

SAFE FOOD HANDLING-Food Safety Fact Sheet #7**“Time-Temperature Control of Food”****Background Information**

Time/temperature control of food is one of the main concerns in keeping food safe. Food is in the temperature danger zone whenever its temperature falls between **41°F and 135°F**. Bacteria multiply very rapidly in this danger zone. If food is not held at the proper temperature, the microorganisms present in the food can grow and make someone ill.



OR



KEEP IT COLD (below 41°F) KEEP IT HOT (above 135°F)

Key Concepts

- Always use a metal stem thermometer to monitor food temperatures.
- Thermometers need to be calibrated daily, whenever they are dropped, or experience severe temperature changes.
- Never re-heat or cook food on a steam table or in a food warmer. (Food does not reach a high enough temperature using these utensils.)
- Pre-chill ingredients when making a cold salad to prevent long periods in the danger zone.
- Cool hot foods to 70°F within 2 hours; and to 41°F within 4 additional hours in shallow pans with a food depth of 2 inches. You can also cool food quickly by using an ice water bath, ice paddles, or a quick chill unit.
- Store deliveries as soon as they are inspected.
- Do not overload refrigerators or line shelving with foil or paper. Leave space between items so cool air can circulate.
- Check temperatures of refrigerator food and storage areas regularly.
- Never place hot food in the refrigerator. (This could warm up the refrigerator’s interior enough to put other food into the temperature danger zone.)
- Check temperatures of all equipment. (For example, refrigerators should be set to 41°F or below and freezers should be at 0°F or below.)
- Keep dry-storage areas cool and dry. (The temperature of the storeroom should be between 50°F and 70°F and the relative humidity at 50% to 60%.)

- Store potentially hazardous foods at the proper temperatures. (Most potentially hazardous food such as protein foods, ready-to-eat foods, and all cooked foods should be stored at 41°F or below.)
- Food received frozen should be stored at 0°F or below.
- Cook foods to the proper internal temperatures. Once this temperature is reached, you must hold the food at this temperature for a specific amount of time. While cooking food reduces pathogens in food, it does not destroy spores or toxins they may have produced. You must handle food correctly before you cook it and while holding the food, as well.

Follow the temperature guide below:

- 165°F for 15 seconds for poultry, stuffed meats, stuffing containing meat, food cooked in the microwave, reheating of leftover food.
- 155°F for 15 seconds for ground beef, ground raw pork, ham, sausage, and bacon and eggs that will be hot-held for service.
- 145°F for 15 seconds for seafood including fish and shellfish, pork, veal, lamb, and raw shell eggs that will be served immediately.
- 135°F for cooking fruits, vegetables, grains, legumes and for hot food holding.

Activity 1

Put the proper temperature that each food should be cooked to.











Activity 2

Complete the blanks in each statement with the correct information.

1. The temperature danger zone is between _____°F and _____°F.
2. Cold tuna salad should be held at a temperature of _____°F.
3. The best tool to test the temperature of food is a _____.
4. Never place _____ food in the refrigerator.
5. Keep dry storage areas _____ and _____.
6. Most potentially hazardous cold food should be stored at a temperature below _____°F.
7. Food that is meant to be kept frozen should be stored at a temperature of _____°F.
8. Ground beef should be cooked to a minimum internal temperature of _____°F and held at this temperature for at least _____ seconds.

Answer Key

Activity 1:

Hamburger=155°F for 15 seconds

Chicken=165°F for 15 seconds

Eggs=145°F for 15 seconds

Fish=145°F for 15 seconds

Green Beans=135°F for 15 seconds

Activity 2:

1. 41°F and 135°F
2. 41°F or below
3. Metal stemmed thermometer
4. Hot
5. Cool and dry
6. 41°F
7. 0°F
8. 155°F ; 15 seconds

REFERENCES

AZ State Health Code. http://www.co.cochise.az.us/health/EnvHealth/food_doc.pdf 2001.

FDA Food Code. <http://www.foodsafety.gov/~dms/foodcode.html> 2005.

National Restaurant Association Educational Foundation. <http://www.nraef.org>.2009

Prepared by Lori Brandman, Program Coordinator, University of Arizona Cooperative Extension, September, 2009