

Wisconsin Nutrition Education Program

Keeping Food Safe





Contents

What's wrong with this picture?	3
Understanding food poisoning.	4
How to know when food is spoiled	5
Food safety begins at the grocery store	6
Fish and your health.	7
Temperature is important for food safety	8
Where would you put this food?.	9
Store your food safely	10
Storing fresh fruits	17
Storing fresh vegetables	18
The power is out!	19
Keeping your kitchen clean	20
Controlling household pests	21
Getting ready to cook	23
Cook food with care	24
Serving food safely	26
Taking care of leftovers	27
Prevent food poisoning — Fight BAC! TM	28
The case of the suspicious chili	30
Answer keys to pages 3 and 9.	31



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What's wrong with this picture?

Look at this picture and circle all the things that are wrong.



Illustration by Hawley Wright

Understanding food poisoning

What is food poisoning?

Food poisoning is illness caused by something harmful in the food you eat. Sometimes, harmful bacteria, viruses or other germs in a food make you sick.

If you get food poisoning, symptoms usually develop within 1 to 3 days. The illness lasts from a few hours to several days. You may experience diarrhea, cramping or an upset stomach. For some people, the symptoms of food poisoning can be much more severe and possibly even life-threatening. This includes infants, the elderly, pregnant women, and people with chronic illnesses or weakened immune systems.

Where do these food poisoning microbes come from, and how can I stop them?

Too tiny to see, food poisoning microbes (germs) are all around us — in the air, soil and water, and digestive tracts of some animals and people.

The only way to stop them is to carefully follow food handling rules like those in this booklet.

Some bacteria that can cause food poisoning.

Bacteria	Foods commonly associated with this bacteria
Campylobacter	Uncooked chicken, turkey and meat Cook food thoroughly to destroy this bacteria.
Clostridium perfringens	Meat or gravy dishes Chill hot leftovers promptly to prevent growth of this bacteria.
Escherichia coli O157:H7 (E. coli)	Undercooked ground beef and unpasteurized milk Cook food thoroughly to destroy this bacteria.
Listeria monocytogenes	Unpasteurized milk, lunch meats and hot dogs Store food properly, discarding old leftovers.
Salmonella	Uncooked chicken, turkey and eggs Cook food thoroughly to destroy this bacteria.
Staphylococcus aureus (Staph)	Egg, tuna, potato and macaroni salads Wash hands well when preparing food to prevent contamination by this bacteria.

How to know when food is spoiled

People often wonder when a food is unsafe to eat. If you suspect food is spoiled, don't taste it. Here are some common signs of spoiled foods:

Fresh fish

- * Off-odor
- * Gray or greenish gills
- * Sunken eyes
- * Fingernail dent remains in flesh
- * Mushy, not firm

Fresh meats

- * Off-odor
- * Slimy or sticky to touch
- * Color changes — from normal, fresh color to brown, grey or greenish.

Processed meats in vacuum packages

- * Sour flavor or odor
- * Milky or slimy
- * Color changes

Fruits and vegetables

- * Mold or rotten spots

Salads

- * Off-odor

Cereal

- * Insects in cereal
- * Mold

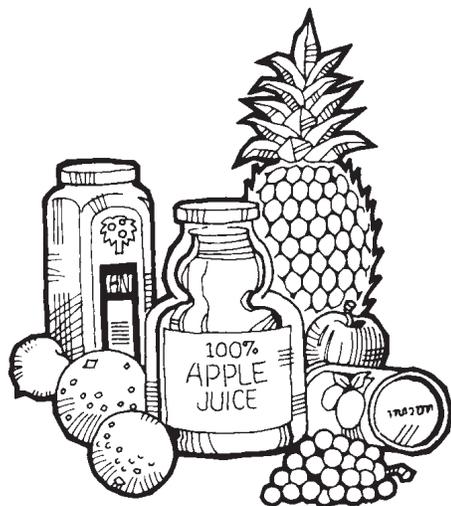
Leftover food

- * Color changes
- * Mold

Canned foods

- * Off-odor
- * Liquid spurts out when can is opened
- * Swollen top or bottom of can
- * Rusty can
- * Foamy or milky liquid
- * Signs of leakage

Caution: Cook **home-canned** foods such as vegetables, meats, fish and poultry thoroughly before eating. But when you notice any of the above signs, **THROW THE CANNED FOOD AWAY** properly, out of reach of people or animals.



Caution: You cannot always tell if food is spoiled by how it tastes, smells or looks. Spoiled foods may taste and appear to be safe and wholesome. If a food has been kept longer than the recommended storage time, or if you doubt it is safe to eat — just throw it away!

Food safety begins at the grocery store

Shop carefully:

- * Don't buy deeply dented or bulging canned food.
- * Shop for meat, poultry, fish and refrigerated and frozen foods last. In hot weather, take along a cooler for cold foods if it will be more than an hour before you get home.
- * Use plastic bags to keep raw meat or poultry from dripping on other foods.
- * Buy products marked "Keep Refrigerated" only if they are in a refrigerated case.
- * Check the date on dairy foods. Use within 2 to 3 days after the date.
- * Packaged meats such as luncheon meats or hot dogs should be eaten no later than 1 week after the "Sell by" date.
- * Buy only the amount of shaved deli meats you can use in 1 or 2 days.
- * If you buy hot food from a deli, eat it right away and refrigerate any leftovers within 2 hours.
- * Buy frozen foods that are solidly frozen.

Be extra careful if you buy food from a roadside stand or truck:

- * Fruits and vegetables should be freshly picked.
- * Eggs should be cold.
- * It is not a good idea to buy meat, poultry or fish from roadside stands or trucks.



Fish and your health

Fish is a delicious part of a nutritious diet. Fish is low in fat and calories. If you choose wisely, fish can be a low-cost part of your family's diet. But you may wonder about the safety of fresh fish.

Is the fish from the grocery store safe to eat?

- * Fresh, unfrozen fish or seafood should have these traits: firm, not soft or mushy; rounded, clear, shiny eyes; clean smell, no strong odor.
- * Frozen and canned fish sold in grocery stores — such as cod, ocean perch and salmon — are safe to eat as part of a varied diet.
- * It is not safe to eat any fish or shellfish raw. Raw fish may contain bacteria and parasites.
- * Some fish you should NEVER eat while pregnant or breastfeeding. Albacore tuna, king mackerel, red snapper, shark, swordfish and tilefish contain too much mercury.

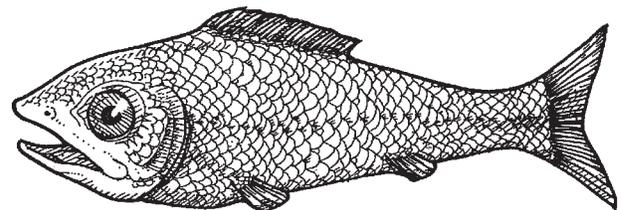
How do I store fresh fish safely?

- * Wash fresh fish in cold water, wrap well, refrigerate, and use within 1 or 2 days.
- * Fish will spoil more quickly than other meat. If you do not plan to eat it within 2 days, wrap it well, label and freeze it.

