

HEALTH INFORMATION

Food

Updated: March 2015

How do I know if food is safe to eat?

Undamaged, commercially prepared foods in all-metal cans and retort pouches (for example, flexible, shelf-stable juice or seafood pouches) can be saved if you do the following:

- Remove the labels, if they are the removable kind, since they can harbor dirt and bacteria.
- Thoroughly wash the cans or retort pouches with soap and water, using hot water if it is available.
- Brush or wipe away any dirt or silt.
- Rinse the cans or retort pouches with water that is safe for drinking, if available, since dirt or residual soap will reduce the effectiveness of chlorine sanitation.
- Then, sanitize them by immersion in one of the two following ways:
 - Place in water and allow the water to come to a boil and continue boiling for 2 minutes, or
 - Place in a freshly made solution consisting of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available) for 15 minutes.
- Air-dry cans or retort pouches for a minimum of 1 hour before opening or storing.
- If the labels were removable, then re-label your cans or retort pouches, including the expiration date (if available), with a marker.
- Food in reconditioned cans or retort pouches should be used as soon as possible, thereafter.
- Any concentrated baby formula in reconditioned, all-metal containers must be diluted with clean, drinking water.

See below table for a detailed list of food you may be able to eat if it has not been contaminated or in contact with flood water.

Throw out food if it has been:

- Throw away food that may have come in contact with flood or storm water.
- Throw away food that has an unusual odor, color, or texture.
- Throw away perishable foods (including meat, poultry, fish, eggs and leftovers) that have been above 40 degrees Fahrenheit (F) (or 5 degrees Celsius) for 2 hours or more.
- Thawed food which still contains ice crystals or is 40 degree F (or 5 degrees Celsius) or below can be refrozen or cooked.
- Throw away canned foods that are bulging, opened, or damaged.
- Food containers with screw-caps, snap-lids, crimped caps (soda pop bottles), twist caps, flip tops, snap-open, and home canned foods should be discarded if they have come into contact with floodwater because they cannot be disinfected.

List of Foods to Save or Throw Out

Refrigerated Foods

FOOD	Held above 40°F (or 5°C) over 2 hours	
Meat, Poultry, Seafood Raw or leftover cooked meat, poultry, fish, or seafood: soy meat substitutes	Discard	
Thawing meat or poultry	Discard	
Meat, tuna, shrimp, chicken, or egg salad	Discard	
Gravy, stuffing, broth	Discard	
Lunchmeats, hot dogs, bacon, sausages, dried beef	Discard	
Pizza – with any topping	Discard	
Canned hams labeled “Keep Refrigerated”	Discard	
Canned meats and fish, opened	Discard	
Cheese Soft Cheeses; blue/bleu, Roquefort, Brie, Camembert, cottage, cream, Edam, Monterey Jack, ricotta, mozzarella, Muenster, Neufchatel, queso blanco, queso fresco	Discard	
Hard cheeses: Cheddar, Colby, Swiss, Parmesan, provolone, Romano		Safe
Processed Cheeses		Safe
Shredded Cheeses	Discard	
Low-fat Cheeses	Discard	
Grated Parmesan, Romano, or combination (in can or jar)		Safe
Dairy Milk, cream, sour cream, buttermilk, evaporated milk, yogurt, eggnog, soy milk	Discard	
Butter margarine		Safe
Baby formula, opened	Discard	
Eggs Fresh eggs, hard-boiled in shell, egg dishes, egg products	Discard	
Custards and puddings	Discard	
Casseroles, Soups, Stews	Discard	
Fruits Fresh fruits, cut	Discard	
Fruit juices, opened		Safe
Canned fruits, opened		Safe
Fresh fruits, coconut, raisins, dried fruits, candied fruits, dates		Safe
Sauces, Spreads, James Opened mayonnaise, tartar sauce, horseradish	Discard if above 10°C for over 8 hours	
Peanut butter		Safe
Jelly, relish, taco sauce, mustard, catsup, olives, pickles		Safe
Worcestershire, soy, barbecue, Hoisin sauces		Safe
Fish sauces (oyster sauce)	Discard	
Opened vinegar-based dressings		Safe

