to keep yourself and your kitchen clean.

Keep Your Hands Clean: Wash your hands! Hands become the most potentially dangerous when seemingly innocent acts like scratching the scalp, running fingers through hair, or touching a pimple become the cause for contaminating foods. Follow the following steps to wash your hands:

- Step 1. Wet hands thoroughly with warm water.
- Step 2. Apply soap generously.
- Step 3. Rub hands for at least 20 seconds.
- Step 4. Scrub under nails with a clean nailbrush.
- Step 5. Rinse hands well with warm water.
- Step 6. Dry hands using a clean paper towel.

Keep Counters and Equipment Clean: Wash counters and equipment with soap and water immediately after use. Sanitize with a chlorine solution of 1 teaspoon liquid household bleach per quart of water, especially after contact with raw meats.

Use a bleach solution to sanitize the kitchen drain and disposal as well. Food particles get trapped and the moist environment is ideal for bacterial growth.

Dishes and other utensils should be washed immediately in hot, soapy water and then air-dried, or cleaned in an automatic dishwasher.

Bacteria can live in kitchen towels, sponges and cloths. Wash kitchen towels and cloths before reusing them, or use paper towels and throw them away. Replace sponges every few weeks.

Keep Cutting Boards Clean: Use plastic or glass surfaces for cutting raw meat and poultry. Wooden cutting boards used exclusively for raw meat and poultry are acceptable but not recommended.

Recent studies by the Food and Drug Administration's Center for Food Safety and Applied Nutrition found that microorganisms become trapped in wood surfaces and are difficult to dislodge by rinsing. Once trapped, bacteria survive in a dormant stage for long periods of time. The next time the cutting board is used, these bacteria could contaminate other foods, potentially causing foodborne illness. On the other hand, the study found that microorganisms are easily washed off plastic surfaces.

USDA researchers studied how easily bacteria can be removed from cutting boards. After they were inoculated with bacteria, the cutting boards were cleaned in different ways. The researchers found that washing by all the methods they used removed virtually all the bacteria on both types of boards, but results were more reliable with the plastic.

If using a wooden cutting board, it is recommended that a different board be used for cutting other foods such as produce and bread. This will prevent bacteria from a meat or poultry product from contaminating another food.

Wash All Cutting Boards Thoroughly: To keep all cutting boards clean wash them with hot, soapy water after each use, then rinse and air-dry or pat dry with fresh paper towels. Non-porous acrylic, plastic or glass boards and solid wood boards can be washed in an automatic dishwasher. Laminated boards may crack and split.

Sanitize Cutting Boards Occasionally: Both wooden and plastic cutting boards can be sanitized with a solution of 1 teaspoon liquid chlorine bleach per quart of water. Flood the surface with the bleach solution and allow it to stand for several minutes, then rinse and air dry or pat dry with fresh paper towels.

Replace Battered Cutting Boards: Even plastic boards wear out over time. Once cutting boards become excessively worn or develop hard-to-clean grooves, they should be discarded.

PREVENT CROSS-CONTAMINATION

Cross-contamination is the transportation of harmful substances to food by

- Hands that touch raw foods, such as raw meat, then touch food that will not be cooked, like salad ingredients.
- Surfaces or cleaning cloths that touch raw foods, are not cleaned and sanitized, then touch ready-to-eat food.
- Raw meat, raw poultry and raw seafood that touch or drip fluids on cooked or ready-to-eat foods.

KEEP FOODS OUT OF THE “DANGER ZONE”

Safely Store Perishable Foods: Refrigerate or freeze foods that will spoil at room temperature. Keep your refrigerator between 34 °F and 40 °F and your freezer temperature at or below 0 °F. The “Danger Zone” for most foods is between 40 °F and 140 °F. Bacteria grow most rapidly in this range of temperatures, doubling in number in as little as 20 minutes. Discard any perishable food left out at room temperature for more than two hours. See the table, “Recommended Times for Refrigerator and Freezer Storage” for specific storage suggestions.

Safely Thaw Foods: Thaw and marinate foods in the refrigerator, never on the counter. If thawed at room temperature, bacteria can grow in the outer layers of the food before the inside thaws. Proper

thawing is essential to maintaining the safety, taste and texture of frozen foods. It affects the juiciness of meats, the texture and flavor of vegetables and fruits, and moisture level of baked goods.

- Thick meat cuts should be thawed before cooking to retain juiciness. Cuts such as chops, patties and steaks that will be prepared by flouring or breading should be thawed before baking.
- Broccoli, cauliflower and greens are more flavorful if partially thawed before cooking.
- Thawing foods should be placed in a shallow pan to catch drippings so that other refrigerated foods will not be contaminated with raw food juices.
- Never thaw foods at or above room temperature (except breads and other baked goods). Remember food spoilage bacteria multiply most rapidly at temperatures between 40 °F and 140 °F.
- Thaw frozen fruits, vegetables or meat in the refrigerator overnight, in a sealed freezer container. Foods may be thawed more quickly by immersing the sealed freezer container into cold water and changing the water frequently until food is thawed. Foods may also be thawed in the microwave using the defrost setting.
- If thawed in the microwave or in cold water in the sink, food must be cooked immediately after thawing. **DO NOT** thaw a food and then refrigerate to cook later.
- When you have defrosted food for use, keep in mind that thawed frozen food is more perishable than fresh food.
- Thawed foods that have been at room temperature for over two hours should be discarded.
- Foods thawed in the refrigerator may be refrozen **IF** they still contain ice crystals. Immediately remove only the amount needed from the freezer container, remove air, reseal and return remaining food to the freezer.
- Thawed meats and poultry kept in the refrigerator should be used within two to three days. Thawed seafood kept in the refrigerator should be used within one to two days.
- Thaw bread and baked goods at room temperature in sealed freezer containers or original wrapping to avoid moisture loss.

