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## NF92-99 Emergency Food Safety

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## Emergency Food Safety

*Julie A. Albrecht, Extension Food Specialist*

Storms may cause conditions that affect the safety of your food. This factsheet contains helpful information for handling food after a tornado, flood, power outage or fire.

If you live in an area where storms and power outages are a problem, plan ahead to be prepared for proper food storage.

- Plan ahead for ice. Buy some freezer-pak inserts and keep them frozen. Have a cooler handy.
- Know in advance where to purchase dry ice.
- Develop emergency freezer-sharing plans with friends, church, or school in another area.
- Check on commercial locker storage availability.

### Safe Food After a Tornado

- Consider all water from wells, cisterns and other delivery systems in the disaster area unsafe until tested.
- Check if the water supply was disrupted or contaminated.
- Drink only approved or chlorinated water.
- Check foods and discard any containing particles of glass or slivers of other debris.
- Discard canned foods with broken seams, dents, leaks, etc.
- Be alert for gas line leaks. If you smell gas, do not try to cook. Open all windows and doors, turn off the main gas valve at the meter and leave the house immediately.

### Safe Food After a Power Outage

In emergency conditions, the following foods should keep at room temperature (about 68-72° F) a few days. Discard anything that turns moldy or has an unusual odor or look.

- Butter, margarine
- Fresh fruits and vegetables
- Dried fruits and coconut

- Open jars of peanut butter, jelly, relish, taco sauce, barbecue sauce, mustard, ketchup and olives
- Hard and processed cheeses
- Fruit juices
- Fresh herbs and spices
- Fruit pies

**Discard the following foods if kept over 2 hours at above 40° F**

- Raw or cooked meat, poultry and seafood
- Milk/cream, yogurt, soft cheese
- Cooked pasta, pasta salads
- Custard, chiffon or cheese pies
- Fresh eggs, egg substitutes
- Meat-topped pizza, lunchmeats
- Casseroles, stews or soups
- Mayonnaise and tartar sauce
- Refrigerator cookie dough
- Cream-filled pastries

Refreeze thawed foods that still contain ice crystals or feels cold (less than 32° F).

To prevent warm air from entering the refrigerator or freezer, open only when necessary.

If power will not be restored within one day, you might want to purchase a 50-pound block of dry ice. It should keep food safe (if there's no power) in a full 18-cubic foot freezer for at least 2 days.

Dry ice registers -216° F, so wear gloves or use tongs when handling it. Wrap it in brown paper for longer storage and separate it from direct food contact with a piece of cardboard. Fill a partly empty freezer with crumpled newspaper to cut down on air currents which cause the dry ice to dissipate.

**Safe Food After a Flood**

Flood waters may carry silt, raw sewage, oil or chemical waste. If foods have been in contact with flood waters, use this chart to determine their safety.

**DISCARD:**

- Meat, poultry, fish and eggs
- Fresh produce
- Preserves sealed with paraffin
- Unopened jars with waxed cardboard seals such as mayonnaise and salad dressing
- All foods in cardboard boxes, paper, foil, cellophane or cloth
- Spices, seasonings and extracts
- Home canned foods
- Opened containers and packages
- Flour, sugar, grain, coffee and other staples in canisters
- Cans dented, leaking, bulging or rusted.

**SAVE:**

Undamaged canned goods and commercial glass jars of food are safe if you sanitize the containers before opening for use. Mark contents on can or jar lid with indelible ink. Remove labels. Paper can harbor dangerous bacteria. Then wash jars and cans in a strong detergent solution with a scrub brush.

Finally, immerse containers for 15 minutes in a solution of 2 teaspoons of chlorine bleach per quart of room temperature water. Air dry before opening.

Sanitize dishes and glassware the same way. To disinfect metal pans and utensils, boil them in water 10 minutes. Discard wooden spoons, plastic utensils and baby bottle nipples and pacifiers.

If in DOUBT, throw it OUT!

## **Safe Food After a Fire**

Generally, saving food that's been in a fire is just not a good idea. Food that's been exposed to fire can be compromised by three factors — the heat of the fire, smoke fumes and chemicals used to fight the fire.

Food in cans or jars may appear to be "okay", but if they've been close to the heat of the fire, they may no longer be edible. Why? Heat from the fire can activate food spoilage bacteria.

One of the most dangerous elements of a fire is sometimes not the fire itself, but toxic fumes released from burning materials. Those fumes can kill. They can also contaminate food.

Any type of food stored in permeable packaging — cardboard, plastic wrap, etc. — should be thrown away. Toxic fumes can penetrate the packaging and contaminate the food. Also discard any raw foods stored outside the refrigerator, like potatoes or fruit, which could be contaminated by fumes.

Food that's stored in refrigerators or freezers can also become contaminated by fumes. We think of the refrigerator seal as air-tight, but it's usually not. Fumes can get inside. If food from your refrigerator has an off-flavor or smell when it's prepared, throw it away.

Chemicals used to fight fires also contain toxic materials and can contaminate food and cookware. Foods that are exposed to chemicals should be thrown away. The chemicals cannot be washed off the food. This includes foods stored at room temperature, like fruits and vegetables, as well as foods stored in permeable containers like cardboard and screw-topped jars and bottles.

