Do:

Introduce yourself, let audience know your name and relevant background

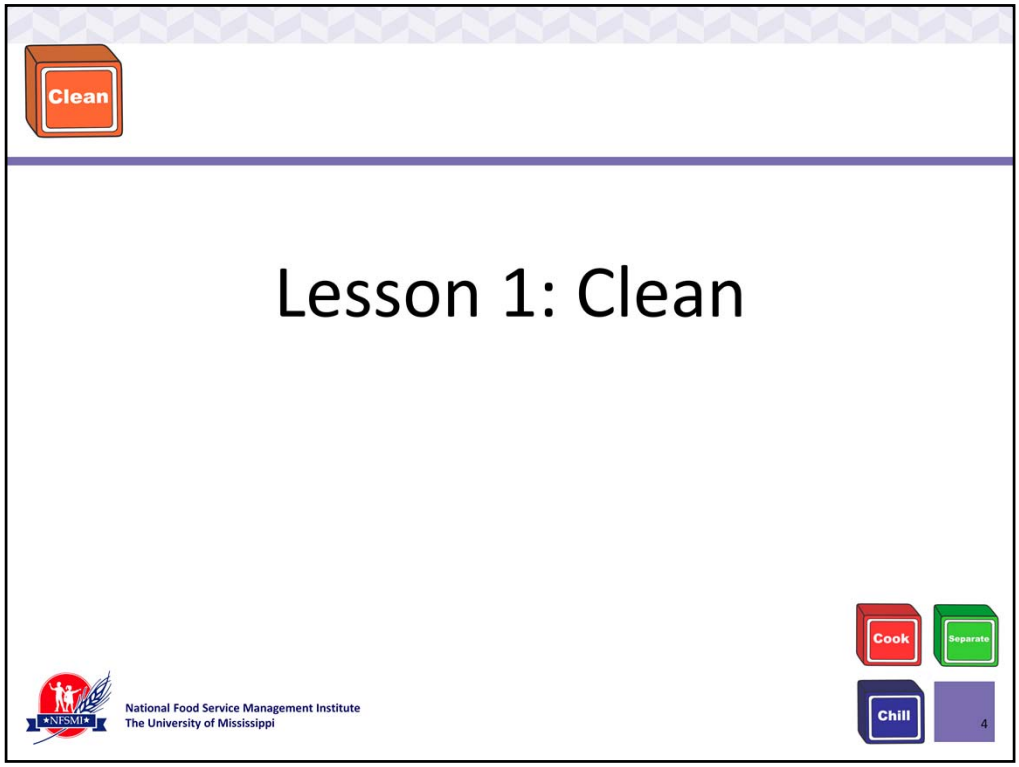
[Cover any housekeeping details, set up a parking lot (Post It note poster sheet) for questions that may come up that the trainer does not know the answer.]

"Welcome to the Serving Safe Food in Child Care training. The information you will receive today will help you to implement safe food serving practices in your child care facility. This training was originally developed by the National Food Service Management Institute and has been adapted to fit the training time offered today."

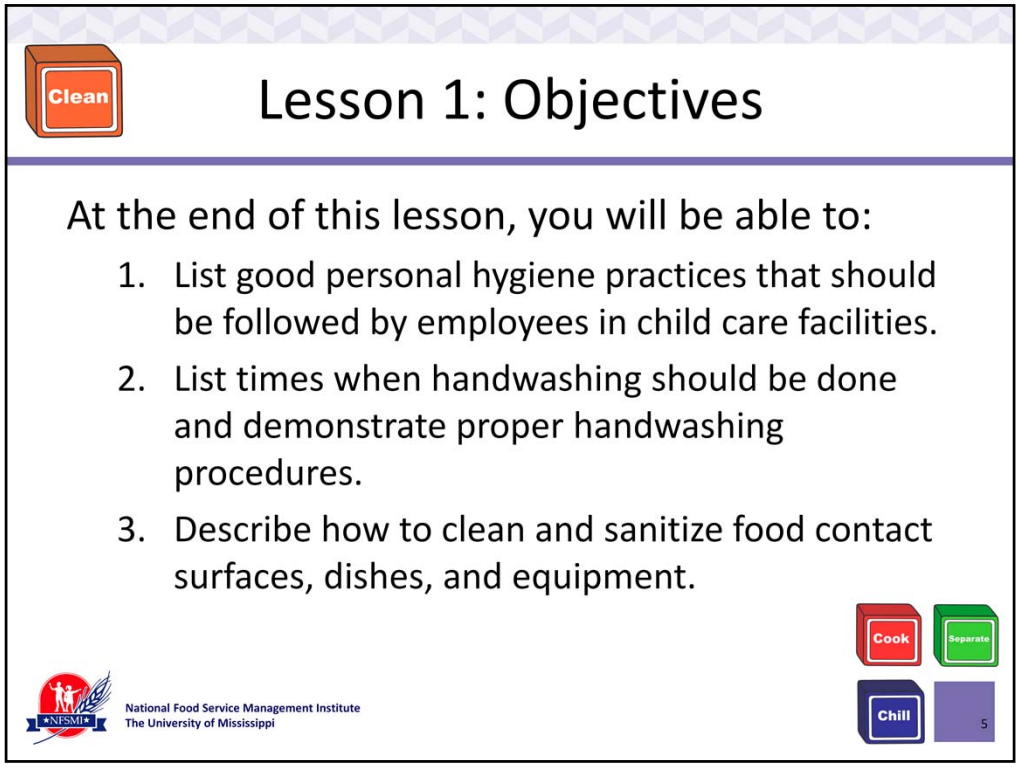
Lessons topics covered today will include;
Clean- In this topic area we will cover good personal hygiene practices, proper hand washing and sanitizing procedures that should be followed by employees in child care facilities .
Separate- We will describe ways to avoid food contamination, list methods of contamination and discuss techniques for storing food and chemicals.
Cook- In this topic area we will demonstrate and discuss how to use and calibrate a thermometer and in addition learn the appropriate temperatures for cooking and reheating food.
Chill-Here we will learn the temperature danger zone for food. Describe methods for storing, preparing, cooling and holding food.

Lets start by taking a pre assessment to test your knowledge of safe foods in child care. We will take the assessment and answer questions, as we go through the chapters, pay close attention to the answers you had incorrect! This way as we go through the training you can pay closer attention to the material you may need to learn more about.

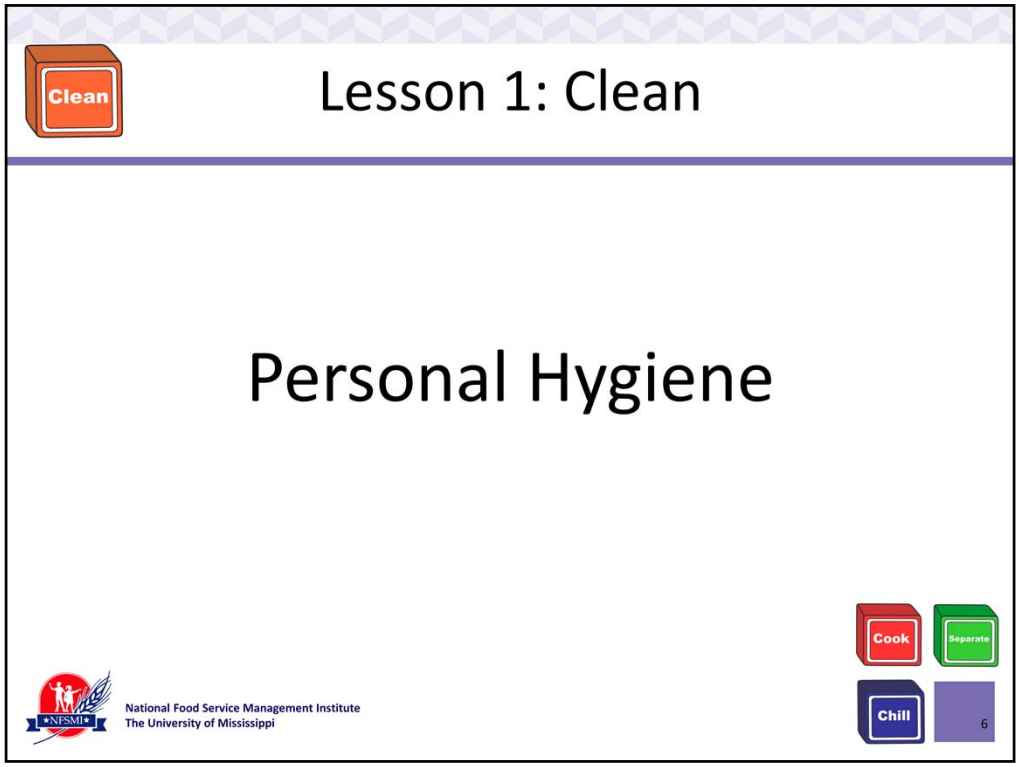
Do:
Instructor to hand out pre assessments**. Allow 5 minutes for attendees to take assessment. Go over answers provided on answer sheet. Remind participants to pay close attention to the topic area related answers they missed in the assessment as we go through the training.**



One of the fundamental requirements of any foodservice operation is cleanliness–not only of the facility but of the employees. Personal hygiene and hand washing are important procedures for employees to follow. In addition, employees must know how to appropriately clean and sanitize food contact surfaces, dishes, and equipment.

