

Module 9 Overview:



Hot and Cold Holding



TRAINER: Read this page ahead of time to prepare for teaching the module.

PARTICIPANTS WILL:

1. Define the term POTENTIALLY HAZARDOUS FOOD and DANGER ZONE.
2. Know the proper food temperatures to control bacterial growth.
3. Demonstrate proper thermometer placement.
4. Develop a service call list for hot and cold holding equipment.

TIME: 15 minutes

TEACHING LOCATION: Kitchen

MATERIALS NEEDED:

- Activity: Temperature Monitoring (p. M9-5)
 - Metal stem thermometers
 - Alcohol wipes or wiping cloths solution
 - POTENTIALLY HAZARDOUS FOOD
 - Food Temperature Log (p. M9-14)
- Activity: Service Phone Numbers (p. M9-6)
 - Paper
 - Pen

COPIES REQUIRED:

- Pre and Post Quiz
- Talking Points (p. M9-4)
- Activity: Temperature Monitoring (p. M9-5)
- Activity: Service Call List (p. M9-6)
- Fact Sheet: Temperature Danger Zone (p. M9-7)
- Fact Sheet: Thermometer Placement (p. M9-8)

GLOSSARY TERMS:

- DANGER ZONE
- POTENTIALLY HAZARDOUS FOODS
- WHEN IN DOUBT, THROW IT OUT



Module 9 Presentation:

Hot and Cold Holding



TRAINER: Read aloud to prepare participants for training.

Today We Are Learning About Hot and Cold Holding. Before our training begins today there will be a short quiz. The quiz helps the Health Department assess training effectiveness and success. You do not need to write your name on the quiz and you will not be graded. Try your best to answer all the questions and don't share your answers with coworkers. We will be taking the same quiz at the end of training so if you don't know the answers, you'll be learning them today. After the training presentation we will do an activity together followed by some review questions. The training will take about 15 minutes and all of you will be participating.



TRAINER: Read aloud.

What's the Risk?

POTENTIALLY HAZARDOUS FOODS held in the DANGER ZONE from 41°F to 135°F may support the rapid growth of disease-causing bacteria and lead to foodborne illness. Some examples of POTENTIALLY HAZARDOUS FOOD include; meat, poultry, seafood, dairy products, cooked and cooled foods. Improper hot or cold holding temperatures account for approximately 35% of all foodborne disease outbreaks.



TRAINER: Read aloud.

What's the Law?

Cold POTENTIALLY HAZARDOUS FOOD must be kept at or below 41°F.

Hot POTENTIALLY HAZARDOUS FOOD must be kept at or above 135°F.

Frozen food must be maintained frozen.



TRAINER: Give participants a copy and have them take turns reading aloud.

Talking Points

- **DANGER ZONE:** The DANGER ZONE is when the temperature of food is between 41°F and 135°F. This is called the DANGER ZONE because bacteria will grow quickly between these temperatures.
- **POTENTIALLY HAZARDOUS FOODS:** Foods that bacteria will grow in when the temperature is in the DANGER ZONE between 41°F and 135°F.
- **WHEN IN DOUBT, THROW IT OUT:** If you are unsure about how long a food item has been at improper temperature, discard it.
- **POTENTIALLY HAZARDOUS FOODS** need extra care in handling. These are foods that spoil easily and if not handled properly can cause foodborne illness. Examples include:

Meat	Gravies	Eggs
Poultry	Soups	Milk
Fish	Meat sauces	Tofu
Cooked pasta or rice	Cream-filled baked goods	Cut melons
Cooked vegetables	Custards	
Cooked potatoes	Meat and potato salads	
- Food should be discarded if in the DANGER ZONE for more than a total of 4 hours.
- If the food has been out of temperature control for more than 4 hours, disease-causing bacteria may grow to levels high enough to cause illness.
- If you are unsure how long a food item has been at an unsafe temperature, discard it. It's better to be safe than sick. **WHEN IN DOUBT, THROW IT OUT.**
- Just because a food looks and smells OK, does not mean it is safe to eat.
- During hot holding, stirring and covering food will help ensure thorough heating.
- Metal containers transfer heat and cold faster than plastic containers; hot foods will cool more quickly in metal containers.
- Storing smaller portions and covering foods after cooling are helpful tips for keeping food below 41°F.
- At all times during hot holding the food should remain above 135°F to prevent the growth of bacteria. Use a thermometer to verify that your hot holding method is keeping the food at safe temperatures.



