

Module 7 Overview:

Safe Cooking



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

PARTICIPANTS WILL:

1. Describe potential hazards of eating food that has not been safely cooked.
2. Identify the proper cook temperatures of various animal foods.
3. Describe what to do if foods are found below the safe cooking temperatures.

TIME: 15 minutes

TEACHING LOCATION: Presentation in the dining room
Teaching activity in the kitchen

COPIES REQUIRED:

- Pre and Post Quiz
- Talking Points (p. M7-4)
- Activity: Cooking Temperatures (p. M7-5)
- Activity: Is It Done? (p. M7-6)
- Fact Sheet: Final Cook Temperatures (p. M7-8)
- Fact Sheet: Roast Cooking Temperatures (p. M7-9)

GLOSSARY TERMS:

- HACCP
- PATHOGEN
- RAW ANIMAL FOOD



Pre Quiz

MODULE 7: SAFE COOKING

Fill in the Final Cook Temperatures

Raw shell eggs Eggs cooked for immediate service.	145°F
Fish Including fresh or saltwater fish, crustaceans, and mollusks.	145°F
Meat Including meat from cattle, swine, sheep, goats or other edible animals.	145°F
Ground meats, fish or game animals Including hamburger, ground pork, sausages, gyros, injected meats, meatballs.	
Poultry Including any domesticated bird (chickens, turkeys, duck, geese, guinea) & migratory waterfowl, game birds or squab (such as pheasant, partridge, quail, grouse or guineas).	
Stuffed fish, meat, poultry, pasta Any raw meat that is stuffed, or anything stuffed with raw meat.	165°F
Commercially precooked foods Foods that have been previously cooked and packaged by a commercial food processing facility.	
Plant Foods for Hot Holding Rice, pasta, vegetables cooked and hot held	135°F
Reheating leftovers Foods that have been previously cooked and cooled should be reheated to 165°F within 2 hours.	

The temperatures must be reached and held for at least 15 seconds.



Module 7 Presentation:

Safe Cooking



TRAINER: Read aloud to prepare participants for training.

Today We Are Learning About Safe Cooking. 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?

RAW ANIMAL FOODS such as beef, pork, poultry, fish, and eggs can contain disease-causing germs, also called PATHOGENS. PATHOGENS may already be in the food by the time it comes to your food establishment. Some examples of common PATHOGENS are *E.coli* in ground beef or *Salmonella* in poultry. Eating foods before they are cooked to a safe temperature may result in someone becoming very sick. By cooking RAW ANIMAL FOODS to safe temperatures, disease-causing germs can be reduced to safe levels or killed.



TRAINER: Read aloud.

What's the Law?

Cook RAW ANIMAL FOODS to the following temperatures:

165°F Chicken, turkey, or waterfowl
Stuffed chicken, fish, meat, or pasta

155°F Ground meats, fish or game animals

145°F Meat: beef, pork, or lamb
Fish
Raw shell eggs



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

Talking Points

- HACCP: Hazard Analysis Critical Control Point. A self-inspection program that helps food employees identify critical control points where food is at risk of causing illness. Cooking foods to safe temperatures is an example of a critical control point.
- PATHOGEN: Bacteria or viruses that cause disease.
- RAW ANIMAL FOOD: Uncooked animal foods such as eggs, fish, meat, chicken, and other foods containing these RAW ANIMAL FOODS.
- A Kansas State University study showed that 40% of hamburgers “brown in the middle” were actually below the required temperature of 155°F that kills *E. coli* bacteria.
- You cannot tell if a food is fully cooked by smelling it or looking at it. Checking the temperature with a metal stem thermometer is the only way to guarantee safety.
- Final cook temperatures vary for different types of animal foods.
- When using a microwave for cooking the food should be stirred, if possible, during cooking, and allowed to stand covered for 2 minutes.
- Plants foods, like rice, pasta, or vegetables, for hot holding must be cooked to at least 135°F.
- When food is found to be below safe cooking temperatures:
 - Continue to cook it until it reaches the required temperature.
 - Check the cooking equipment for proper operation.
 - Verify that the product was made according to the recipe or procedure.
 - Check the accuracy of your thermometer and calibrate if needed.



Module 7 Activity:

Cooking Temperatures



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

List food items from your own menu into the spaces on the left. Choose the correct safe cooking temperatures for each food item from the list on the bottom. The temperatures may be used more than once. Use the Final Cook Temperature fact sheet (p. M7-8) and Roast Cooking Temperature fact sheet (p. M7-9) to help you.

	Menu Item	Answer
1.	Hamburger _____	155°F _____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

Temperatures Choices:

135°F
145°F
155°F
165°F

Think about the following:

1. What is the main ingredient of each item?
2. Does the menu item contain raw meat?
3. Is the item made with pre-cooked meat?
4. Is the item a roast?
5. Does the dish contain ground meat?



Module 7 Activity:

Is It Done?



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

Check a box to answer if the example is safely cooked. Use the Final Cook Temperatures fact sheet (p. M7-8) and Roast Cooking Temperatures fact sheet (p. M7-9) to help you.

Cooking Example – Is it Safely Cooked?	Yes	No	Not enough info
1. Deep fried chicken breast cooked to 165°F.			
2. Hamburger is cooked until it looks brown in the middle.			
3. Commercially precooked ham for hot buffet cooked to 135°F.			
4. Beef roast cooked to 140°F.			
5. Carrots for hot holding heated to 130°F.			
6. Breakfast sausage for the hot breakfast buffet is cooked in the microwave to 155°F.			
7. Pork tenderloin baked until it reaches 145°F.			
8. Whole turkey breast reaches 165°F.			



Module 7 Activity:

Is It Done? Answer Key



TRAINER: Use to discuss participants' answers.