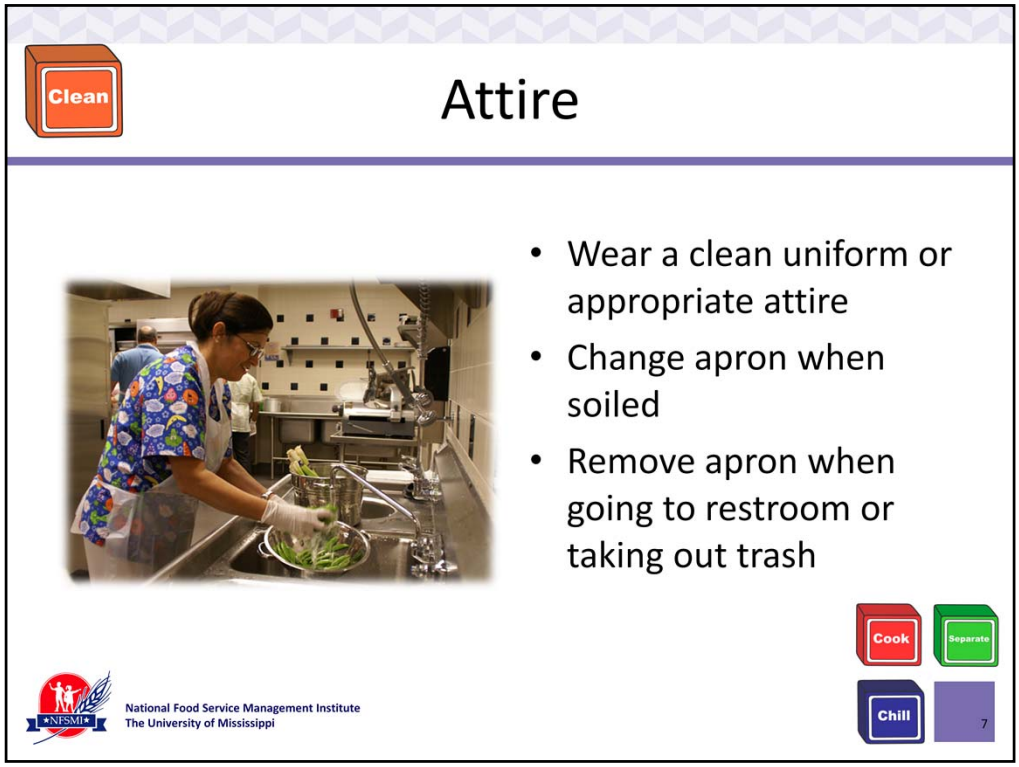


At the end of this lesson, you will be able to: List good personal hygiene practices that should be followed by employees in child care facilities, list times when hand washing should be done, demonstrate proper hand washing procedures and last but not least, describe how to clean and sanitize food contact surfaces, dishes, and equipment.



Good personal hygiene is a basic requirement for implementing a food safety program. All foodservice employees must follow the standard operating procedures for personal hygiene that are written for their foodservice operation. Handouts providing an example of Standard Operating Procedures for personal hygiene in your child care center will be available at the end of the training for those who may need them.

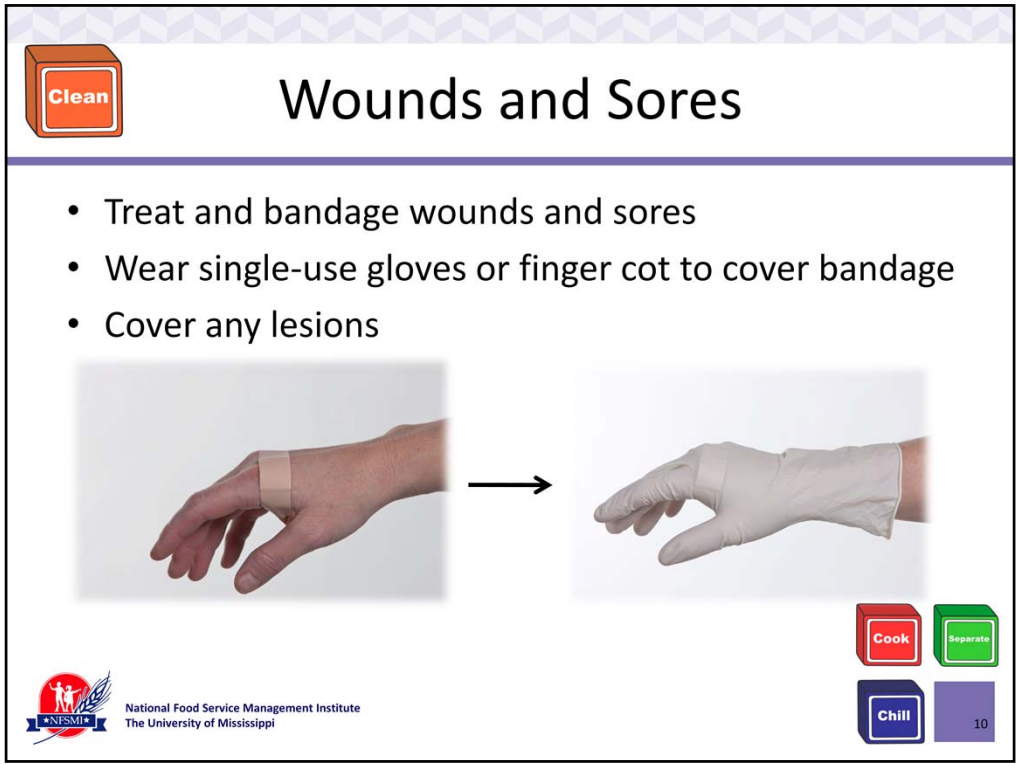
Research conducted by the U.S. Food and Drug Administration shows that poor personal hygiene practices often are followed in retail foodservice establishments, which includes elementary schools, hospitals, nursing homes, and restaurants. Poor personal hygiene is a risk factor that must be controlled in all types of foodservice operations. Personal hygiene covers; attire, fingernails, jewelry, wounds and sores, hair and tasting food.



Proper attire includes; wearing a clean uniform or other approved attire when arriving to work, changing your apron after it is soiled and removing your apron before going to the restroom or garbage.

Fingernails should be kept clean and filed and not have any polish or acrylic applied to them.

Only wear a solid wedding band without stones or grooves. For the use of medical information jewelry, follow the recommendations from the state or local public health department.