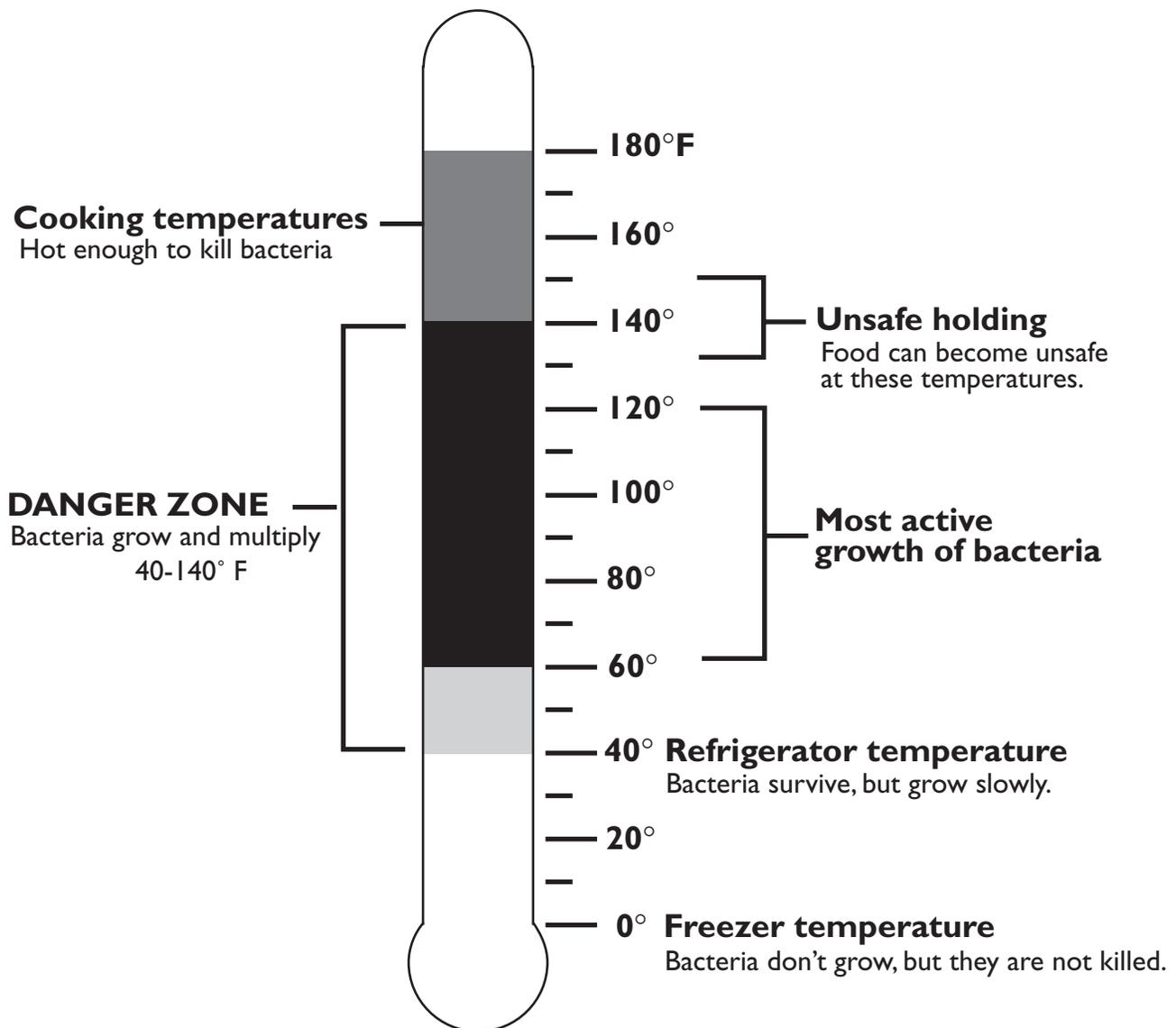
Are the fish caught in local lakes or streams safe to eat?

- * Smaller panfish are safe to eat if cleaned and put on ice as soon as possible after they are caught.
- * Larger fish from inland lakes and rivers may contain pollutants such as mercury and PCBs (polychlorinated biphenyls). Persons who eat a lot of fish containing mercury or PCBs may have health problems later in life.

Caution: Pregnant or breastfeeding women and children under the age of 15 years should be extra careful to limit the kinds, size and amount of fish they eat. Check with the Department of Natural Resources for advisories about fish caught in lakes or rivers that contain pollutants.



Temperature is important for food safety

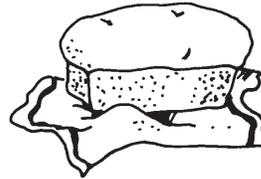
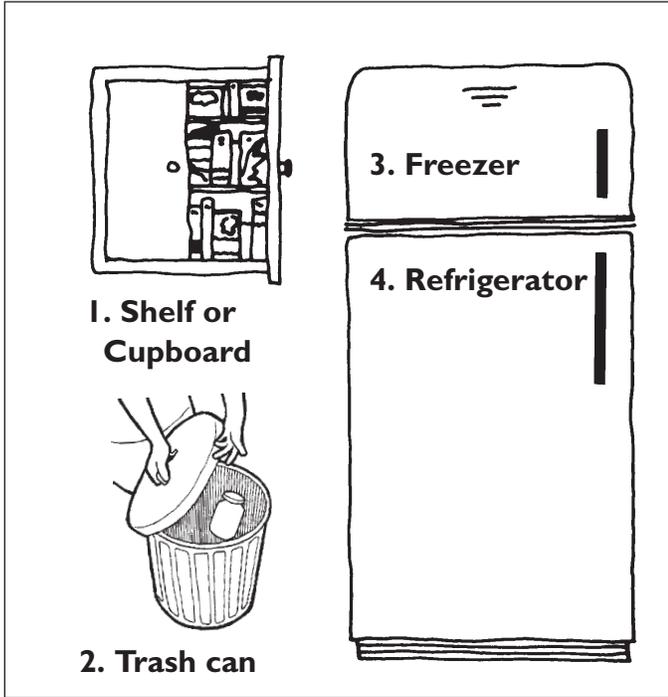


Remember: Keep food safe!

Caution: Meats and dairy foods are favorite places for harmful bacteria to grow. Keep these foods cold enough — or heat them hot enough — to stop bacteria from growing.

Where would you put this food?

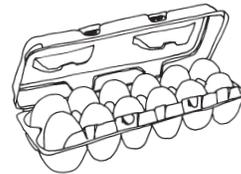
Under each picture, write the number of where you would put the food. Some may have more than one answer.



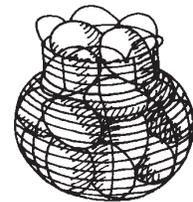
Bread _____



Nuts _____



Eggs _____



Hard cooked eggs

Freshly cooked _____

After 2 hours at room temperature _____



Raw chicken

Thawed on counter _____

Thawed in refrigerator _____



Rice

Cooked _____

Uncooked _____



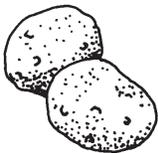
Canned foods

Unopened _____

Opened _____



Flour _____



Potatoes _____

Green or sprouted potatoes _____



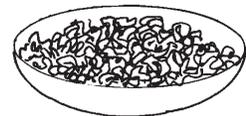
Cheese _____

Moldy cheese _____



Cooked beans

Still hot _____



Tuna, ham or egg salad

Freshly prepared _____

After 2 hours in a picnic basket _____

Adapted with permission from "Storing Food Safely" N368, 1992, University of Missouri-Columbia.

