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Joan Hegerfeld
South Dakota State University

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After a Flood: Keeping Food Safe

Joan Hegerfeld, Extension food safety specialist

Storm- and flood-damaged foods may not be safe to eat. If you have even the slightest question about the safety of any item, dispose of it. Otherwise, keep the following points in mind:

Destroy the following foods if they have been covered by floodwaters and are not in a waterproof container—they cannot be effectively cleaned and sanitized:

- fresh fruits and vegetables
- foods in cardboard, paper cartons, or bags (e.g., juice, milk and baby formula boxes, rice, pastas, flour)
- foods, liquids, or beverages in crown-capped bottles, containers with pull-tops, snap lids, crimped caps, corks or screw caps
- foods in glass jars, both commercial and home canned

Destroy all foods that were covered by water that may have been contaminated with waste, whether the waste is agricultural, industrial, or domestic. This includes foods in sealed, unopened cans.

Disinfect metal cans or retort pouches (i.e., flexible, shelf-stable juice or seafood pouches) not fouled by wastewater. They may be safe to eat, if the cans don't have bulges or leaks:

- Remove labels, if at all possible, since they harbor dirt and bacteria.
- Brush or wipe away any dirt or silt.
- Thoroughly wash containers with soap and hot water.
- Rinse with water that is safe for drinking. Dirt or residual soap will reduce the effec-

tiveness of chlorine sanitation.

- Sanitize by immersing in one of the following two ways:
 - a. Place in water and allow water to come to a boil and continue boiling for 2 minutes.
 - b. Place in a freshly made solution consisting of 1 tablespoon unscented, liquid chlorine bleach per gallon of drinking water (or cleanest, clearest water available) for 15 minutes.
- Air-dry for a minimum of 1 hour before opening or storing.
- Re-label with contents of can and expiration date, if known.
- Use as soon as possible.
- Any concentrated baby formula must be diluted with clean drinking water.

Clean pots, pans, dishes, utensils, and countertops that had been covered with flood waters:

- Thoroughly wash all metal pans, ceramic dishes, utensils (including the can opener), and countertops with soap and hot water.
- Rinse, then sanitize using one following:
 - a. Boil in clean water.
 - b. Immerse for 15 minutes in 1 tablespoon unscented, liquid chlorine bleach solution per gallon of drinking water (or cleanest, clearest available).
- Rinse countertop, then sanitize by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or cleanest, clearest available).
- Air-dry all dishes and countertops.

For safe drinking water after a flood, use bottled water that has not been exposed to floodwaters. If water such as that is not available, consider the following options:

- Boil water for 1 minute. This will kill most disease-causing organisms that may be present. If water is cloudy, filter it first through clean clothes or allow it to settle and then draw off the clear water for boiling. Cool and store in clean, covered containers.
- Disinfect with household bleach, if boiling is not an option. Bleach kills some, but not all, disease-causing microorganisms that may be in the water. If the water is cloudy, filter first through clean cloths or allow sediment to settle. Draw off clean water and add 1/8 teaspoon, or 8 drops, of regular, unscented liquid bleach for each gallon of water. Stir well and let stand for 30 minutes before use. Store in clean, covered containers.
- Test and disinfect flooded wells after floodwaters have receded. Contact local or state health department or your Extension office for specific advice.

If the power has gone out, consider these recommendations to maintain the safety of frozen and refrigerated foods:

- Never taste food to determine its safety.
- Appliance thermometers can be a lifesaver by telling if the refrigerator or freezer were ever above 40 F. If the freezer stayed below 40 F, the food can be refrozen.
- Keep 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 the door is

left shut. A full freezer will hold temperature for approximately 48 hours (24 hours if it is half-full) if the door is left shut.

- Obtain dry or block ice if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should hold an 18-cubic-foot full freezer for 2 days. Ahead of time, learn where dry ice and block ice can be purchased.

About frozen foods:

- If frozen foods are thawed completely and have warmed above 40 F, cook, eat, or discard them immediately. After cooking, they can be refrozen.
- Partially thawed frozen foods with ice crystals may be safely refrozen.
- All breads and cakes can be refrozen, even if completely thawed. If an item has a cheese or custard base, it must be discarded.
- Commercial pie crusts and homemade bread dough can be refrozen if completely thawed.
- Fruits and vegetables that did not reach temperatures above 40 F (refrigeration temperature) or that contain ice crystals can be refrozen.
- Discard all casseroles and foods that contain stuffing.
- Discard completely thawed frozen meals, entrees, and specialty items such as pizzas.
- Discard any dairy product that is completely thawed and above 40 F for more than 2 hours.
- Discard all frozen fruit juices that are completely thawed and show mold, smell yeasty, or appear slimy.
- Discard vegetable juices if held above 40 F for more than 6 hours.



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