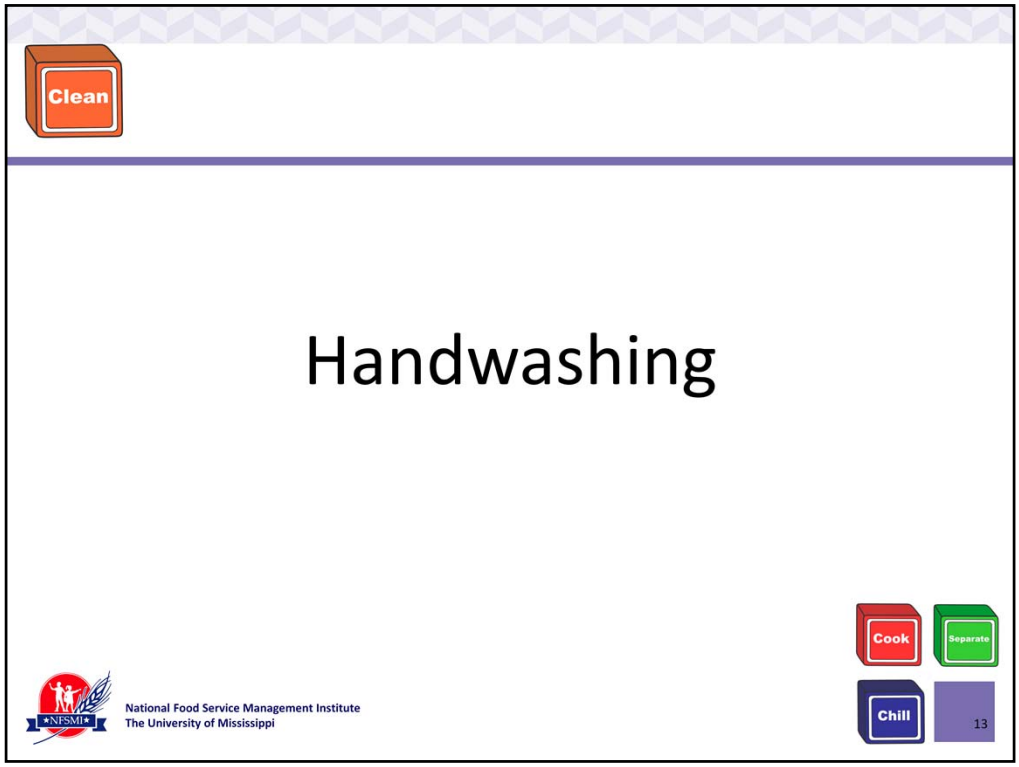


Treat and bandage wounds and sores, wear single-use gloves or finger cot to cover bandage and cover any lesions.

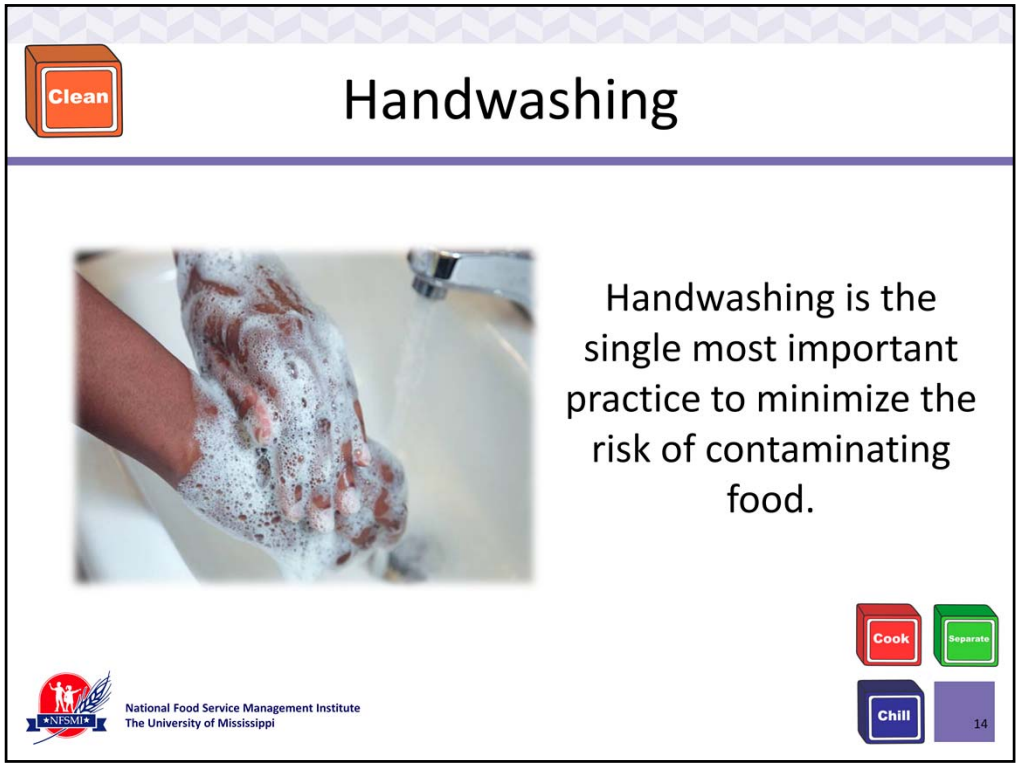
Good hygiene as it relates to hair includes; keeping your hair clean and pulling long hair back and restraining it with suitable hair restraints.

To taste food without worry of contamination one should-

1. Place a small amount of food into a separate container
2. Step away from exposed food and food contact surfaces for tasting
3. Use a clean teaspoon to taste food
4. Never reuse spoon that has been used for tasting
5. Wash hands immediately after tasting

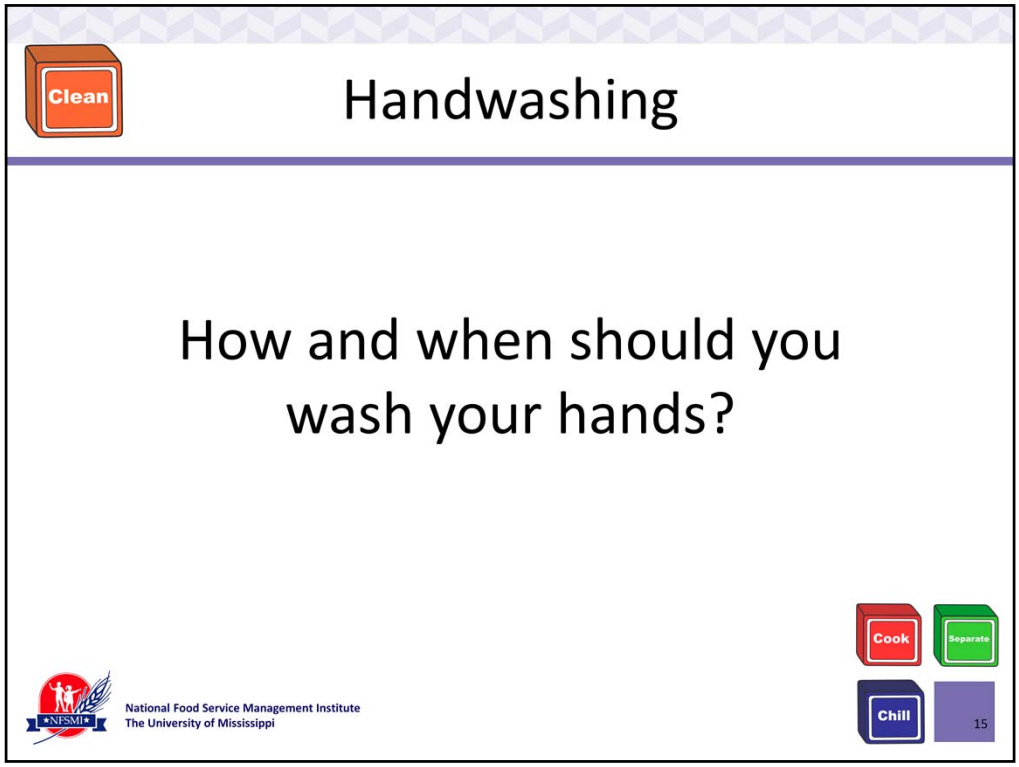


We have reviewed many good personal hygiene practices that should be followed by foodservice and child care employees. One important personal hygiene practice we have not talked about is hand washing. Hand washing is the single most important practice in any foodservice operation. Child nutrition employees can improve the safety of the food they serve by washing their hands frequently, correctly, and at the appropriate times.