Store your food safely

You can safely store many staples, dry mixes and unopened canned foods at room temperature. But buy only what you expect to use within the time recommended in the chart.

Some foods such as flour, spices and baked goods will stay fresh longer if stored in the freezer. Most fresh foods, opened canned foods, mixed foods, and meat, eggs or dairy foods should be kept in the refrigerator or freezer.

Date food packages, and use the oldest first. If stored for longer than recommended times, or beyond the date on the package, foods may change quality, color and flavor — or be unsafe to eat.

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
STAPLES				
Keep dry and covered.				
Baking Powder	18 months			
Bouillon Cubes or Granules	2 years			
Cereals • hot cereals, dry • ready-to-eat unopened opened	6 months 6-12 months 2-3 months			Refold package liner tightly after opening.
Chocolate • semi-sweet • unsweetened, baking	18 months 18 months			
Cocoa Mixes	8 months			
Coffee • cans, unopened cans, opened • instant, unopened instant, opened	2 years 2-4 weeks 1-2 years 2 months	2 months	6 months	
Coffee Lighteners, dry • unopened • opened	9 months 6 months			
Cornmeal	1 year	18 months	2 years	
Cornstarch	1 year	18 months	2 years	
Flour • white • whole wheat	6-8 months	1 year 6-8 months	1-2 years 1-2 years	
Grits	1 year			
Honey	1 year			
Jellies, Jams • unopened • opened	1 year	6-8 months		
Margarine		3 months	1 year	Wrap well to freeze.
Molasses • unopened • opened	1 year 6 months	1-2 years		Throw away if moldy.

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
Mayonnaise • unopened • opened	2-3 months	6 months		
Pasta — Spaghetti, Macaroni, etc.	2 years			
Rice • white or brown • flavored	1 year 6 months	2 years	2 years	
Salad Dressings • bottled, unopened • bottled, opened • made from mix	10-12 months	* 6 months 6 months		* If you buy it from a refrigerator case, keep it refrigerated.
Shortenings, solid	8 months			
Sugar • brown • powdered • granulated • artificial sweetener	4 months 18 months 2 years 2 years			
Syrups	1 year			
Tea • bags • loose • instant	18 months 2 years 3 years			
Vegetable oils • unopened • opened	6 months 1-3 months	6-8 months		
Vinegar	Indefinitely			Cloudy look doesn't hurt quality.
Yeast, dry	Expiration date on package			Refrigerate or freeze to store longer.

SPICES, HERBS, CONDIMENTS

Store in airtight containers away from sunlight and heat.

Catsup, Chili Sauce • unopened • opened	1 year 1 month	6 months		
Mustard, prepared yellow • unopened • opened	2 years 6-8 months	8-12 months		
Spices and Herbs • whole spices • ground spices • herbs • herb/spice blends	1-2 years 6-12 months 6 months 6 months		2-3 years 1-2 years 1-2 years 1-2 years	
Vanilla • unopened • opened	2 years 1 year			

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
MIXES				
Keep dry and covered.				
Biscuit, Brownie, Muffin Mix	9 months			
Cake Mix • regular • angel food	9 months 1 year			
Casserole Mix	9-12 months			
Frosting • canned • mix	3 months 8 months			Store leftovers in refrigerator.
Hot Roll Mix	18 months			
Pancake Mix	6-9 months			
Pie Crust Mix	8 months			
Potatoes, Instant Mix	6-12 months			
Pudding Mix	1 year			
Sauce or Gravy Mix	6-12 months			
Soup Mix	1 year			

BREADS, PIES, CAKES, COOKIES

Unbaked Rolls, Bread		2-3 weeks	1 month	
Baked Quick Bread	4-5 days	1-2 weeks	2 months	
Baked Muffins	4-5 days	1-2 weeks	6-12 months	
Home-Baked Yeast Bread	4-5 days	1-2 weeks	2-3 months	
Purchased Bread	5-7 days	1-2 weeks	3-6 months	
Unfrosted Doughnuts	4-5 days		2-4 months	
Waffles		4-5 days	1 month	
Unbaked Fruit Pies		1-2 days	2-4 months	
Baked Fruit Pies		2-3 days	6-8 months	
Pumpkin, Chiffon Pies		2-3 days	1-2 months	
Cookie Dough		2-3 days *	3 months	*Or by date on package. Cook before eating.
Home-Baked Cookies	2-3 weeks		6-12 months	
Purchased Cookies	1-2 months		6-12 months	
Frosted Baked Cakes	4-5 days		1 month	
Unfrosted Baked Cakes	4-5 days		2-4 months	
Angel Cakes	4-5 days		6-12 months	
Fruit Cakes		2-3 months	6-12 months	

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
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CANNED FOOD

Unopened Canned or Bottled Fruit Juices Fruits and Vegetables	9 months 1 year			
Opened Canned Food Store all opened canned food tightly covered. Put acidic foods in glass or plastic containers to avoid metallic taste.				
Commercial Baby Food		1-3 days		
Meat		2-3 days		
Fish, Seafood, Poultry		1 day		
Gravy and Broth		2 days	2-3 months	
Fruits and Vegetables		3-5 days	1-2 months	Texture softens after freezing, OK for sauces, soups and stews.
Tomato Sauce		5 days	2-3 months	

DAIRY FOODS

Check date on dairy foods. Use within 2 to 3 days after date, if kept refrigerated.

Butter		3 months	1 year	Wrap well to freeze.
Buttermilk		1-2 weeks		
Cheese				
• cottage or ricotta		1-2 weeks	4 weeks	Keeps better if you smooth over the creamy surface after you scoop out cheese.
• cream cheese		2 weeks		
• natural aged cheddar, brick, Swiss, Gouda, mozzarella, etc. — large pieces, packaged or wax-coated — slices or opened		3-6 months	6-8 months	Thaw cheese in the refrigerator for less crumbling.
• pasteurized process cheese		2-3 weeks		
• Parmesan, Romano, grated		3-4 weeks	6-8 months	
		1 year		
Cream, half & half (light) or whipping (heavy)				
• ultrapasteurized unopened opened		1 month 1-2 weeks		
• pasteurized		1-2 weeks		

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
Milk				
• evaporated milk unopened	1 year			
opened		1-2 weeks		
• fluid whole, lowfat or skim milk		1-2 weeks		
• nonfat dry milk unopened	6 months			
opened	3 months			
mixed with water		5 days		Store in airtight container.
Sour Cream		2-3 weeks		
Yogurt		1 month		

EGGS AND FOODS CONTAINING EGGS

Eggs, fresh in shell		3 weeks		
Eggs, fresh yolks and/or whites		2-4 days	1 year	To freeze, break out of shell and blend yolk with white or other yolks. Add a little salt, sugar or corn syrup.
Eggs, liquid pasteurized or substitute			1 year	
• unopened		10 days		
• opened		3 days		
Eggs, in shell, hard-cooked		1 week		Keep refrigerated. If eggs are at room temperature for more than 2 hours, do not eat.
Egg-containing custards, puddings, custard-filled pastries or cakes		1-2 days		

FRESH MEATS

Meats may be left in the supermarket package for refrigerator storage or very brief freezer storage. To freeze longer than 1 month, rewrap in freezer wrap or place in freezer bags.