RECOMMENDED TIMES FOR REFRIGERATOR AND FREEZER FOOD STORAGE

FOOD	REFRIGERATOR	FREEZER
DAIRY		
Fresh milk	5-7 days	*
Buttermilk	1-2 weeks	*
Canned milk (opened)	3-5 days	*
Yogurt, cottage cheese	7 days	*
Hard cheese	6-12 weeks	6-12 months
Cheese spreads	3-4 weeks	*
Ice cream	*	2 months
EGGS		
Fresh in shell	3 weeks	*
Hard-cooked	1 week	*
MEATS, FRESH		
Beef roasts, steaks	3-5 days	6-12 months
Ground beef or stew	1-2 days	3-4 months
Pork roasts, chops	3-5 days	4-6 months
Sausage	1-2 days	1-2 months
Chicken or turkey	1-2 days	9-12 months
MEATS, COOKED		
Smoked Sausage, whole ham (fully cooked)	7 days	1-2 months
Ham slices (fully cooked)	3-4 days	1-2 months
Hotdogs, luncheon meats (unopened)	2 weeks	1-2 months
Hotdogs, luncheon meats (opened)	3-7 days	1-2 months
Leftover meat, cooked	3-4 days	2-3 months
Leftover gravy and meat broth	1-2 days	2-3 months
Leftover poultry, cooked	3-4 days	4-6 months
SEAFOOD		
Fresh lean fish: cod, flounder, trout, haddock, halibut, pollack, perch	1-2 days	4-6 months
Fresh fatty fish: mullet, smelt, salmon, mackerel, bluefish, tuna, swordfish	1-2 days	2-3 months
Live crabs and lobster	same day purchased	*
Live mussels and clams	2-3 days	*
Live oysters	7-10 days	*
Freshly shucked oysters	5-7 days	3-4 months
Scallops, shrimp, shucked mussels and clams	2-3 days	3-4 months
FRUITS AND VEGETABLES (FRESH)		
Apples	1 month	8-12 months
Apricots, avocados, grapes, peaches, pears, plums	3-5 days	8-12 months
Berries, cherries	2-3 days	8-12 months
Grapefruit, lemons, limes, oranges	2 weeks	4-6 months
Pineapple	2-3 days	4-6 months
Beets, carrots	2 weeks	8-12 months
Beans, broccoli, greens, peas, summer squash	3-5 days	8-12 months
Celery, cabbage, chilies, lettuce, peppers, tomatoes	1 week	8-12 months
Mushrooms	1-2 days	8-12 months
PIES		
Chiffon pie, pumpkin pie	1-2 days	1 month
Fruit pie	1-2 days	1 year
* Storage not recommended due to safety or quality issues		

<u>Raw Food</u>	<u>Internal Temperature</u>
Ground Products	
Hamburger	160 °F
Beef, veal, lamb, pork	160 °F
Chicken, turkey	165 °F
Beef, Veal, Lamb	
Roasts and Steaks	
<i>medium-rare</i>	145 °F
<i>medium</i>	160 °F
<i>well-done</i>	170 °F
Pork	
Chops, roasts, ribs	
<i>medium</i>	160 °F
<i>well-done</i>	170 °F
Ham, fresh	160 °F
Sausage, fresh	160 °F
Poultry	
Chicken, whole and pieces	180 °F
Duck	180 °F
Turkey (unstuffed)	180 °F
Whole	180 °F
Breast	170 °F
Dark meat	180 °F
Stuffing (cook separately)	165 °F
Eggs	
Fried, poached	Yolk and white are firm
Casseroles	160 °F
Sauces, custards	160 °F
SOURCE: USDA and FDA. <i>Fight BAC!</i> URL http://www.fightbac.org/word/index.html	

COOK FOODS THOROUGHLY

Using a thermometer is the only reliable way to ensure safety and to determine the “doneness” of meat and egg dishes. To be safe, these foods must be cooked to an internal temperature high enough to destroy any harmful bacteria that may have been in the food. Color changes in meat are no longer considered reliable proof that all bacteria have been destroyed. Use the temperature chart to determine if foods have been cooked thoroughly.

SAFELY HANDLE LEFTOVERS

Divide large amounts of hot leftovers directly into small, shallow containers for quick cooling, and place directly in the refrigerator. Discard food that has been left standing at room temperature for more than two hours.

Date leftovers so they can be used within a safe time. Most foods remain safe when refrigerated for three to five days, although ground meats and meat gravies should be kept for only one to two days. If in doubt, throw it out rather than risk a foodborne illness. Never taste food that looks or smells strange to see if you can still use it. Even a small amount of contaminated food can cause illness.

SOURCES:

1. USDA (1994). *Focus On: Cutting Board Safety*. URL <http://www.usda.gov/fsis/cutboard.htm>
2. USDA and FDA. *Four Simple Steps to Fight BAC!* URL <http://www.fightbac.org/steps.html>
3. Minch, D.L., *Home Storage of Foods Part I: Refrigerator and Freezer*. Rutgers Cooperative Extension. State Univ. of N.J.

This information has been reviewed and adapted for use in South Carolina by P.H. Schmutz, HGIC Information Specialist and E.H. Hoyle, Extension Food Safety Specialist, Clemson University.

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