Module 9 Activity:

Temperature Monitoring



TRAINER: Give participants copies of activity sheet and corresponding fact sheet(s). Have participants complete individually or as a group.

- Review and discuss Temperature Danger Zone fact sheet (p. M9-7).
- Check temperatures of POTENTIALLY HAZARDOUS FOOD in your kitchen.
 1. Use thermometers to check food temperatures during hot and cold holding.
 2. Demonstrate proper thermometer placement. Refer to the Thermometer Placement fact sheet (p. M9-8).
 3. Clean and sanitize the thermometer between uses. Alcohol swabs or sanitizing wiping cloth solutions are acceptable.
 4. Record the temperatures on the Food Temperature Log (p. M9-14).



Module 9 Activity:

Service Phone Numbers



TRAINER: Give participants copies of activity sheet and corresponding fact sheet(s). Have participants complete individually or as a group.

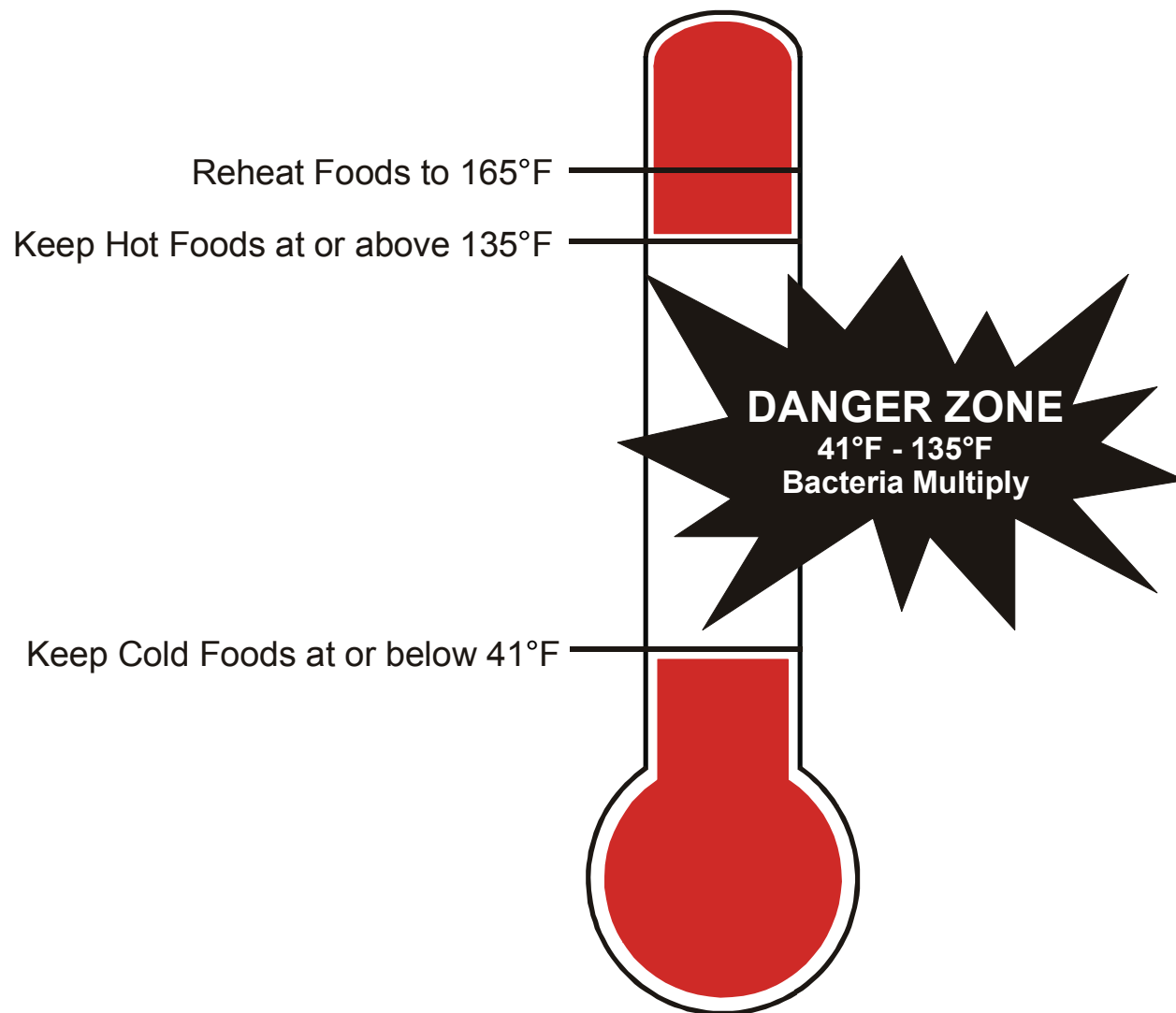
Prepare a plan for servicing hot and cold holding equipment that is not operating properly.

