

# Keep Food and Water Safe During Power Outages and Floods

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Power outages and floods can happen any time of the year after severe storms, tornadoes and hurricanes. Floodwaters contain disease-causing organisms that can contaminate food. If you know how to handle food and water, you can reduce your risk of illness and cut down on food loss.

## When a severe storm is predicted . . .

- Make sure you have an appliance thermometer in the refrigerator and freezer to help determine the safety of food when the power is out. Keep the freezer at 0°F or below and the refrigerator at 40°F or below.
- Have coolers on hand to keep perishable food cold when the power is out for four hours or longer.
- Buy ice cubes, freeze gel packs or freeze containers of water and use these to help keep food cold in the freezer, refrigerator or cooler when the power is out.



- Purchase block ice or dry ice and keep it in the refrigerator and freezer. Fifty pounds of dry ice will hold an 18-cubic foot freezer full of food cold for two days.
- Freeze refrigerated items, such as leftovers, milk, fresh meat, fish and poultry. You may not need these immediately, and freezing them ahead of time will keep them at a safe temperature longer.
- Group food together in the freezer. This helps the food stay cold longer.
- Make sure you have a supply of bottled water for drinking.
- Store food and bottled water on shelves high off the floor and out of the way of floodwaters.



## While the power is out . . .

- Do not taste food to determine if it is safe. Unsafe food usually does not look or taste bad, but it contains organisms that will make you sick.
- Keep the refrigerator and freezer doors closed as much as possible. A closed refrigerator will keep food safe for four hours.
- A full freezer will keep food safe for 48 hours if the door remains closed.
- After four hours without power, discard perishable foods such as meat, poultry, fish, milk, leftovers and deli foods that had been kept in the refrigerator.

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- Monitor the temperature of the refrigerator and freezer when the power is out. If the temperature is at 40°F or below or the food still contains ice crystals, the food is safe.
- When the power returns, you can refreeze food that is at 40°F or below or food that still has ice crystals.

### When floods occur . . .

- Use bottled water that has not been exposed to floodwaters.
- If you do not have bottled water, boil water to make it safe. If the water is cloudy, first filter it through a clean cloth or allow it to settle, and then draw off the clear water for boiling. Bring the water to a boil, and boil it for one minute. Let it cool and then store it in clean containers with covers.
- If you cannot boil water, disinfect it with household bleach. Filter cloudy water or allow it to settle and then draw off the clear water for disinfecting. Add ½ teaspoon (or eight drops) of regular, unscented liquid household bleach for each gallon of water. Stir it well and let it stand for 30 minutes. Store disinfected water in clean containers with covers.
- Do not eat any food that may have come in contact with floodwater.
- Discard food that is not in a waterproof container if there is any chance it has come into contact with floodwater. Food containers that are not waterproof include those with screw-caps, snap lids, pull tops and crimped caps. Discard cardboard juice boxes, milk boxes, baby formula boxes and home-canned foods that have come in



contact with floodwater, because these containers cannot be cleaned and sanitized effectively.

- Throw out food in damaged cans, including cans that are swollen, punctured, deeply rusted, crushed or dented.
- Keep commercially prepared foods in metal cans or plastic pouches that are not damaged. Remove the labels and wash the containers with soap and hot water, if it is available. Rinse the containers with safe drinking water, if available, and then sanitize them by placing them in water, bringing the water to a boil, and then boiling for two minutes. Or, place the containers in a freshly made solution of one tablespoon of unscented, liquid chlorine bleach per gallon of safe (or cleanest) water for 15 minutes. Air-dry them for at least one hour before either opening or storing them. Use the food as soon as possible.
- Wash metal pans, ceramic dishes and utensils with soap and hot water, if possible. Rinse and then sanitize them as described above.
- Wash countertops with soap and hot water. Rinse, and then sanitize by applying a solution of one tablespoon of unscented, liquid chlorine bleach per gallon of drinking water.

### References

*Food and Water Safety During Hurricanes, Power Outages and Floods* (December 2007). Accessed January 2009, U.S. Department of Health and Human Services, Food and Drug Administration, [www.fda.gov](http://www.fda.gov).

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