Opened creamy-based dressing	Discard	
Spaghetti sauce, opened jar	Discard	
Bread, cakes, Cookies, Pasta, Grains Bread, rolls, cakes, muffins, quick breads, tortillas		Safe
Refrigerator biscuits, rolls, cookie dough	Discard	
Cooked pasta, rice, potatoes	Discard	
Pasta salads with mayonnaise or vinaigrette	Discard	
Fresh pasta	Discard	
Cheesecake	Discard	
Breakfast foods – waffles, pancakes, bagels		Safe
Pies, Pastry Pastries, cream filled	Discard	
Pies – custard, cheese filled, or chiffon; quiche	Discard	
Pies, fruit		Safe
Vegetables Fresh mushrooms, herbs, spices		Safe
Greens, pre-cut, pre-washed, packaged	Discard	
Vegetables, raw		Safe
Vegetables, cooked; tofu	Discard	
Vegetable juice, opened	Discard	
Baked potatoes	Discard	
Commercial garlic in oil	Discard	
Potato salad	Discard	

Refrigerated Foods

FOOD	Still contains ice crystals and feels cold as if refrigerated	Thawed. Held above 40°F (or 5°C) for over 2 hours
Meat, Poultry, Seafood Beef, veal, lamb, pork, and ground meats	Refreeze	Discard
Poultry and ground poultry	Refreeze	Discard
Variety meats (liver, kidney, heart, chitterlings)	Refreeze	Discard
Casseroles, stews, soups	Refreeze	Discard
Fish, shellfish, breaded seafood products	Refreeze. However, there will be some texture and flavor loss	Discard
Dairy Milk	Refreeze. May lose some texture.	Discard
Eggs (out of shell) and egg products	Refreeze	Discard
Ice cream, frozen yogurt	Refreeze	Discard
Cheese (soft and semi-soft)	Refreeze	Discard
Hard cheeses	Refreeze	Discard
Casseroles containing milk, cream, eggs, soft cheeses	Refreeze	Discard
Cheesecake	Refreeze	Discard

Fruits Juices	Refreeze	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
Home or commercially packaged	Refreeze. Will change texture and flavor.	Refreeze. Discard if mold, yeasty smell, or sliminess develops.
Vegetables Juices	Refreeze	Discard after held at above 40°F (or 5°C) for 6 hours.
Home or commercially packaged or blanched	Refreeze. May suffer texture and flavor loss.	Discard after held at above 40°F (or 5°C) for 6 hours
Breads, Pastries Breads, rolls, muffins, cakes (without custard fillings)	Refreeze	Refreeze
Cakes, pies, pastries with custard or cheese filing	Refreeze	Discard
Pie crusts, commercial and homemade bread dough	Refreeze. Some quality loss may occur.	Refreeze. Quality loss is considerable.
Other Casseroles – pasta, rice based	Refreeze	Discard
Flour, cornmeal, nuts	Refreeze	Refreeze
Breakfast items – waffles, pancakes, bagels	Refreeze	Refreeze
Frozen meal, entrée, specialty items (pizza, sausage and biscuit, meat pie, convenience foods)	Refreeze	Discard

How do I store food safely?

Store food on shelves that will not be reached by any further contaminated water. Coolers are a great help for keeping food cold if the power is or will be out for more than 4 hours— along with frozen gel packs.

Cans:

If cans have come in contact with floodwater or storm water, remove the labels, wash the cans, and dip them in a solution of 1 cup of bleach in 5 gallons of water. Re-label the cans with a marker.

Bottles / jars:

Bottles and jars that have come in contact with flood water it is unsafe to eat or drink.

Fresh:

Dispose of any fresh foods, such as fruit and vegetables that have come in contact with flood/contaminated water. Food that has been kept on high shelves away from the flood or sealed and refrigerated might safe to eat.