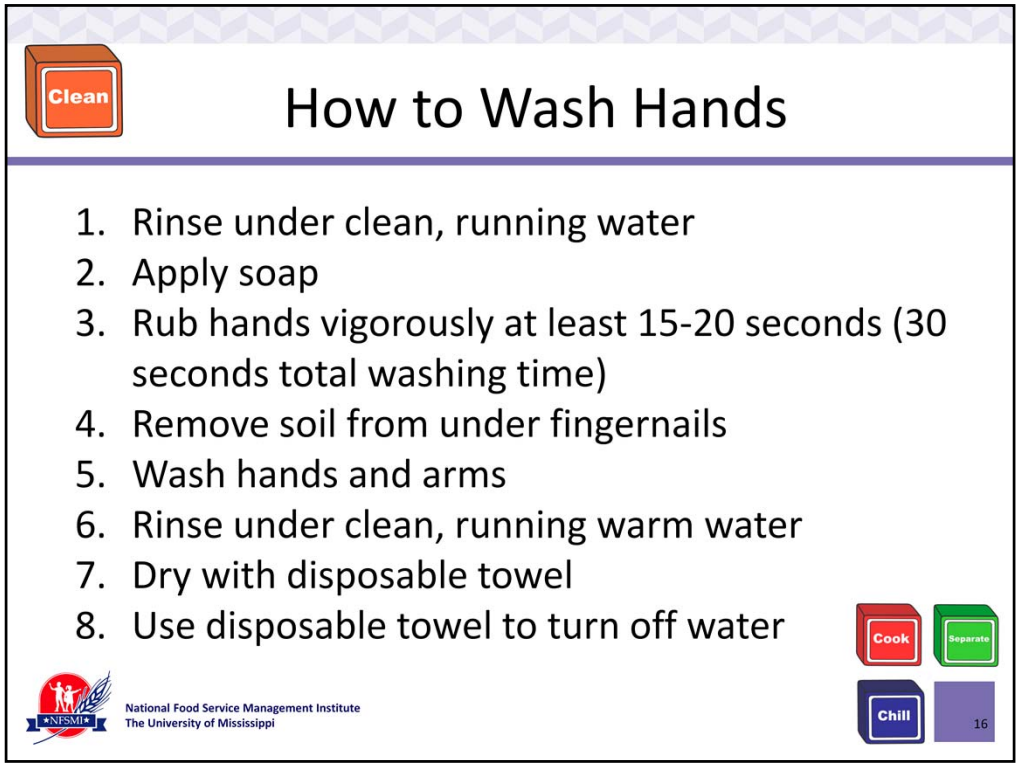


Hand washing is the single most important practice that foodservice and child care employees can follow to minimize the risk of contaminating food. Foodborne illnesses are transmitted by food handlers that contaminate food and food contact surfaces.

Individuals who handle food when they have a foodborne illness, gastrointestinal illness, infected lesion, or are around someone who is ill can pass along those illnesses. Individuals can simply touch a surface that is contaminated with a bacteria or virus and pass that along to others. Hand washing minimizes the risk of passing along bacteria or viruses that can cause foodborne illnesses. Follow state or local health department requirements.



Lets now discuss the how and when of washing your hands!



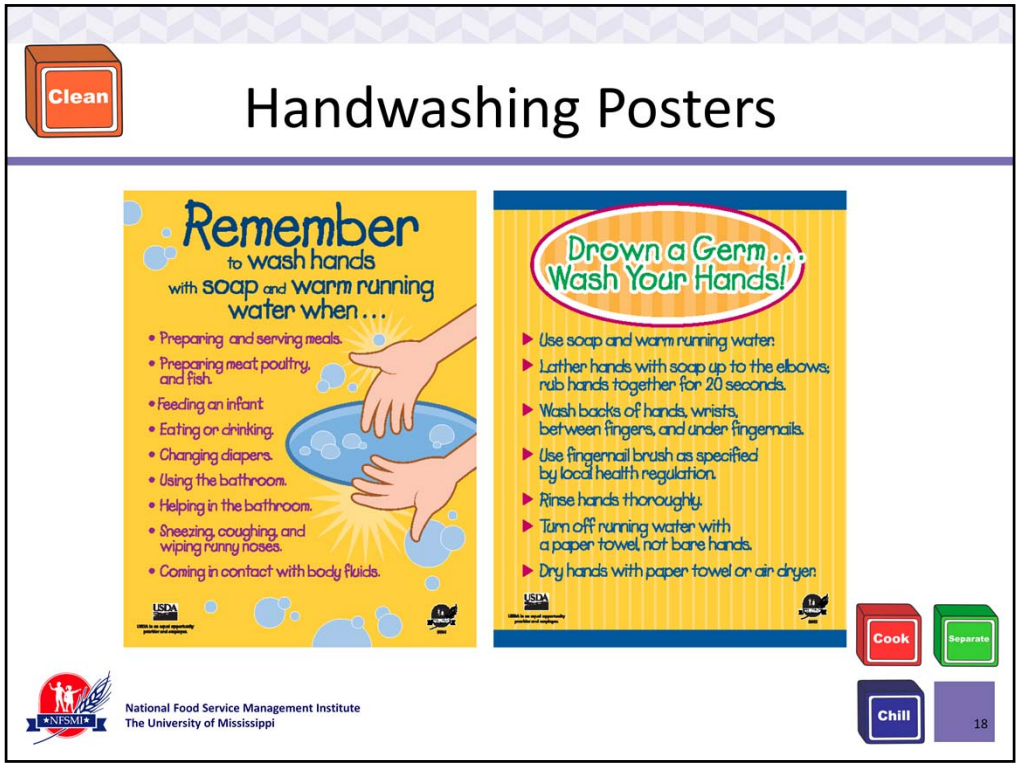
The correct way to wash hands before food preparation is to

1. Rinse under clean, running water
2. Apply soap
3. Rub hands vigorously at least 15-20 seconds (30 seconds total washing time)
4. Remove soil from under fingernails
5. Wash hands and arms
6. Rinse under clean, running warm water
7. Dry with disposable towel
8. Use disposable towel to turn off water

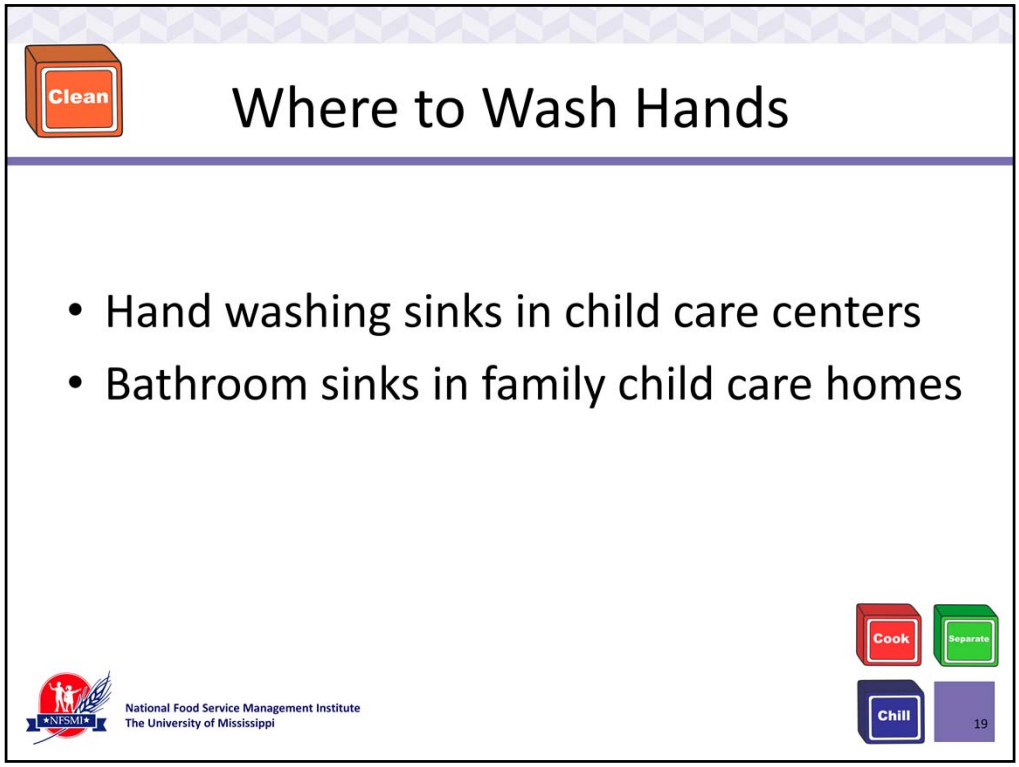
Now lets take some time for a fun activity. Let's split into two groups. Everyone take a small amount of the "Glo Germ" and spread it evenly on the front and back of hands. Now- group 1 go and wash for 5-10 seconds . Group 2 can go wash for 20 seconds, remember to count! Lets discuss the germy difference and why just a few extra seconds of hand washing can make a difference.