Roasts				
• beef		3-5 days	6-12 months	
• veal or pork		3-5 days	4-6 months	
• lamb		3-5 days	6-9 months	
Steaks, Beef		3-5 days	6-12 months	
Chops				
• pork		3-5 days	4-6 months	
• lamb, veal		3-5 days	6-9 months	
Ground Beef or Pork, Stew Meat		1-2 days	3-4 months	
Sausage, Pork		1-2 days	1-2 months	
Bratwurst				
• fresh		2-3 days	2-3 months	
• precooked		5-7 days	2-3 months	
Variety Meats — Tongue, Liver, Brains, Heart, Kidneys		1-2 days	3-4 months	

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
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PROCESSED AND CURED MEATS

Packaged meats are best kept in their package. Use no later than 1 week after the “Sell by” date. Frozen, cured meats lose quality rapidly, and should be used as soon as possible.

Bacon		1 week	1 month	
Smoked Turkey		1 week	1 month	
Hot Dogs , package • unopened • opened		2 weeks 1 week	1-2 months 1-2 months	
Ham , fully cooked • whole • half • slices		1 week 3-5 days 3-4 days	1-2 months 1-2 months 1-2 months	
Ham , canned • unopened • opened		6-9 months 3-5 days	4-6 weeks	
Luncheon Meats , package • unopened • opened		2 weeks 3-5 days	1-2 months 1-2 months	
Sausage , Smoked		1 week	1-2 months	
Sausage , Dry and Semi-Dry Hard		2-3 weeks	1-2 months	

FRESH POULTRY

Chicken or Turkey , • whole • pieces • giblets		1-2 days* 1-2 days* 1-2 days	1 year 9 months 3-4 months	* Or by date on package.
Duck or Goose		1-2 days	6 months	

FRESH WILD GAME

Venison		3-5 days	10-12 months	
Rabbit or Squirrel		1-2 days	1 year	
Wild Duck or Pheasant		1-2 days	1 year	

UNCOOKED SEAFOOD

Store seafood and fish in the coldest part of your refrigerator.

Clams or Oysters , shucked & Scallops		4 days	3-4 months	
Crab		1 week	2 months	
Shrimp		4 days	5-9 months	
Fresh Water Fish , cleaned		3 days	6-9 months	

RECOMMENDED STORAGE TIMES

Food	Cupboard at 70° F	Refrigerator at 32-40° F	Freezer at 0° F	Comments
Filletts cod, flounder, haddock, pollack, mullet, ocean perch, sea perch, sea trout, striped bass		2 days	10-12 months	
Salmon Steaks		2 days	7-9 months	

COOKED MEATS, POULTRY AND FISH

All cooked meats, poultry, fish and leftovers should be quickly refrigerated and used as soon as possible. Large roasts may be cut in half to cool in the refrigerator.

Meat and Meat Dishes		3-4 days	2-3 months	
Gravy and Meat Broth		1-2 days	2-3 months	Fats tend to separate in homemade gravies and broths.
Chicken • fried • cooked dishes • pieces, plain • pieces, with broth or gravy • nuggets, patties		3-4 days 3-4 days 3-4 days 1-2 days 1-2 days	4 months 4-6 months 4 months 6 months 1-3 months	
Fish		1-2 days		

OTHER FOODS

Coconut , shredded, canned, packaged • unopened • opened		1 year 6-8 months		
Fruit Juice , fresh or mixed from frozen		1 week		
Powdered Breakfast Mixes , Liquid Breakfast Formulas	6 months			Keep in can, closed jar or original packet.
Peanut Butter • unopened • opened	6-9 months 2-3 months			Refrigeration not needed, unless bought from a refrigerator case. Natural peanut butter must be refrigerated.
Peas or Beans , dried	1 year		1-2 years	Store in airtight container.
Popcorn	1 year	2 years	2-3 years	Store in airtight container.
Soups, Stews		3-4 days	2-3 months	
Sandwiches		2-3 days	1 month	
Casseroles		1-2 days	1 month	

Storing fresh fruits

For best flavor, store these fresh fruits at room temperature:

Bananas
Pineapple
Mango
Peaches, Nectarines and Pears
— if not fully ripe *
Avocados — if not fully ripe *

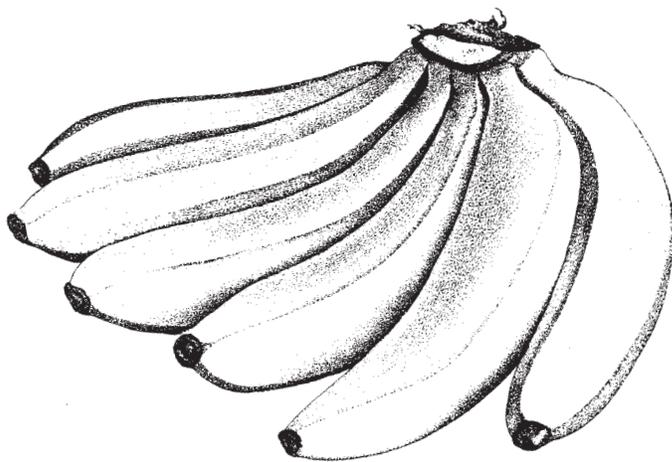
** Avocados, peaches, nectarines and pears will ripen faster if placed in a paper bag for a few days.*

These fresh fruits will keep longer if stored in the refrigerator:

Apples
Cherries and Berries
Grapes
Plums
Melons
Tangerines, Limes, Lemons
Oranges, Grapefruits
Peaches, Nectarines and Pears
— fully ripe **
Avocados — fully ripe **

*** Most fully ripe fruits can be stored only a few days.*

Apples and citrus fruits can be kept several weeks. Throw away any fresh fruits that are moldy or have other signs of spoilage.



Storing fresh vegetables

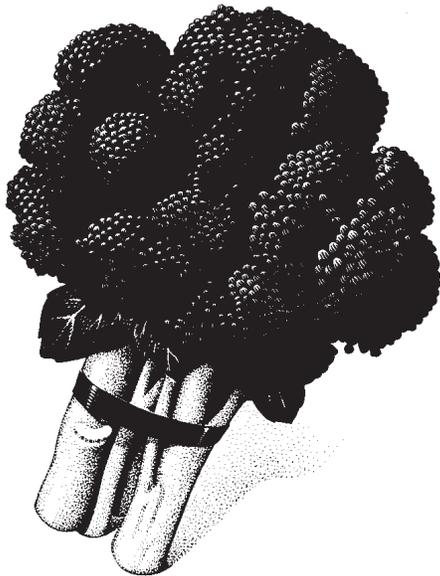
Fresh vegetables will keep longer if they are kept cool or cold.