1. Make a list of all of the hot and cold holding equipment in the food establishment.
2. Write the name and phone number for the repair service next to each piece of equipment.
3. Keep this list posted in the kitchen or in a readily available file.
4. Ensure the person in charge knows whom to contact when repairs are needed.



Fact Sheet:

TEMPERATURE DANGER ZONE



WHEN IN DOUBT, THROW IT OUT!

Public Health – Madison and Dane County (06/04)



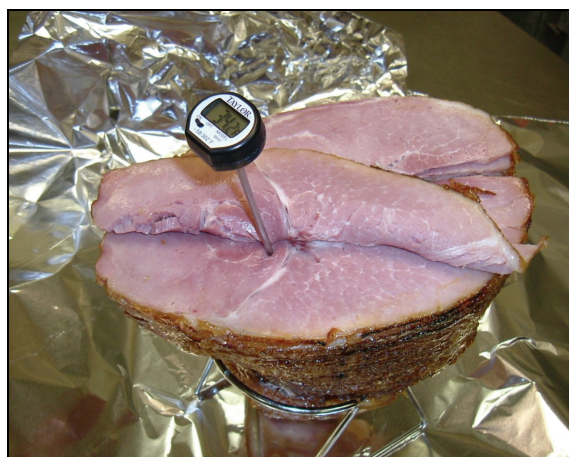
Fact Sheet:

THERMOMETER PLACEMENT

Ham

Insert the thermometer in the **thickest area**, away from bone & fat.

Check the temperature of **irregularly shaped foods** in several places.



Hamburger Patty



For **thin foods** like a hamburger patty, a digital thermometer or thermocouple is best.

Lasagna

Combination Dishes/Casseroles

Check in the center or thickest part.

Check in several places, especially for dishes containing eggs or ground meat and/or poultry.



Public Health – Madison and Dane County (06/04)



TRAINER: Share one or more of the following "Tales from the Kitchen."

Tales from the Kitchen

1. During a routine re-inspection at a local restaurant, the health inspector discovered that the air temperature in the walk-in cooler was 68°F. The circuit breaker for the walk-in cooler was located in a public, common area and was switched off. The health inspector found many of the foods in the unit were above 60°F and had to be discarded. It was later learned that an employee knew that the temperature was too warm and unsuccessfully tried to phone the head chef. It was the food establishment's policy for the head chef to place service calls for repairs, not the other employees. This establishment lost thousands of dollars worth of food.