Do:

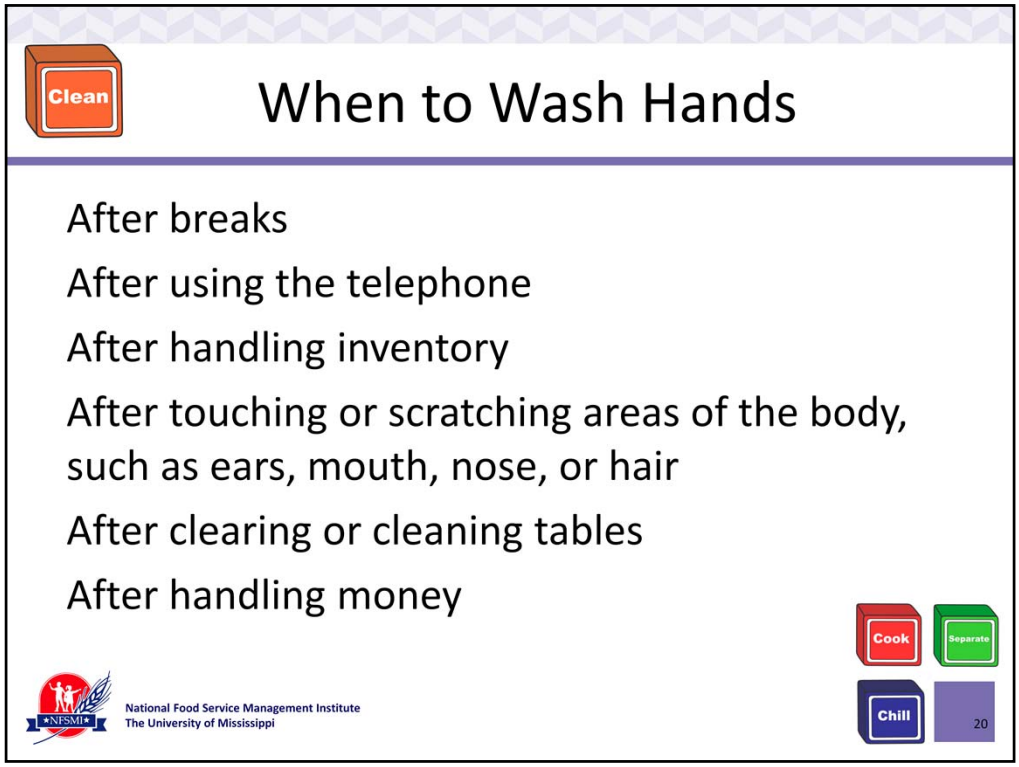
After the groups return have them hold their hands under the backlight to see the germs left. Compare the two groups hands. Discuss importance of proper hand washing.



Hand washing posters are a nice additional reminder to your child care center food service workers. These colorful posters are available at the end of the session.



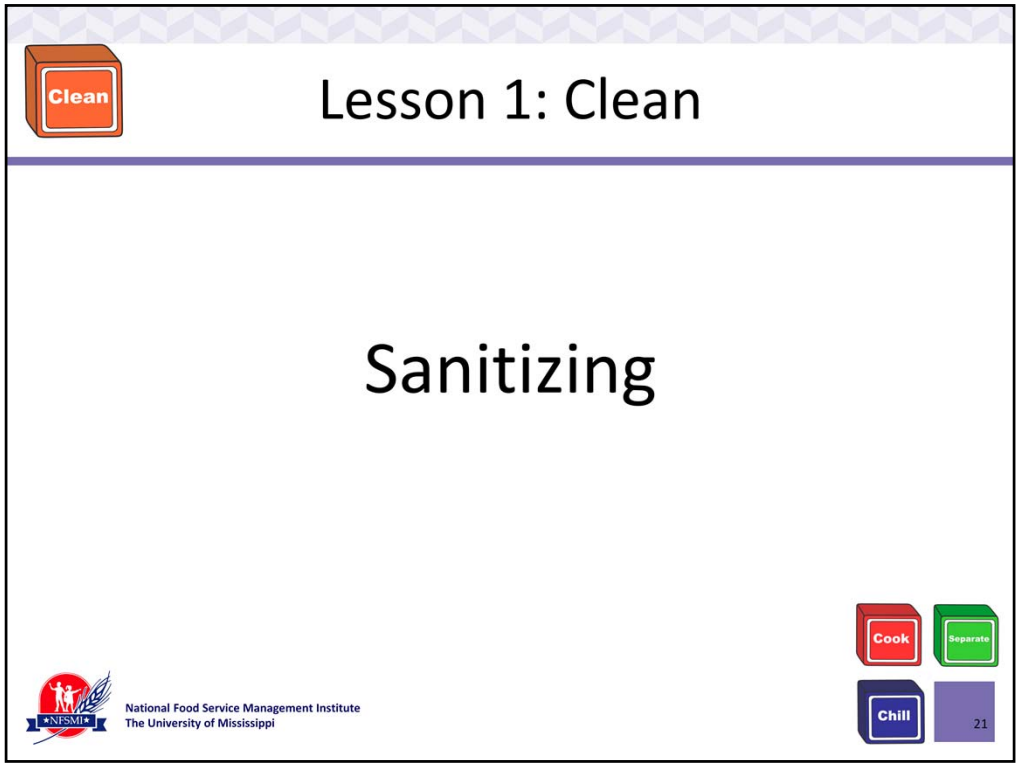
The correct place to wash hands is in hand washing sinks in child care centers and bathroom sinks in family child care homes.



A few examples of when to wash your hands are; before beginning food preparation, before putting on disposable gloves, before serving customers, after eating, drinking, smoking, or chewing tobacco or gum, after handling inventory, after handling raw food. A few more are even listed on the screen. There are lots of times to wash hands! Can you think of any more?

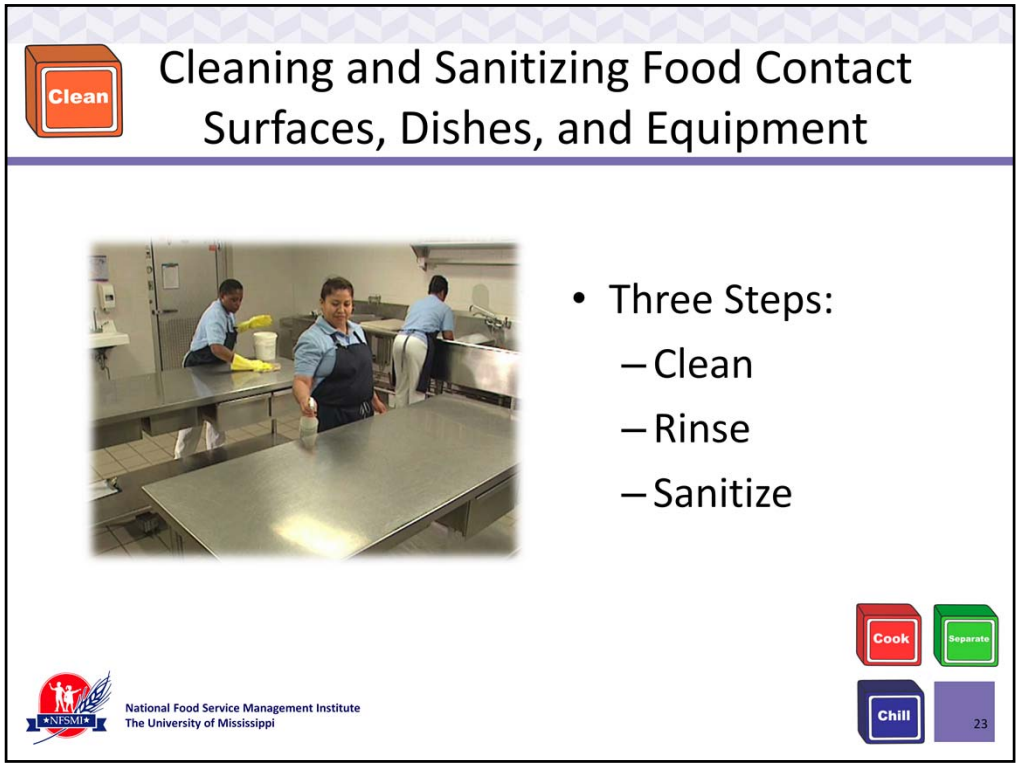
Do:

Let the participants list a few more, note them on the flip chart.



Research conducted by the U.S. Food and Drug Administration shows that contaminated equipment is a risk factor for food safety in retail foodservice establishments, which include elementary schools, hospitals, nursing homes, and restaurants. This is an area in which a high number of foodservice operations did not follow appropriate practices.

