



Food Safety after a Flood

A flood or the loss of power due to storms could jeopardize the safety of your food. Knowing how to determine if food is safe and how to keep food safe will help minimize the potential loss of food and reduce the risk of foodborne illness. This fact sheet will help you make the right decisions for keeping your family safe after a flood.

ABCD's of Keeping Food Safe During an Emergency

Always keep meat, poultry, fish, and eggs refrigerated at or below 40 °F and frozen food at or below 0 °F. This may be difficult when the power is out.

Keep the refrigerator and freezer doors closed as much as possible to maintain the cold temperature. The refrigerator will keep food safely cold for about 4 hours if it is unopened. A full freezer will hold the temperature for approximately 48 hours (24 hours if it is half full) if the door remains closed. Obtain dry or block ice to keep your refrigerator as cold as possible if the power is going to be out for a prolonged period of time. Use 2 ½ to 3 pounds of dry ice per cubic foot in your freezer; 50 pounds of dry ice should hold an 18-cubic foot full freezer for 2 days. Plan ahead and know where dry ice and block ice can be purchased.

Be prepared for an emergency...

... by having items on hand that don't require refrigeration and can be eaten cold or heated on the outdoor grill. Shelf-stable food, boxed or canned milk, water, and canned goods should be part of a planned emergency food supply. Make sure you have ready-to-use baby formula for infants and pet food. Remember to use these items and replace them from time to time. Be sure to keep a hand-held can opener for an emergency.

Consider what you can do ahead of time to store your food safely in an emergency. If you live in a location that could be affected by a flood, plan your food storage on shelves that will be safely out of the way of contaminated water. Coolers are a great help for keeping food cold if the power will be out for more than 4 hours—have a couple on hand along with frozen gel packs. When your freezer is not full, keep items close together—this helps the food stay cold longer.

Digital, dial, or instant-read food thermometers and appliance thermometers will help you know if the food is at safe temperatures. Keep appliance thermometers in the refrigerator and freezer at all times. When the power is out, an appliance thermometer will always indicate the temperature in the refrigerator and freezer no matter how long the power has been out. The refrigerator temperature should be 40 °F or below; the freezer, 0 °F or lower. If you're not sure a particular food is cold enough, take its temperature with a food thermometer.

Food Safety after a Flood

If your garden was flooded with water from a stream or river, can you still harvest the produce? Do not attempt to harvest any items from a garden flooded with water from a river or stream. This includes tomatoes or peppers, but also potatoes and carrots. Flood waters can bring with them harmful microorganisms, chemicals and other contaminants that can make food unsafe. Some of these contaminants may not be removed or destroyed with peeling or cooking. It is best to throw produce from a flooded garden away.

If flood waters covered food stored on shelves and in cabinets, what should you keep and what should you throw out? Many food items are unsafe once they come in contact with flood water. Here is a guide of what to keep and what to discard:

- Do not eat any food that may have come into contact with flood water – this would include raw fruits and vegetables, cartons of milk or eggs.

- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flood water. Food containers that are not waterproof include those packaged in plastic wrap or cardboard, or those with screw-caps, snap lids, pull tops, and crimped caps. Flood waters can enter into any of these containers and contaminate the food inside. Also, discard cardboard juice/milk/baby formula boxes and **home canned foods** if they have come in contact with flood water, because they cannot be effectively cleaned and sanitized.
- Inspect canned foods and discard any food in damaged cans. Can damage is shown by swelling, leakage, punctures, holes, fractures, extensive deep rusting, or crushing/denting severe enough to prevent normal stacking or opening with a manual, wheel-type can opener.

How do I salvage canned items? 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

How should I clean my pots, pans, dishes, 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).

How should I clean my countertops? 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.

My home was flooded and I am worried about the safety of the drinking water. What should I do? Use **bottled water** that has not been exposed to flood waters if it is available.

- 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.
- 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.
- If you have a well that had been flooded, the water should be tested and disinfected after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department or county Extension office for specific advice.

Summarized from: Keeping Food Safe During an Emergency. FSIS. <http://www.fsis.usda.gov/>

Other resources available from UWEX: <http://www.foodsafety.wisc.edu> – When the Power Goes Out

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