Canned goods (commercial and home canned) and cookware exposed to chemicals can be decontaminated. Wash in strong detergent solution and then dip in a chlorine bleach solution (2 teaspoons bleach per quart of water) for 15 minutes.

## **References:**

- Help, Power Outage! *Food News for Consumers*, Summer, 1989.
- The Storm Season - A Food Safety Survival Guide, *Food News for Consumers*, Spring 1992.

## **REFRIGERATOR FOOD — When to Save and When to Throw It Out**

	<b>Food still cold, held at 40° F or above under 2 hours</b>		<b>Held above 40° F for over 2 hours</b>
<b>Dairy</b>			
Milk, cream, sour cream, buttermilk, evaporated milk, yogurt	Safe		Discard
Butter, margarine	Safe		Safe
Baby Formula, opened	Safe		Discard
<b>Eggs</b>			
Eggs, fresh, hard-cooked in shell	Safe		Discard
Egg Dishes, custards and puddings	Safe		Discard
<b>Cheese</b>			
Hard cheeses, processed cheeses	Safe		Safe
Soft cheeses, cottage cheese	Safe		Discard
<b>Fruits</b>			
Fruit juices, opened	Safe		Safe
Canned fruits, opened	Safe		Safe
Fresh fruits, coconut, raisins, dried fruits, candied fruits, dates	Safe		Safe
<b>Vegetables</b>			
Vegetables, cooked	Safe		Discard after 6 hours
Vegetable juice, opened			
Baked potatoes	Safe		Discard
Fresh mushrooms, herbs and spices	Safe		Safe
Garlic, chopped in oil or butter	Safe		Discard
Casseroles, soups, stews	Safe		Discard
<b>Meat, Poultry, Seafood</b>			
Fresh or leftover meat, poultry, fish or seafood	Safe		Discard
Thawing meat or poultry	Safe		Discard if warmer than refrigerator temperatures
Meat, tuna, shrimp, chicken, egg salad	Safe		Discard
Gravy, Stuffing	Safe		Discard
Lunchmeats, hotdogs, bacon, sausage, dried beef	Safe		Discard
Pizza - meat topped	Safe		Discard

Canned meats (NOT labeled "Keep Refrigerated") but refrigerated after opening	Safe	Discard
Canned hams labeled "Keep Refrigerated"	Safe	Discard
<b>Pies, Pastry</b>		
Pastries, cream filled	Safe	Discard
Pies - custard, cheese filled or chiffons	Safe	Discard
Pies, fruit	Safe	Safe
<b>Bread, Cakes, Cookies, Pasta</b>		
Bread, rolls, cakes, muffins, quick breads	Safe	Safe
Refrigerator biscuits, rolls cookie dough	Safe	Discard
Cooked pasta, spaghetti	Safe	Discard
Pasta salads with mayonnaise or vinegar base	Safe	Discard
<b>Sauces, Spreads, Jams</b>		
Mayonnaise, tartar sauce, horseradish	Safe	Discard if above 50° F for over 8 hours
Peanut butter	Safe	Safe
Opened salad dressings, jelly, relish, relish, taco and barbecue sauce, mustard, catsup, olives	Safe	Safe

## **FROZEN FOOD — When To Save and When To Throw It Out**

	<b>Still contains ice crystals and feels as cold as if refrigerated</b>	<b>Thawed. Held above 40° F for over 2 hours</b>
<b>Meat, Poultry, Seafood</b>		
Beef, veal, lamb, pork and ground meats	Refreeze	Discard
Poultry and ground turkey	Refreeze	Discard
Variety meats (liver, kidney, heart, chitterlings)	Refreeze	Discard
Casseroles, stews, soups, convenience foods, pizza	Refreeze	Discard
Fish, shellfish, breaded seafood products	Refreeze, however there will be some texture and flavor loss.	Discard
<b>Dairy</b>		
Milk	Refreeze. May lose some texture.	Discard
Eggs (out of shell) and egg	Refreeze	Discard

products

Ice Cream, frozen yogurt	Discard	Discard
Cheese (soft and semi-soft) cream cheese, Ricotta	Refreeze. May lose some texture.	Discard
Hard cheeses (cheddar, Swiss, Parmesan)	Refreeze	Refreeze
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 in texture and flavor	Refreeze. Discard if mold, yeasty smell or sliminess develops.

### **Vegetables**

Juices	Refreeze	Discard after held above 40° F for 6 hours.
Home or commercially packaged or blanched	Refreeze. May suffer texture and flavor loss	Discard after held above 40° F for 6 hours

### **Breads, Pastries**

Breads, rolls, muffins, cakes (without custard fillings)	Refreeze	Refreeze
Cakes, pies, pastries with custard or cheese filling	Refreeze	Discard
Pie crusts	Refreeze	Refreeze
Commercial and homemade bread dough	Refreeze. Some quality loss may occur.	Refreeze. Considerable quality loss.

### **Other**

Casseroles - pasta, rice based	Refreeze	Discard
Flour, cornmeal, nuts	Refreeze	Refreeze

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***File NF99 under FOODS AND NUTRITION***

***F-7, Safety***

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