Cooking Example – Is it Safely Cooked?	Yes	No	Not enough info
1. Deep fried chicken breast cooked to 165°F. <i>Chicken and other poultry must be cooked to 165°F.</i>	X		
2. Hamburger is cooked until it looks brown in the middle. <i>Using the color of the meat as an indicator is not always accurate. Meat that appears brown isn't necessarily 155°F.</i>			X
3. Commercially precooked ham for hot buffet cooked to 135°F. <i>Commercially precooked foods only need to be cooked to 135°F for hot holding.</i>	X		
4. Beef roast cooked to 140°F. <i>It depends on how long the beef roast has been cooking. Refer to the Roast Cooking Temperature fact sheet (p. M7-9).</i>			X
5. Carrots for hot holding heated to 130°F. <i>Vegetables are that is cooked for hot holding must be heated to at least 135°F.</i>		X	
6. Breakfast sausage for the hot breakfast buffet is cooked in the microwave to 155°F. <i>All RAW ANIMAL FOODS cooked in the microwave must be cooked to 165°F.</i>		X	
7. Pork tenderloin baked until it reaches 145°F. <i>Pork must be cooked to a minimum 145°F.</i>	X		
8. Whole turkey breast reaches 165°F. <i>The minimum cooking temperature of turkey breast is 165°F.</i>	X		



Fact Sheet:

FINAL COOK TEMPERATURES

USE A THERMOMETER TO CHECK THE INTERNAL TEMPERATURE OF THE FOOD YOU ARE COOKING

Raw shell eggs Eggs cooked for immediate service.	145°F
Fish Including fresh or saltwater fish, crustaceans, and mollusks.	145°F
Meat Including meat from cattle, swine, sheep, goats or other edible animals.	145°F
Ground meats, fish or game animals Including hamburger, ground pork, sausages, gyros, injected meats, meatballs.	155°F
Poultry Including any domesticated bird (chickens, turkeys, duck, geese, guinea) & migratory waterfowl, game birds or squab (such as pheasant, partridge, quail, grouse or guineas).	165°F
Stuffed fish, meat, poultry, pasta Any raw meat that is stuffed, or anything stuffed with raw meat.	165°F
Commercially precooked foods Foods that have been previously cooked and packaged by a commercial food processing facility.	135°F
Plant Foods for Hot Holding Rice, pasta, vegetables cooked and hot held	135°F
Reheating leftovers Foods that have been previously cooked and cooled should be reheated to 165°F within 2 hours.	165°F

The temperatures must be reached and held for at least 15 seconds.

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



Fact Sheet:

ROAST COOKING TEMPERATURES

Whole beef roasts and pork roasts can be safely cooked using one of the following time and temperature combinations

130°F for 112 minutes
131°F for 89 minutes
133°F for 56 minutes
135°F for 36 minutes
136°F for 28 minutes
138°F for 18 minutes
140°F for 12 minutes
144°F for 5 minutes
145°F for 4 minutes
151°F for 54 seconds
155°F for 22 seconds
158°F for 0 seconds

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. In 1993, over 700 people got sick and 4 children died from eating undercooked ground beef contaminated with *E. coli* bacteria at a restaurant chain in Washington State. The restaurant chain lost over 100 million dollars as a defendant in multiple lawsuits.

Solution: The restaurant chain worked hard to change their hamburger cooking procedures and was the first company in the restaurant industry to use a HACCP-based food safety system. This restaurant chain now is considered a leader in food safety and a model by the U.S. Department of Agriculture. This landmark case changed hamburger cooking awareness and procedures for all Americans.

2. A sanitarian performed an inspection at a well-known, fast food establishment, and noticed that the hamburgers were not reaching the final required minimum cooking temperature of 155°F. The employees were using the same equipment, timers and procedures that they had always used and had worked fine in the past. Apparently, the grill had recently been serviced, and was improperly calibrated.

Solution: Even though this establishment had set procedures in place that have worked in the past, procedures must be routinely verified by checking food temperatures to ensure their equipment is functioning properly.



Module 7 Questions:

Safe Cooking Review



TRAINER: Ask participants to answer the following.

1. Describe potential hazards of eating food that has not been safely cooked.

Answer: Eating undercooked foods can cause foodborne illness such as *E. coli* or *Salmonella*.

2. Describe the best way to tell if a food has been cooked to a safe temperature.

Answer: Use an appropriate thermometer to check final cooking temperatures. Meat that “looks” or “feels” done is not necessarily safely cooked.

3. What should you do if your food has not reached the safe cooking temperature?

Answer: Continue to cook it until it reaches the proper temperature.

4. What is the safe cooking temperature for pork, hamburger, and chicken?

Answer: Pork 145°F
Hamburger 155°F
Chicken 165°F



Post Quiz

MODULE 7: SAFE COOKING

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Post Quiz Answers

MODULE 7: SAFE COOKING

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Module 7 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).
- Incorporate safe cook temperatures into your recipes or written procedures.
- Develop or review procedures for temperature monitoring, recording and corrective actions if improper temperatures are found.
- Create and/or post easy-to-use temperature logs for recording temperatures.
- Post the Final Cook Temperatures fact sheet (p. M7-8) and Roast Cooking Temperatures fact sheet (p. M7-9) in the kitchen for a quick reference.

Resources

- FDA 2001 Food Code and Wisconsin Food Code: 3-401.11, Raw Animal Foods; 3-401.12, Microwave Cooking; 3-401.13, Plant Food Cooking for Hot Holding.
- USDA, Food Safety and Inspection Service Fact Sheets, http://www.fsis.usda.gov/fact_sheets/index.asp
- Food Safety Training and Education Alliance, Food Safety Training Tools, <http://www.fstea.org/resources/tools.html>