Store these fresh vegetables at room temperature, preferably a cool, dry room:

Potatoes — white and sweet
Winter Squash
Onions
Tomatoes — if not fully ripe

Store these fresh vegetables in the refrigerator:

Asparagus
Green Beans
Beets — leave 1 inch of stem
 on top
Carrots,* Radishes *
Turnips, Rutabagas
Cabbage
Cauliflower, Broccoli
Celery
Corn — leave husks on until
 ready to cook
Lettuce, Spinach, Greens
Tomatoes — fully ripe
Summer Squash, Zucchini
Peas
Mushrooms **



** Remove leafy tops before storing.*

*** Do not wash before storing. Store loosely wrapped.*

Most fresh vegetables can be stored for 3 to 5 days in the refrigerator. Carrots, turnips and rutabagas will keep up to a month in the refrigerator. Potatoes, winter squash and onions can be stored 1 to 2 months at room temperature.

The power is out!

What to do when the refrigerator fails

Food in a refrigerator will last at least 4 to 6 hours after a power failure. How long depends on how warm the kitchen is, and how many times the door is opened.

Steps to take:

- * Find out how long the refrigerator will be out before doing anything.
- * Open the refrigerator only when necessary.
- * Put a block of ice in the refrigerator to keep it cool.
- * Find other storage places for your food such as a friend's house, church or commercial storage.

What to do when the freezer fails

Don't panic. Freezers are well insulated, and each package of frozen food acts as a "block of ice," protecting the food around it. A fully stocked freezer will keep food frozen for about 2 days after losing power. A half-full freezer can keep food frozen for about 1 day.

Steps to take:

- * Find out how long the freezer will be out before doing anything.
- * Find other storage places for your food such as a friend's house, church or commercial storage.

Refreezing foods

You can safely refreeze most partly thawed food as long as it still has ice crystals and has been held no longer than 1 or 2 days at refrigerator temperature. However, do not refreeze ice cream, pizza or mixed foods like soups or casseroles. Pizza and other mixed foods that have been thawed no longer than 24 hours — and have been cold during that time — may be cooked and eaten.

Meats or poultry that are completely thawed — but are still cold and show no off-color or odor — can be cooked. Eat or freeze the cooked meat or poultry right away.

If any food is completely thawed, warmed to room temperature and left for more than 2 hours, throw it away.

Keeping your kitchen clean

Keeping your kitchen counters, stove, refrigerator, cutting board and sink clean will reduce the chance of dirt and bacteria getting on your food.

*** Keep your refrigerator clean and fresh.**

Use the all-purpose cleaner described — or detergent and hot water — to clean refrigerator shelves and sides. Put an open box of baking soda in your refrigerator or freezer to absorb odors. After six months, pour the baking soda down the sink to freshen your drain.

*** Use clean dish towels and dish cloths.**

Wash dish towels and dish cloths in hot — not warm — soapy water. Do not use dish towels and dish cloths to wipe floors, dry hands or clean children's faces.

*** Can openers and cutting boards must be kept clean.**

Wash your can opener and cutting board with hot, soapy water each time after you use them. After cutting up raw poultry, fish or meat, wash and then disinfect your cutting board with the diluted bleach solution described below.

*** Disinfect dishes, counters, cutting boards and your refrigerator.**

Mix a bleach solution and keep it handy for disinfecting:

- 1 teaspoon bleach per 4 cups of water
- 1 Tablespoon bleach per gallon of water

Use this bleach mixture to rinse dishes, counters, cutting boards and your refrigerator after washing them. Keep some in a clearly labeled spray container for easy use, out of reach of children.

You do not need to buy lots of expensive, fancy cleaners. Try these less hazardous cleaners in your kitchen.

*** All-purpose cleaner**

For Counters, Stove Tops and Refrigerators, mix one gallon hot water and $\frac{1}{4}$ cup vinegar. This cleaner is safe for all surfaces, and can be rinsed away with water.

*** Sink cleaner**

In place of powdered cleansers, use baking soda and a little detergent to scrub sinks. Rinse with vinegar and water solution.

*** Oven cleaner**

Dampen the spill and sprinkle salt on it while the oven is still warm. Scrape the spill away when cooled. Remove greasy spots with a vinegar-soaked rag. To remove really tough spots, dampen the area with water and lightly scrub with baking soda and a steel wool pad.

*** Drain cleaner**

Keep drains open and clean with a plunger or metal snake. If a drain runs slowly, pour in $\frac{1}{4}$ cup baking soda, followed by $\frac{1}{2}$ cup vinegar. Close the drain until all the fizzing stops, then flush well with boiling water.

Caution: Do not mix bleach and ammonia. Do not mix detergents or cleaners that contain bleach and ammonia. These mixtures will give off a harmful gas.

Controlling household pests

FLIES

Flies are a nuisance, and carry bacteria that cause food poisoning, diarrhea and other diseases.

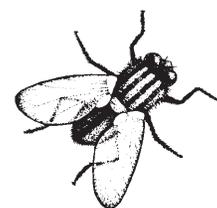
How to control flies

- * Remove garbage, pet waste, disposable diapers, wet bedding and yard waste.
- * Keep garbage cans covered.
- * Wrap wet garbage in newspaper, and then in plastic garbage bags.

If insecticides are needed — Use them safely

- * Keep insecticides in the original, labeled containers and away from children and pets.
- * Store insecticides where they cannot be mistaken for food or cleaning products.
- * Read the label directions and safety recommendations every time you use insecticides.
- * Put away or carefully cover all foods, dishes and utensils before spraying insecticides.
- * Keep people and animals away from areas where insecticides are being used.

- * Don't smoke, eat or drink when you are working with insecticides.
- * Wear rubber gloves when handling insecticides, and wash them well before you take them off. Also wash your hands and face thoroughly with soap and water after using insecticides.
- * Save empty containers out of reach of children and animals until your community has a Clean Sweep program to collect household toxic waste. If there is no program in your area, throw empty containers in the trash. Do not leave them where children or animals can get them.
- * If poisoning occurs, get medical help at once. Save the insecticide label to show your doctor.



Controlling household pests

ANTS

Ants seen in kitchens are usually attracted by poorly stored sweet foods or spills on floors and counters. Some ants also feed on grease.

How to prevent ants

- * Wipe up all food spills right away.
- * Store food in airtight containers.

COCKROACHES

Cockroaches are a nuisance and health hazard. They hide during the day, and search for food at night. Where do cockroaches come from?

- * Cockroach eggs can come into your house with boxes, packages, clothing, toys and furniture.
- * Adult cockroaches may come from nearby buildings and apartments.

How to control cockroaches

- * Inside — Seal all food packages, clean up crumbs, wash dishes promptly, sweep floors, clean behind refrigerator and stove.
- * Outside — Clean away trash and clutter, seal cracks and openings in the building and remove standing water.

- * Use an insecticide approved for roach control if needed. Or, use chemically treated baits or sticky traps where roaches are found.