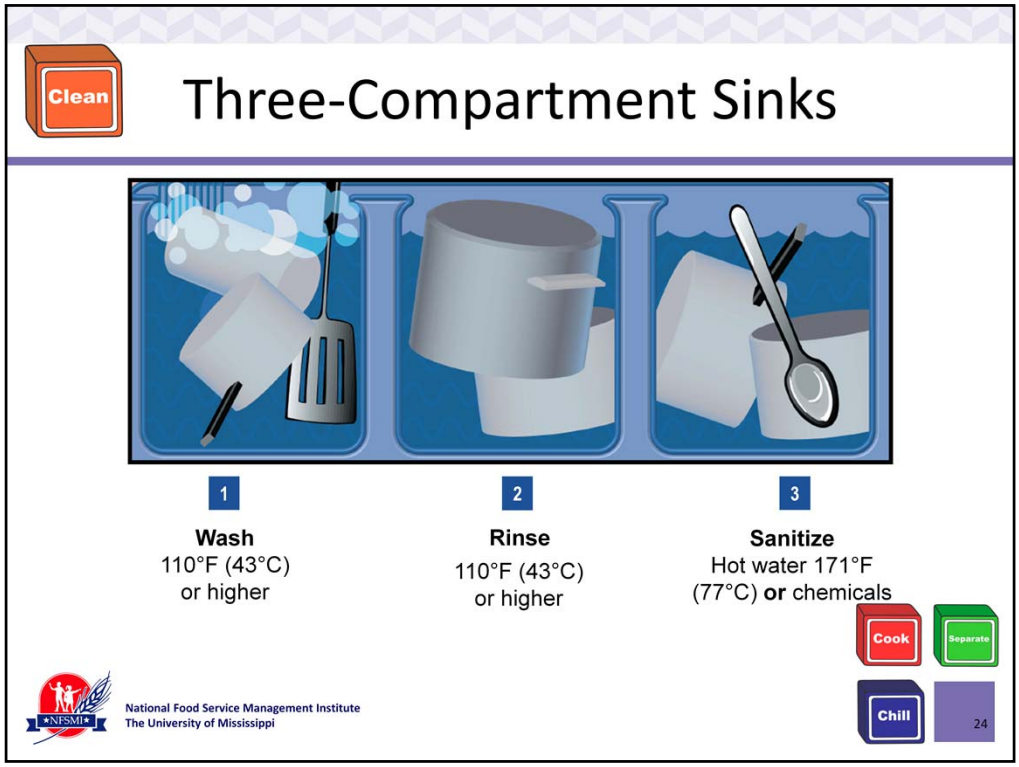
Cleaning and sanitizing are used to reduce the opportunity for bacteria and viruses to contaminate food. Foodservice employees who follow proper cleaning and sanitizing practices reduce the risk of cross contamination that can lead to foodborne illness.



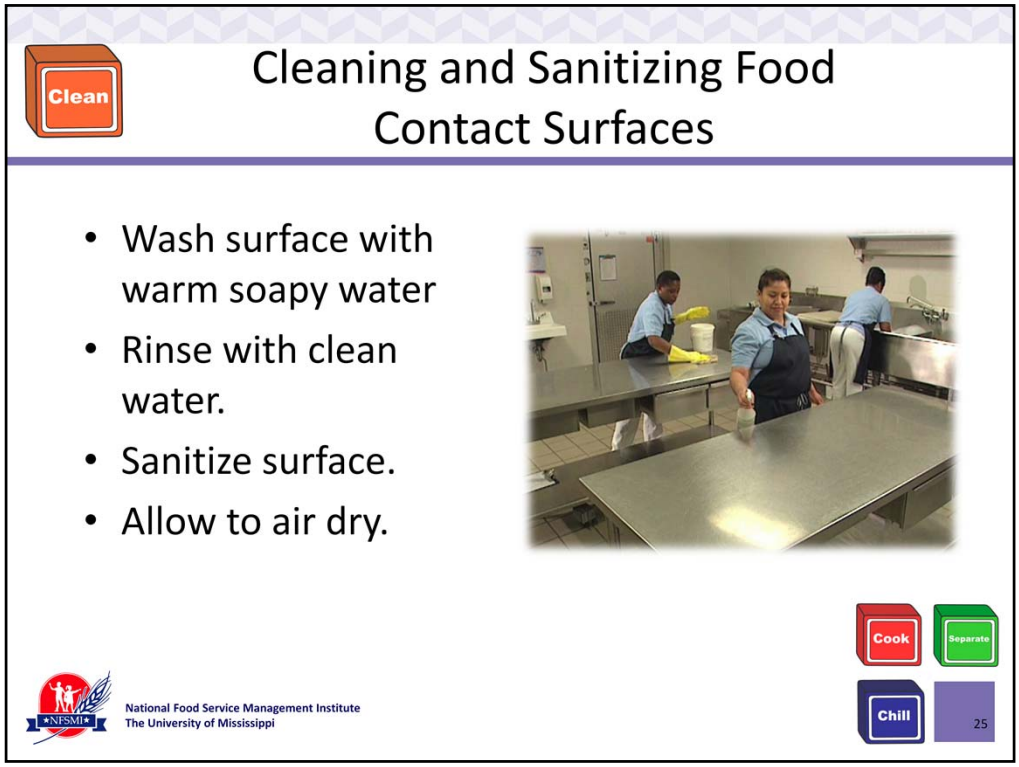
The first step is cleaning surfaces with warm soapy water to remove all debris and grease film. The water should be about 110 °F and the quantity of detergent should be based on the manufacturer's instructions. Prior to cleaning, scraping and rinsing may be needed. You may even want to pre-soak flatware and heavily soiled items. Cleaning may require vigorous rubbing with a brush or cloth to loosen and remove any visible food particles. Check wash temperatures periodically.

The second step is rinsing with warm, clean water to remove all of the detergent. Clean, hot water (110 °F) should be used to rinse away traces of food, debris, and detergent. The water should be changed if it gets too cold or shows signs of food, debris, or detergent. If there is detergent on the surface, the next sanitizing step will not be effective.

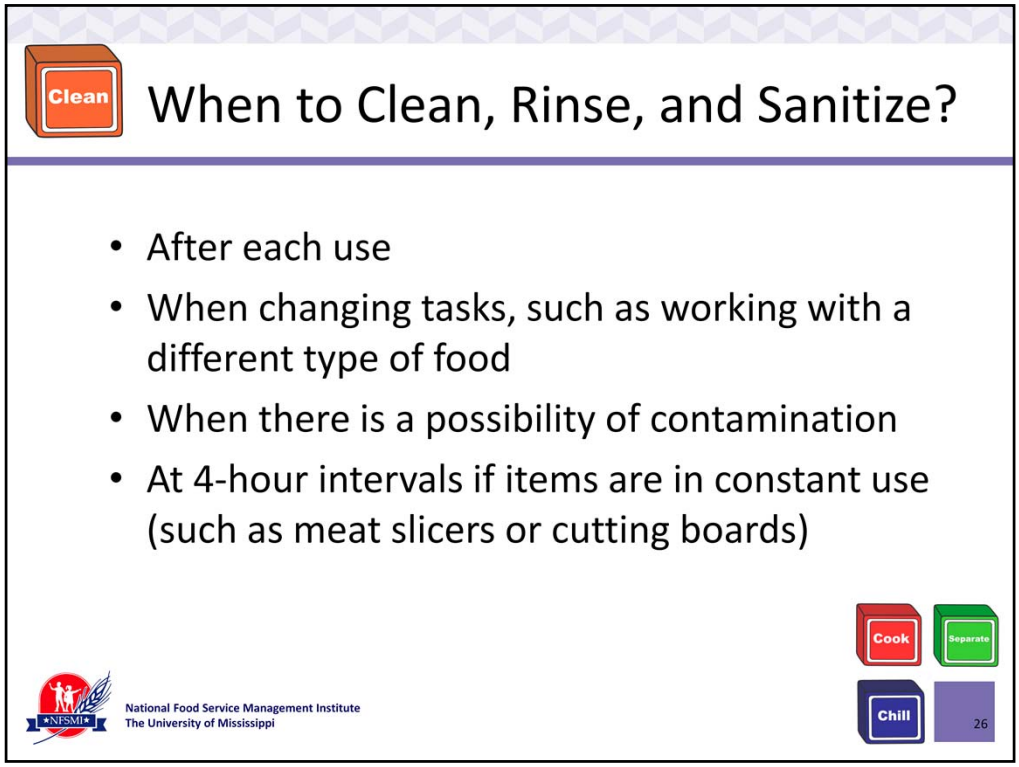
The third step is sanitizing. Sanitizing can be done with a chemical sanitizing solution or with hot water. If you use a chemical sanitizing solution, the concentration or parts per million (ppm) needs to be at the proper level recommended by the manufacturer and should be tested with test strips. Sanitizing solutions need to be changed when they are visibly dirty or when concentrations drop below the required level. If you use hot water, the water should be maintained at 171 °F or above. Items should be submersed in the hot water at least 30 seconds for adequate sanitizing. When using hot water to sanitize, it is necessary to do a secondary check of dish machine temperatures using temperature sensitive strips. If you are sanitizing dishes in a sink, chemical sanitizers typically are used.