Refrigerated:

- While the power is out, keep the refrigerator and freezer doors closed as much as possible.
- Add block ice or dry ice to your refrigerator if the electricity is expected to be off longer than 4 hours. Wear heavy gloves when handling ice

Preparing food

Key Advice:

1. Avoid preparing food in areas where there is a high risk of contamination from flooded water.
2. Protect food storage and preparation areas from insects, pests and other animals.
3. Individuals with symptoms that are highly transmissible such as, vomiting and diarrhoea should be kept away from food preparation areas.
4. Ensure there is reasonable distance between food-preparation areas and places for defecation.
5. In the event of a flood avoid eating raw food such as vegetables a fruit.
6. Meats should be thoroughly cooked, with no visible pink. Juices should run clear.

Cleaning food preparation surfaces

Discard any wooden cutting boards, baby bottle nipples, and pacifiers that have been affected. These items cannot be properly sanitized if they have come into contact with contaminated flood waters.

Clean and sanitize food-contact surfaces in a four-step process:

1. Wash with soap and warm, clean water.
2. Rinse with clean water.
3. Sanitize by immersing for 1 minute in a solution of 1 teaspoon of chlorine bleach (5.25%, unscented) per gallon of clean water.
4. Allow to air dry.

Thoroughly wash countertops with soap and water, using hot water if available. Rinse and then sanitize them by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available). Allow to air-dry.

Cleaning plates, bowls and utensils

Thoroughly wash metal pans, ceramic dishes, and utensils (including can openers) with soap and water, using hot water if available. Rinse and then sanitize them by boiling in clean water or immersing them for 15 minutes in a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available).

Using boiled water

Do not use flood or contaminated water to clean food, food utensils, preparation surfaces or your hands.

Washing hands

It is important to wash your hands with safe boiled or treated water and soap, or use an alcohol –based sanitizer before you prepare food.

Do not prepare food if you have contracted any contagious illnesses to avoid cross contamination.

Disposal of Food Wastes

It is important to correctly store or dispose of food scraps to avoid bacterial contamination and attracting unwanted insects and wild animals. If there is no waste management services use rodent proof containers to store waste.

Feeding infants and young children

Breastfeeding

Breastfed infants should continue breastfeeding.

Preparing formula

For formula-fed infants, use ready-to-feed formula if possible. If using ready-to-feed formula is not possible, it is best to use bottled water to prepare powdered or concentrated formula. If bottled water is not available, use boiled water. Use treated water to prepare formula only if you do not have bottled or boiled water.

- If you prepare formula with boiled water, let the formula cool sufficiently before giving it to an infant.
- Clean feeding bottles and nipples with bottled, boiled, or treated water before each use.
- Wash your hands before preparing formula and before feeding an infant. You can use alcohol-based hand sanitizer for washing your hands if the water supply is limited

Water

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Water may not be safe to drink, clean with, or bathe in after an emergency such as a hurricane or flood. During and after a disaster, water can become contaminated with microorganisms, such as bacteria, sewage, agricultural or industrial waste, chemicals, and other substances that can cause illness or death.

Listen to and follow public announcements. Local authorities will tell you if tap water is safe to drink or to use for cooking or bathing. If the water is not safe to use, follow local instructions to use bottled water or to boil or disinfect water for cooking, cleaning, or bathing.

Use only bottled, boiled, or treated water for drinking, cooking or preparing food, washing dishes, cleaning, brushing your teeth, washing your hands, making ice, and bathing until your water supply is tested and found safe. If your water supply is limited, you can use alcohol-based hand sanitizer for washing your hands.

If you use bottled water, be sure it came from a safe source. If you do not know that the water came from a safe source, you should boil or treat it before you use it.

Making water safe

Safe water for drinking, cooking, and personal hygiene includes bottled, boiled, or treated water

Instructions to make water safer

Bottled Water

Use bottled water that has not been exposed to flood waters if it is available.