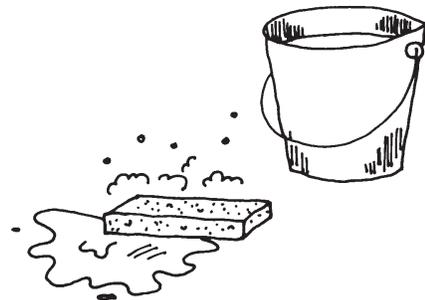
MICE

How to prevent mice invasion

- * Inside — Close all openings in the house where mice could get in.
- * Outside — Use concrete or sheet metal to cover gaps around pipes that enter the building. Use steel wool to block small, hard-to-reach places.

How to get rid of mice

- * Use simple, wooden snap traps baited with raisins, bacon or peanut butter.
- * Set traps close to walls, behind objects in dark places and other places you've seen mice.
- * Keep traps out of reach of children and pets.



NOTE: If the pests are a problem in the whole building, tell your landlord. Professional pest control may be needed.

Getting ready to cook

Hand washing is important for good health.

How?

- * Use soap and warm running water.
- * Rub your soapy hands together for 20 seconds.
- * Remember to wash backs of hands, between fingers and under fingernails.
- * Rinse hands well.

When?

- * Before starting to fix food for a meal or snack,
- * After touching raw meat or poultry,
- * After touching animals, and
- * After using the bathroom or changing a diaper.

Thaw food safely.

- * Thaw meat, fish and poultry in the refrigerator — not on the counter.
- * If you must thaw food quickly, place it in a plastic bag and cover it with cold water in a clean kitchen sink, or place it in a microwave oven and use the defrost setting. Follow microwave directions.

Use only clean, wholesome foods.

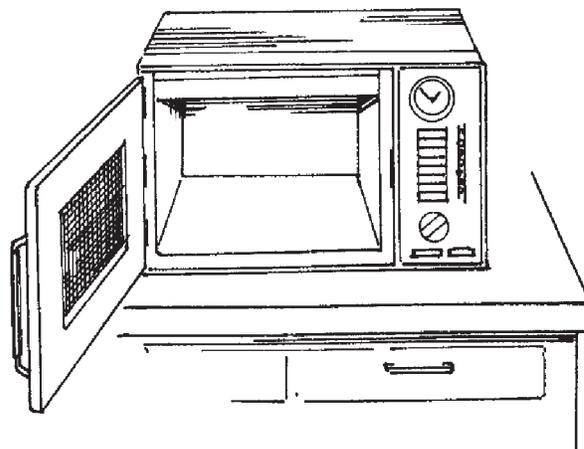
- * Wash all fresh fruits and vegetables with cool water — without soap — before using.
- * If you think a food is beginning to spoil, do not taste it and do not cook it — just throw it away.
- * Throw away all moldy food.



Cook food with care

Safe microwave cooking

- * Cook meats in a covered casserole or roasting bag. This helps to heat the meat more evenly, since steam surrounds the meat.
- * Reheat leftover meats and casseroles completely. To do this, cover the dish with a lid or loosely attached plastic wrap. If you can, use a lower power level — simmer or 50 percent — to let the heat cook through the food without burning the outside or causing liquid to spatter.
- * Follow the directions for letting the food stand after cooking. To make sure meat or poultry is safe to eat, let the food stand outside the microwave oven — preferably covered to hold the heat — for the full number of minutes recommended to finish cooking.
- * If you use the microwave to thaw foods, finish cooking the food right away. Do not refreeze the food. Do not let food sit in the microwave when it is off — before or after thawing. Bacteria will grow, and the food may become unsafe.



Caution:

- * **Use microwave-safe containers and microwave-safe plastic wraps when cooking food in the microwave.**
- * **Do not use a microwave to warm baby bottles or heat baby food. The liquid may heat unevenly and burn your baby. Unopened jars can explode, and thick foods can develop hot spots.**
- * **Pop popcorn only in special popcorn bags or poppers. Follow directions carefully. Open bags away from your face — steam will come out that can cause burns.**

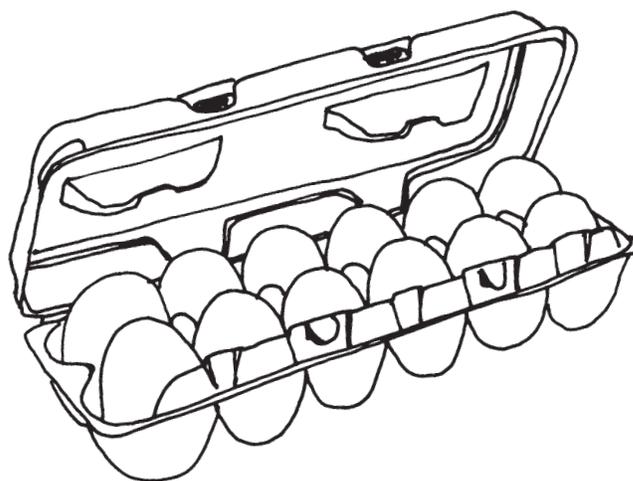
Cook food with care

Cook meat, poultry and fish until completely done.

- * Use a meat thermometer if you are unsure whether meat is completely cooked.
- * Cook beef roasts to 145° F.
- * Cook ground meats to 160° F.
- * Cook whole chicken to 180° F and breasts and thighs to 170° F.
- * Cook pork chops and roasts to 160° F.
- * Cook fish to 160° F.
- * Pork and poultry should not be pink when cooked.
- * Roast meats and poultry at oven settings of 325° F or above.
- * Do not partially cook a food and then finish cooking several hours later.

Eggs must be cooked completely.

- * Eggs may contain bacteria that can cause illness.
- * Do not use recipes in which eggs are not cooked, such as homemade eggnog and homemade ice cream. Instead, look for other recipes in which the eggs are cooked, or use liquid pasteurized egg product.
- * Cook eggs until the whites and yolks are firm, not runny.



Serving food safely

Never leave food that spoils easily out of the refrigerator for more than 2 hours. In warm weather, food should not be outside the refrigerator for more than 1 hour.

Always keep HOT foods HOT, and COLD foods COLD.

Serve cooked foods on clean plates.

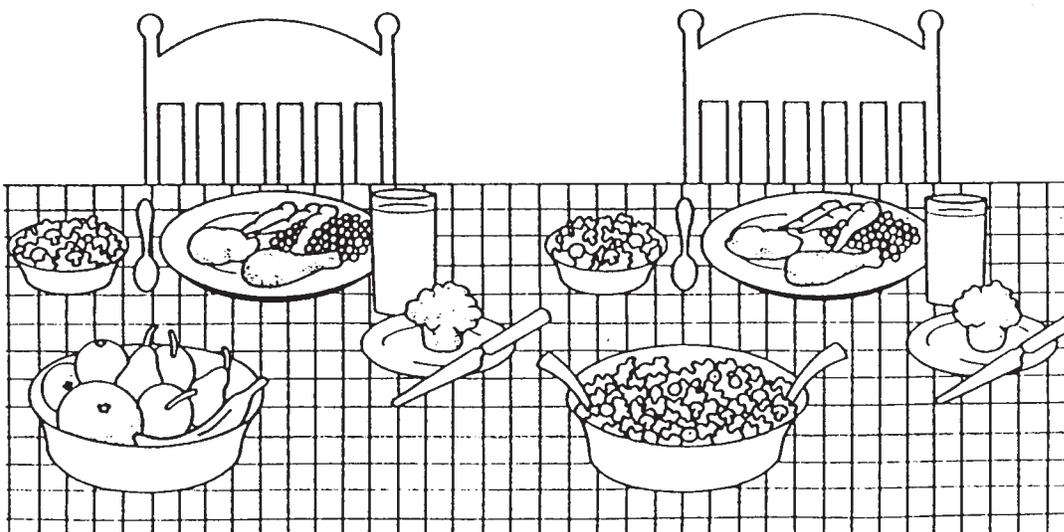
- * Don't put cooked or grilled meats back on the plate that held the raw meat.
- * Use clean utensils to cut and serve prepared food.