This slide provides a visual example of the three step process of sanitizing kitchen items in a three compartment sink. Please note the water temperature must be at 110 or above. It is important to monitor the water visually in each sink to make sure it is clean and free of food debris. Take the water temperature in the first compartment of the sink by using a calibrated thermometer. Test sanitizer concentration in the third sink using appropriate test strips if chemical sanitizing is used. Test temperature of water in the third sink with a calibrated thermometer if hot water sanitizing is used.

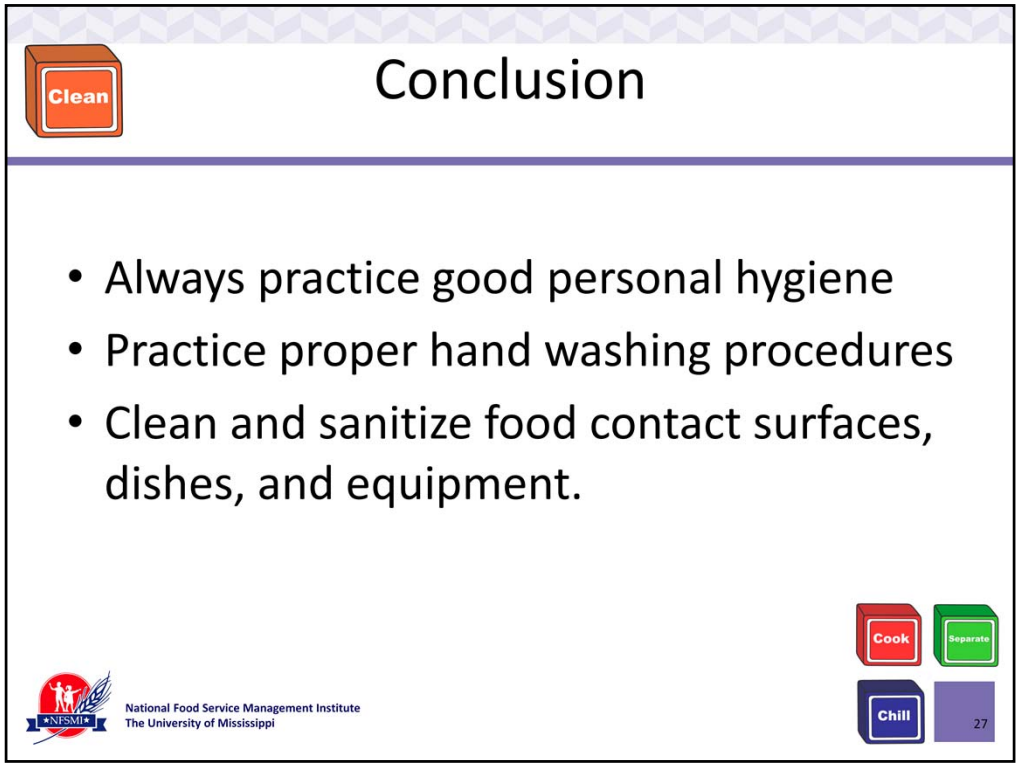


Wash, rinse, and sanitize food contact surfaces using the following procedures: First- Wash surface with detergent solution to clean. Then- Rinse surface with clean water to remove debris and detergent. Follow with -Sanitizing surfaces using a sanitizing solution mixed at the concentration specified on the manufacturer's label. Finally- Allow items to air dry

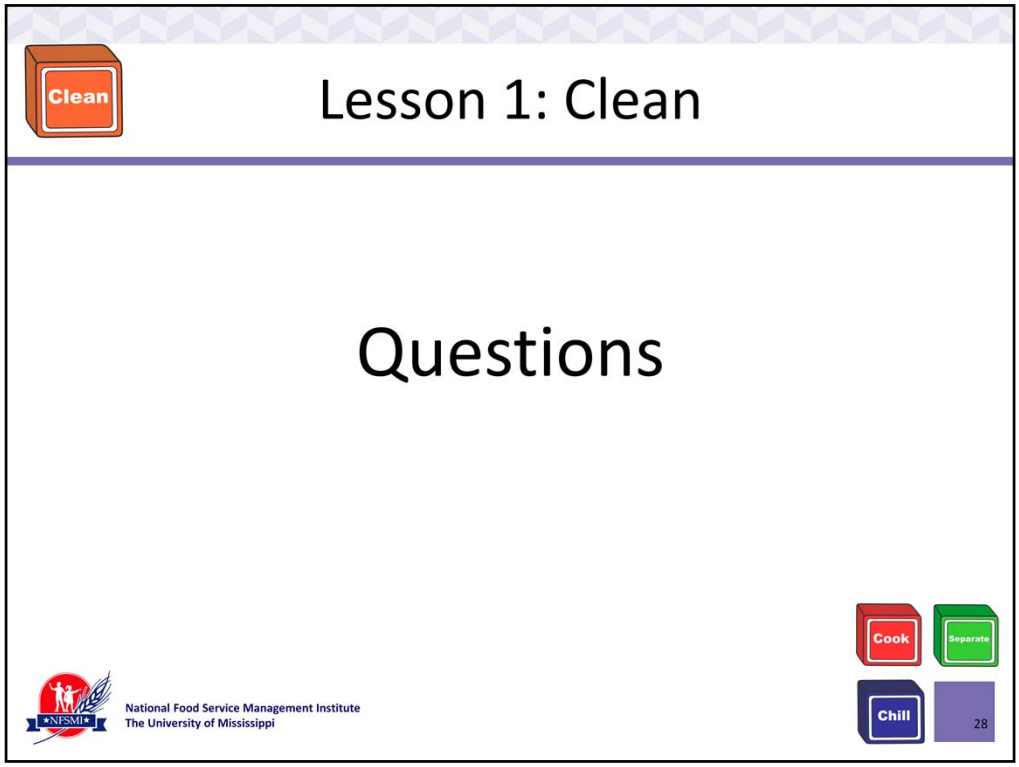


When should you clean, rinse and sanitize food preparation areas and other noted food service items?

Before each use. Between uses when preparing ready-to-eat foods and raw animal foods such as eggs, fish, meat, and poultry. Any time contamination occurs or is suspected. At 4-hour intervals if items are in constant use (such as meat slicers or cutting boards)



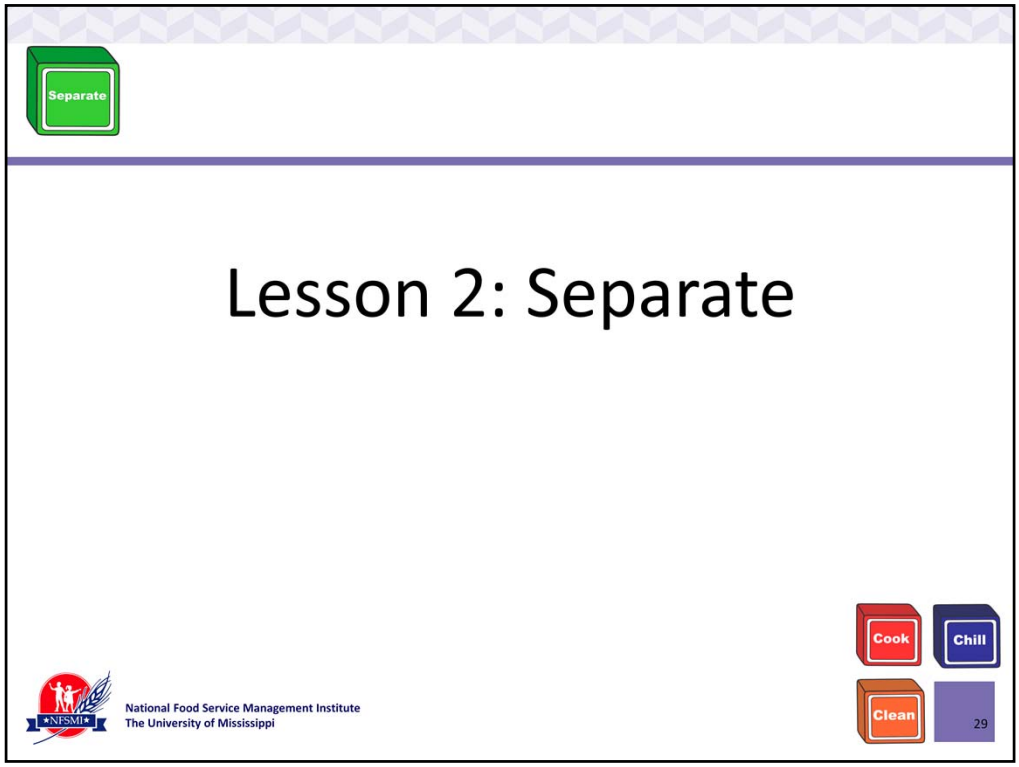
To conclude this section remember; Always practice good personal hygiene, practice proper hand washing procedures, clean and sanitize food contact surfaces, dishes, and equipment.