Solution: There must be a person in charge at all times who has the authority to take action to correct any critical equipment malfunction. In the above case the food had likely been above 41°F for well over 4 hours. Decisions should have been made to identify foods that were at unsafe temperatures and to discard or move it to working refrigerators, as appropriate.

2. An employee heated beans in a large stockpot on the stove before hot holding in the steam table. The steam table container was not large enough for all the beans, so he left the remaining portion in the stockpot on the stove, however he turned the stove off because he did not want the beans to burn. He thought the beans would stay hot. When the health inspector checked the temperature of the beans in the stockpot, the beans were at 110°F.

Solution: At all times during hot holding the food should remain above 135°F to prevent the growth of bacteria. Use a thermometer to verify that your hot holding method is keeping the food at safe temperatures. Develop procedures for temperature monitoring, recording and corrective actions if improper temperatures are found for hot holding.



Module 9 Questions:

Hot and Cold Holding Review



TRAINER: Ask participants to answer the following.

1. At what temperature must hot and cold food be held?

Answer: HOT: At or above 135°F for hot holding

COLD: At or below 41°F for cold holding

2. What are some ways to keep hot and cold foods at proper temperatures?

Answer: HOT: Keep food covered, stir frequently to provide even heating, check food with a thermometer every 4 hours, and use approved hot holding equipment.

COLD: Use smaller portions so food is used quickly, keep food covered, use approved refrigeration equipment, or cool with ice. If using ice for cold holding - make sure ice level is even with product in container (add salt and some water to ice to make the solution colder).

3. What are the corrective actions for foods found at improper temperatures?

Answer: HOT: If hot food is below 135°F for less than 4 hours, reheat food to 165°F and either hot hold at or above 135°F or rapidly cool. If the food is hot held below 135°F for more than 4 hours or you are unsure of the time, discard the food.

COLD: If cold food is above 41°F for less than 4 hours, move it to another refrigeration unit that is at or below 41°F. If the food is held above 41°F for more than 4 hours or you are unsure of the time, discard the food.



Post Quiz Answers

MODULE 9: HOT AND COLD HOLDING

1. What is the temperature Danger Zone?

41°F to 135°F

2. List five potentially hazardous foods.

Potentially hazardous foods need extra care in handling. These are foods that spoil easily and if not handled properly can cause foodborne illness. It is important to keep these foods out of the Danger Zone. Examples include:

Meat	Gravies	Eggs
Poultry	Soups	Milk
Fish	Meat sauces	Tofu
Cooked pasta or rice	Cream-filled baked goods	Cut melons
Cooked vegetables	Custards	
Cooked potatoes	Meat and potato salads	



Module 9 Moving Ahead:

For Managers/Trainers



TRAINER: Do not read aloud. These are your next steps, additional activities and resources.

After the Training

- Have participants sign Training Verification Log (p. 9), a requirement for **SAFE FOOD CREW** Recognition Program.
- Complete the Trainer's Evaluation Form (p. 10), a requirement for **SAFE FOOD CREW** Recognition Program.
- Present participants with Certificate of Completion (p. 12).
- Track all trainings an employee receives on the Employee Attendance Record (p. 13).
- Develop or review procedures for temperature monitoring, recording and corrective actions if improper temperatures are found for hot and cold holding.
- Create and/or post easy-to-use temperature logs for recording temperatures.
- Post the Temperature Danger Zone fact sheet (p. M9-7) and Thermometer Placement fact sheet (p. M9-8) in the kitchen for a quick reference.

Resources

- FDA 2001 Food Code and Wisconsin Food Code: 3-501.11 Frozen Food and 3-501.16, Potentially Hazardous Food, Hot and Cold Holding.
- Video: The Food Protection Video Series: Your Safe Food Training Guide - Vol. 3: Thawing, Cooking, Cooling and Holding Food. University of Florida/Florida Restaurant Association, 1997. *The University of Florida Food Protection Video Series is ideal for training your food service personnel about the most important aspects of food safety. This volume covers the importance of safe thawing, cooking, cooling, and hot and cold holding of food (9:00 min).*