Boiled Water

- If you don't have bottled water, you should boil water to make sure it is safe. Boiling water will kill most types of disease-causing organisms that may be present. If the water is cloudy, filter it through clean cloths or allow it to settle, and draw off the clear water for boiling. Boil the water for one minute, let it cool, and store it in clean containers with covers. **NEVER USE THE FLOOD WATER.**

Treated Water

- If you can't boil water, you can disinfect it using household bleach. Bleach will kill some, but not all, types of disease-causing organisms that may be in the water. If the water is cloudy, filter it through clean cloths or allow it to settle, and draw off the clear water for disinfection. Add 1/8 teaspoon (or 8 drops) of regular, unscented, liquid household bleach for each gallon of water, stir it well and let it stand for 30 minutes before you use it. Store disinfected water in clean containers with covers.

Water Storage Tanks

- Use water storage tanks and other types of containers with caution. For example, fire truck storage tanks and previously used cans or bottles may be contaminated with microbes or chemicals. Water containers should be thoroughly cleaned, then rinsed with a bleach solution before use.
 - Clean surfaces thoroughly with soap and water, then rinse.
 - For gallon- or liter-sized containers, add approximately 1 teaspoon (4.9 mL) household bleach (5.25%) with 1 cup (240 mL) water to make a bleach solution.
 - Cover the container and agitate the bleach solution thoroughly, allowing it to contact all inside surfaces. Cover and let stand for 30 minutes, then rinse with potable water.

Private Water Wells

- Flooded, private water wells will need to be tested and disinfected after flood waters recede. If you suspect that your well may be contaminated don't use it.

When to use treated / boiled water:

Washing hands

After an emergency, finding running water can be difficult. However, keeping your hands clean helps you avoid getting sick. It is best to wash your hands with soap and warm water for 20 seconds. However, when water is not available, you can use alcohol-based hand products made for washing hands (sanitizers).

When should you wash your hands?

- Before preparing or eating food
- After going to the bathroom
- After changing diapers or cleaning up a child who has gone to the bathroom
- Before and after caring for someone who is sick
- After handling uncooked foods, particularly raw meat, poultry, or fish
- After blowing your nose, coughing, or sneezing
- After handling an animal or animal waste
- After handling garbage
- Before and after treating a cut or wound
- After handling items contaminated by flood water or sewage

Washing with soap and water

1. Place your hands together under water (warm water if possible).
2. Rub your hands together for at least 20 seconds (with soap if possible). Wash all surfaces well, including wrists, palms, backs of hands, fingers, and under the fingernails.
3. Clean the dirt from under your fingernails.
4. Rinse the soap from your hands.
5. Dry your hands completely with a clean towel if possible (this helps remove the germs). However, if towels are not available it is okay to air dry your hands.
6. Pat your skin rather than rubbing to avoid chapping and cracking.
7. If you use a disposable towel, throw it in the trash.

Remember: If soap and water are not available, use an alcohol-based hand sanitizer.

Using alcohol-based hand sanitizers

When your hands are visibly dirty, you should wash them with soap and warm water when available. However, if soap and water are not available, use alcohol-based hand sanitizers.

- Apply product to the palm of one hand.
- Rub hands together.
- Rub the product over all surfaces of hands and fingers until your hands are dry.

Note: the volume needed to reduce the number of germs on hands varies by product.

Avoiding flood water

Flood water after a disaster becomes contaminated with microorganisms, such as bacteria, sewage, agricultural or industrial waste, chemicals, and other substances that can cause illness or death.

Flood water should be avoided, and not used to clean, bathe, play, drink, or cook with. See above 2.1 – Making water safe

Especially avoid flood water if you have any wounds or illness. Although skin contact with flood water does not, by itself, pose a serious health risk, there is some risk of disease from eating or drinking anything contaminated with flood water. If you have any open cuts or sores that will be exposed to flood water, keep them as clean as possible by washing well with soap to control infection. If a wound develops redness, swelling, or drainage, seek immediate medical attention.

Do not allow children to play in flood water areas, wash children's hands frequently (always before meals), and do not allow children to play with flood-water contaminated toys that have not been disinfected. You can disinfect toys using a solution of one cup of bleach in 5 gallons of water.

References

International SOS - Country Guides - <http://www.internationalsos.com>

Disclaimer: This information has been developed for educational purposes only. It is not a substitute for professional medical advice. Should you have questions or concerns about any topic described here, please consult your healthcare professional.