Potlucks and parties

- * Cook or heat casseroles and other hot food items just before serving.
- * Use electric serving dishes or crock-pots to keep foods hot, if serving time is long or delayed.
- * Keep cold foods in the refrigerator or on ice until just before serving.

Picnics

- * Warm weather means picnic foods will get warm faster and become good places for bacteria to grow.
- * Use an ice-filled cooler to keep raw meats, salads or sandwiches cold.



Taking care of leftovers

Special care is needed to make sure leftover foods are safe to eat later. Reheating will NOT make spoiled or unsafe food OK to eat.

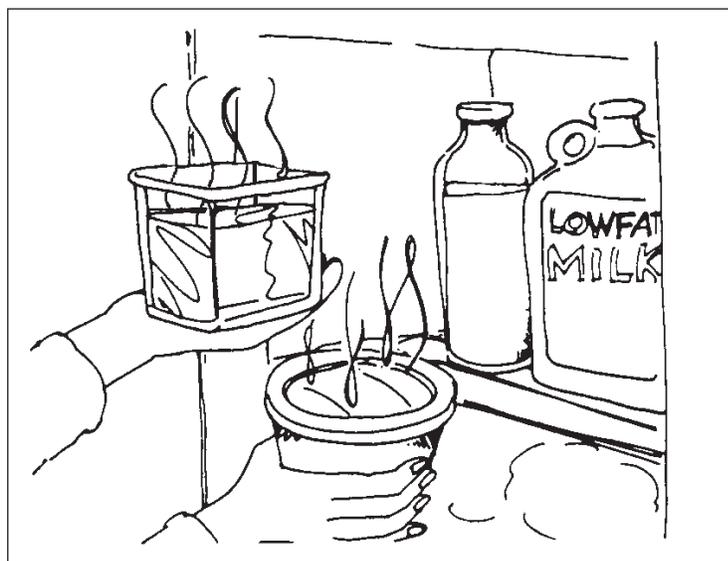
Cool leftover foods quickly — in the refrigerator or freezer.

- * Do not let food cool on the stove or counter before putting it in the refrigerator.
- * Divide large amounts of leftovers into small, shallow containers so food will cool faster.
- * Place open container in the refrigerator to cool. Once cooled, cover with a tight-fitting lid.
- * Separate meat from stuffing or gravy for faster cooling. Cut large roasts in half.

Reheat leftovers completely.

- * Bring sauces, gravies and soups to a boil.
- * Heat all leftovers until they are hot all the way through — not just warm enough to eat.
- * If reheating in a microwave oven, cover the food with plastic wrap or a lid to hold steam around the food. Stir the food at least once during heating. Heat until bubbling.

Eat leftovers in a day or two, or label and freeze.



Prevent food poisoning — Fight BAC!™

In summary: What steps can I take to fight germs?

The invisible enemy, bacteria (bac), can make you and those you care about sick. But you have the power to “Fight Bac!”™ and keep your food safe from harmful bacteria.

The four steps to Fight BAC! are:

1. Clean: Wash hands and surfaces often.

Bacteria can spread throughout the kitchen and get into cutting boards, utensils, sponges and counter tops.

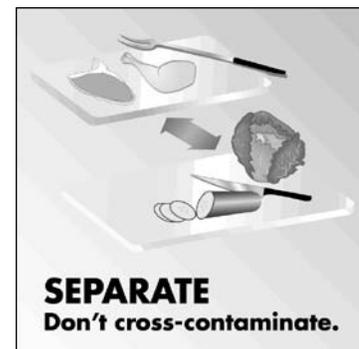
- * Wash your hands with hot soapy water before handling food and after using the bathroom, changing diapers and handling pets.
- * Wash your cutting boards, dishes, utensils and counter tops with hot soapy water after preparing each food item and before you go on to the next food.



2. Separate: Prevent cross-contamination.

Cross-contamination is the word for how bacteria can spread from one food product to another. This is especially true when handling raw meat, chicken, turkey and fish. So keep these foods and their juices away from fruits, vegetables and cooked foods.

- * Separate raw meat, chicken, turkey and fish from other foods in your grocery shopping cart and in your refrigerator.
- * Use different cutting boards for raw meats and for all other foods.
- * Never place cooked food on a plate that held raw meat, chicken, turkey or fish.



Adapted with permission from “Fight Bac”™ (1998), Partnership for Food Safety Education: www.fightbac.org

Prevent food poisoning — Fight BAC!™

3. Cook: Cook to proper temperatures.

Cook food to the proper temperature to destroy harmful bacteria that cause foodborne illness.

- * Use a meat thermometer to make sure meat, chicken, turkey and fish are properly cooked.
- * Cook ground meat to 160° F; beef roast to 145° F; whole chicken to 180° F; breasts and thighs to 170° F; pork roasts and chops to 160° F; and fish to 160° F.
- * Cook eggs until the whites and yolks are firm, not runny.
- * Heat leftovers in a microwave oven until they are bubbling hot.



4. Chill: Refrigerate promptly.

Refrigerate promptly because cold temperatures keep harmful bacteria from growing.

- * Refrigerate food and leftovers right away — within 2 hours or less — at 40° F or colder.
- * Thaw food in the refrigerator, or in the microwave to cook right away.

Divide large amounts of hot leftovers into shallow containers — less than 3 inches deep — for quick cooling in the refrigerator.



It's also important to store food safely. Food safety steps for proper food storage are:

- * Check cupboards every few weeks and bring canned goods to the front so you will remember to use them.
- * Purchase cans of foods that are **not** bulging, rusted, leaking or heavily dented.
- * Store household chemicals such as bleach and cleanser away from food and out of reach of children.

The case of the suspicious chili

Ann is looking forward to her grandchildren coming over for supper. She plans to make chili. She puts the frozen hamburger on the counter to thaw before she leaves for a day of shopping with her neighbor.

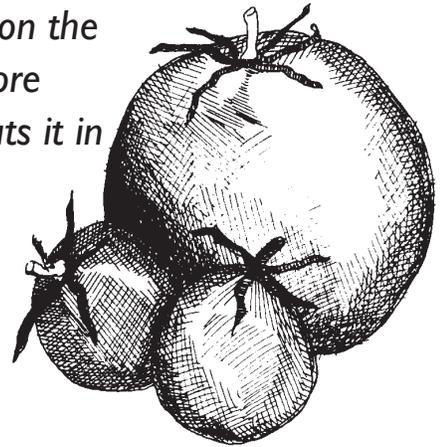
Ann returns from shopping later than she planned. She immediately starts the chili, forgetting to wash her hands. She fries the meat, adds cut up onion, celery and green pepper.

