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Sandria L. Godwin

Fur-Chi Chen

Tennessee State University, fchen1@tnstate.edu

Richard Stone

Tennessee State University, rstone@tnstate.edu

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College of Agriculture, Human and Natural Sciences

Disaster Education Response Team



Avoiding The Food “Danger Zone” When It Is Hot Outside

Sandria L. Godwin, Fur-Chi Chen, Richard Stone

When you get sick from a foodborne illness, bacteria is usually to blame. Bacteria is everywhere and because of this precautions must be taken when handling food. One important precaution is to keep potentially hazardous foods out of the **danger zone**.

- When not handled correctly bacteria can grow rapidly in and on potentially hazardous foods. Below you will find a list of potentially hazardous foods.
 - Meat, fish, poultry, and foods containing these such as casseroles, deli meats, salads, sandwiches, and plan ahead dinners.
 - Eggs and other protein rich foods like soy bean products, in addition to foods containing these items such as quiche, soy milk, salads, and casseroles.
 - Dairy products and foods containing dairy products such as custards, soft cheeses, cream filled baked goods, and dairy desserts.
 - Fresh cut or peeled fruits or vegetables.
 - Cooked vegetables, beans, rice, and pasta dishes.
 - Shellfish (alive or cooked) and seafood or foods containing seafood.
 - Sauces, gravy, and non-commercial garlic in oil mixtures.
 - Sprouts such as alfalfa and bean sprouts.
- The danger zone is the temperature range between 40°F and 140°F (4.4°C and 60°C). When potentially hazardous foods are left in this temperature range bacteria found in and on these foods will begin to grow rapidly. It is important to keep foods below 40°F (4.4°C) or above 140°F (60°C) whenever possible.
 - The 2 Hour Rule: The 2 hour rule states that potentially hazardous foods left in the danger zone for longer than 2 hours when the air temperature is 40-80°F (4.4-26.6°C) must be thrown into the trash. If the air temperature is above 90°F (32.2°C), the food must be thrown into the trash after 1 hour. While this is the recommendation, it is always safer to keep food out of the danger zone at all times if possible.



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Disaster Education Resources
Call (615) 963-1375 for further information*



- **Avoiding the danger zone in the grocery store.**

- Shop for non-refrigerated items first.
- Place cold foods together in the grocery cart and ask the bagger to pack the cold foods together.
- Try not to put cold foods in the trunk of the car. The temperatures of cold foods stored in your car's trunk can increase rapidly when exposed to sunlight or extreme outdoor heat.
- Go straight home after leaving the grocery store. If you need more time, pack a cooler with ice packs in your car to keep your cold food cold.

- **Keeping food out of the danger zone at home.**

- The refrigerator needs to be at 40°F (4.4°C) or below. Using an appliance thermometer will help you to monitor the temperature of the refrigerator. Be sure to check it often.
- Do not overfill your refrigerator. Cold air needs to be able to move around the food.
- Thaw frozen foods in the refrigerator, in cold water that you change often, or in the microwave oven. Never leave frozen foods on the counter or in the sink to defrost.
- If you have any food leftover, it needs to be put into small storage containers and placed in the refrigerator as soon as possible. The containers may be placed in ice for faster cooling.
- Hot foods must be kept over 140°F (60°C) to be safe. Leftovers should be placed in small containers and refrigerated as soon as possible.



- Use a food thermometer to check the temperature of the refrigerated leftovers to make sure they reached 40°F (4.4°C) within 2 hours.
- Remember—any food left in the danger zone for more than 2 hours should be thrown away! If the air temperature is above 90°F (32.2°C), foods left out for more than 1 hour must be thrown away.



- **Keeping hot foods hot and cold foods cold at outdoor picnics or barbeques.**

- Keep cold food cold by placing them into a cooler with ice or frozen gel packs. Keep an appliance thermometer in the cooler to make sure the temperature remains below 40°F (4.4°C).
- Keep coolers containing cold foods closed so cold air does not escape. It is a good idea to have 2 coolers, 1 cooler for drinks and 1 cooler for cold foods.
- When serving cold food items, place the cold food dishes directly on ice, or in a shallow container set in a deep pan filled with ice. Use your food thermometer to check the temperature of your cold foods often, making sure they are below 40°F (4.4°C).
- When serving hot food items, use a heated chafing dish with a cover. Use your food thermometer often to check the temperature of the hot foods to be sure they are above 140°F (60°C).
- If the temperature of the food is in the danger zone [i.e. between 40°F and 140°F (4.4°C and 60°C)], remember the 2 hour rule. Both your cold food and your hot food cannot sit in the danger zone for longer than 2 hours before it must be thrown into the garbage. If the air temperature is above 90°F (32.2°C) you only have 1 hour before foods in the danger zone must be thrown into the garbage.