She cleaned the pantry last week, and opens the cans of tomato sauce she found at the back of the shelf. As she opens a can, she notices it is starting to rust. She adds the tomato sauce, some kidney beans and some water.

The chili smells so good, Ann tastes it several times with the stirring spoon. At 5 o'clock, the chili is ready — but not everyone is there. Ann turns off the burner, and leaves the chili on top of the stove. By 7 o'clock everyone is ready to eat. Ann turns the burner back on to warm the chili.

When everyone has eaten, Ann pours the hot leftover chili into a con-

tainer and leaves it on the counter to cool. Before going to bed, she puts it in the refrigerator. She thinks to herself, “That’s just enough for lunch next week when Julie is here.”



What could Ann do differently to help keep her family’s food safe to eat?



Answer key to page 3, “What’s wrong with this picture?”

There are a number of things wrong in the picture on page 3. Some things to notice include:

1. The woman tastes food with the spoon she is using to prepare it, possibly introducing germs into the food.
2. Insects in the kitchen, buzzing around the full trash can, carry bacteria that may cause illness.
3. The trash can is not covered, and young children can reach spoiled leftovers in food containers.
4. A young child is touching a pet and eating without first washing hands in between. Germs from the pet can get on the child’s food.
5. Milk is sitting out on the counter. It may be spoiled if it has been out of the refrigerator for more than 2 hours.
6. Chicken is sitting out on the counter. Dangerous levels of harmful bacteria can build up in chicken at room temperature.
7. Chicken juice dripping into the kitchen drawer spreads harmful bacteria.
8. The child sneezing on the chicken spreads germs.
9. Food stored under the sink with cleaners could lead to accidental poisoning.
10. Chemicals stored under the sink are within the reach of children.
11. Stove dials appear to be within the reach of children and could lead to burns.
12. The handle on the pot on the stove is turned out so a child could reach it. This could cause burns.
13. The spilled drink on the floor could cause slipping.
14. The deeply dented soup can in the cupboard may contain harmful bacteria and should be discarded in the trash can.
15. Many foods in the cupboard are in open jars or packages, which can lead to spoilage or contamination.

Answer key to page 9, “Where would you put this food?”

Bread — 1, 3, or 4. Store bread in the cupboard for best quality and use within 5 to 7 days. Bread can also be stored in the refrigerator for 1 to 2 weeks or freezer for 3 to 6 months.

Nuts — 1 or 3. Nuts can be stored for up to 1 month on a shelf or in a cupboard. For longer storage, store nuts in the freezer.

Eggs — 4. Refrigerator. Store eggs in the refrigerator within 2 hours. Eggs will last about 3 weeks in the refrigerator.

Hard cooked eggs

Freshly cooked — 4. Refrigerator. Store hard cooked eggs in the refrigerator.

After 2 hours at room temperature — 2. Trash can. Discard hard cooked eggs after 2 hours at room temperature.

Raw chicken

Thawed on counter — 2. Trash can. Chicken thawed on the counter may be unsafe and should be discarded in the trash can.

Thawed in refrigerator — 4. Refrigerator. Thaw meat, chicken, turkey and fish in the refrigerator, and then cook within 1 or 2 days.

Rice

Cooked — 4. Refrigerator. Use within 2 to 3 days.

Uncooked — 1. Shelf or cupboard (will last up to 1 year).

Canned foods

Unopened — 1. Shelf or cupboard. Store canned goods in a cool, dry cupboard.

Opened — 4. Refrigerator. Transfer the contents of any opened cans to a plastic or glass container and store in the refrigerator.

Flour — 1, 3, or 4 for white; 3 or 4 for whole wheat. Store flour in a sealed container. White flour will last on the shelf or in a cupboard for 6 to 8 months, in the refrigerator for 1 year and in the freezer for 1 to 2 years. Whole wheat flour should be stored in the refrigerator, where it will last 6 to 8 months or in the freezer where it will last 1 to 2 years.

Potatoes — 1. Shelf or cupboard. Store potatoes in a cool, dry shelf or cupboard, and in a plastic bag to keep them from drying out. The plastic bag should have a few small holes in it to keep the potatoes from spoiling quickly.

Green or sprouted potatoes — 2. Trash can. Discard green or sprouted potatoes. They may contain a harmful chemical called solanine, which is poisonous at high concentrations.

Cheese — 4. Refrigerator. Cheese can also be frozen for longer storage (6 to 8 months).

Moldy cheese — 2. Trash can. Discard moldy cheese.

Cooked beans, still hot — 4. Refrigerator. Promptly refrigerate all leftovers. Divide leftovers into shallow containers, no more than 3 inches deep, and refrigerate within 2 hours.

Tuna, ham and egg salads

Freshly prepared — 4. Refrigerator. Use within 1 to 2 days.

After 2 hours in a picnic basket — 2. Trash can.

Acknowledgments

“What’s wrong with this picture?” is based on *Eating Right Is Basic 2*, Michigan State University Cooperative Extension. Illustration on page 3 by Hawley Wright.

“Where would you put this food?” is based on *Storing Food Safely* N368, University of Missouri-Columbia, 1992.

“Store your food safely” is based on *Storing Food Safely in Your Refrigerator and Freezer* B2817, University of Wisconsin-Extension Cooperative Extension.

“The power is out!” is based on *When the Home Freezer or Refrigerator Stops* B2837, UW-Extension Cooperative Extension.

“Keeping your kitchen clean” is based on “Tried and True Recipes for a Less Hazardous Home” by Elaine Andrews, environmental education specialist, UW-Extension, and Liz Wessel, toxic use reduction specialist, *Wisconsin Natural Resources*, December 1990.

“Getting ready to cook,” “Cook food with care,” “Serving food safely” and “Taking care of leftovers” are based on “Food Safety at Home: Taking Control” by Mary Mennes, professor, Department of Food Science, University of Wisconsin-Madison, and food management specialist, UW-Extension (retired).

“Prevent food poisoning” is adapted from “Fight BAC!”™ For more information in English and Spanish, visit the Partnership for Food Safety Education Web site: www.fightbac.org

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Wisconsin Nutrition Education Program (WNEP) **Materials developed by WNEP staff and Family Living Programs specialists, University of Wisconsin-Extension Cooperative Extension:**

Geraldine Jackson, nutrition educator, Dane County

Barbara Love, nutrition educator, Milwaukee County (retired)

Jean Love, nutrition educator, Rock County

Beverly Phillips, senior outreach specialist in nutritional sciences, UW-Extension

Angela Ramirez, nutrition educator, Milwaukee County

Betty Ramsey, nutrition educator, Racine County

Jane Voichick, nutrition specialist, UW-Madison and UW-Extension (retired)

Reviewers: Reviewed in 2004 by Barbara H. Ingham, professor and food science specialist, University of Wisconsin-Madison and UW-Extension, and Amy Rettammel, outreach specialist in nutritional sciences, UW-Extension. Initial review by Mary Mennes, food management specialist, UW-Madison and UW-Extension (retired); Dennis Buege, professor and extension meat specialist, UW-Madison and UW-Extension; and Walter Gojmerac, entomology specialist, UW-Extension (retired).

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