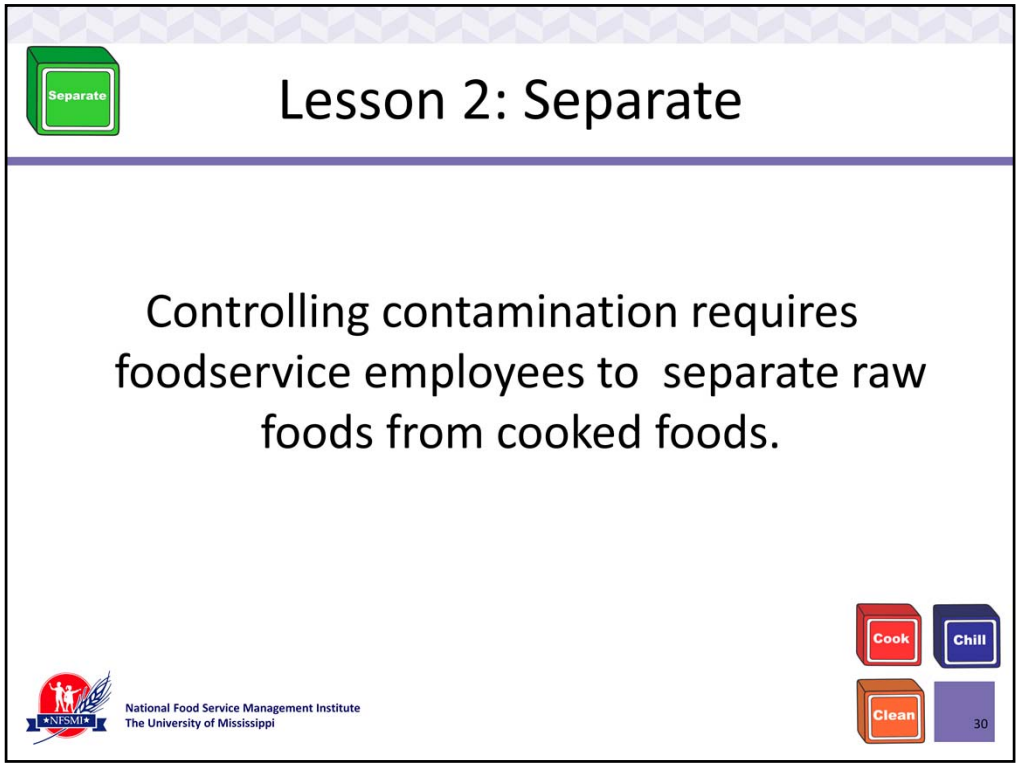
Does anyone have any questions in regard to the information provided in the Clean section?

Do:

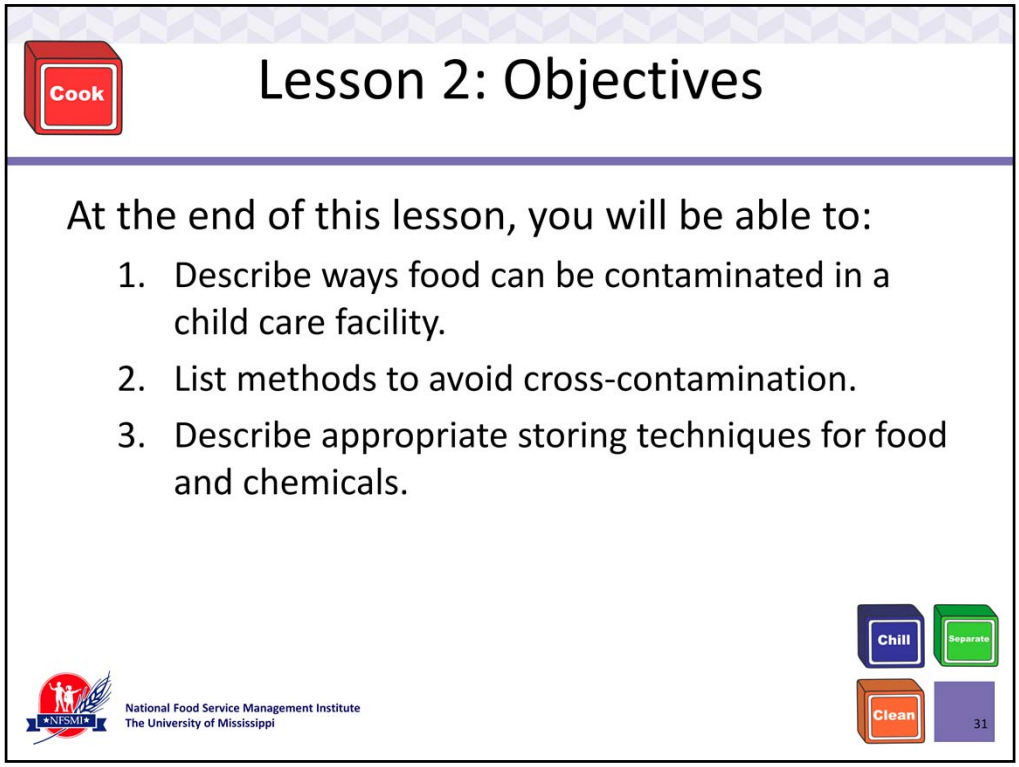
Allow time for questions write any good questions and their answers on the flip chart.



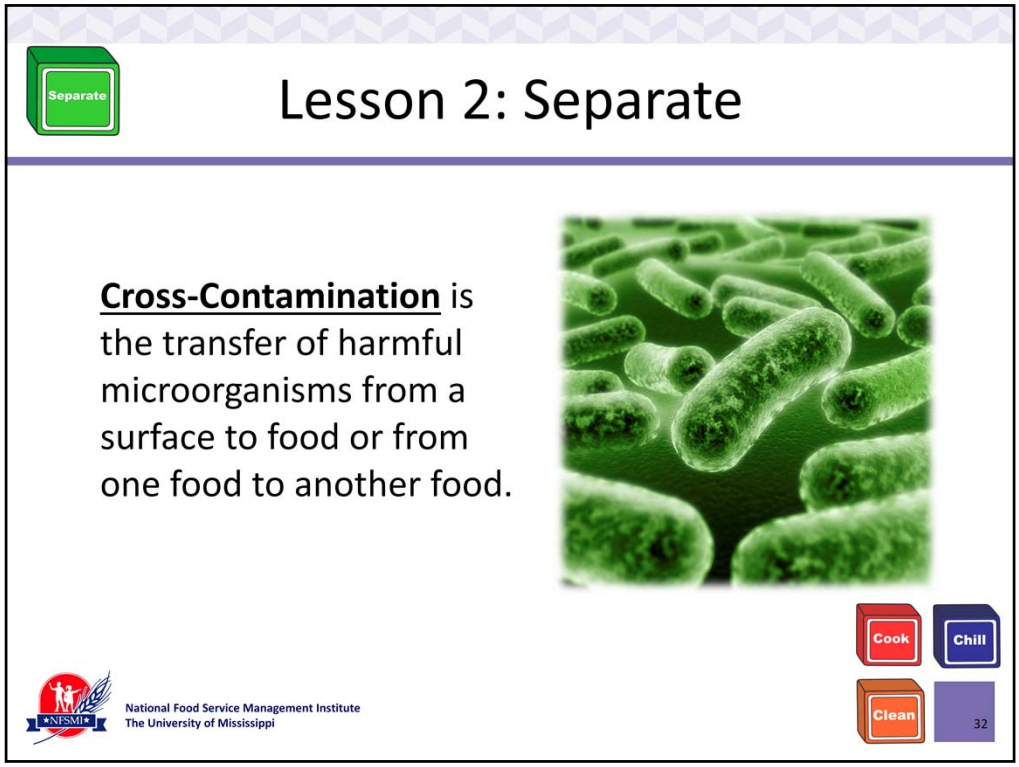
Research conducted by the U.S. Food and Drug Administration (FDA) shows that prevention of contamination is one food safety practice that needs improvement in many foodservice operations. Cross contamination, or contamination that occurs when one surface contaminates another, can be controlled by foodservice employees. One way to control contamination is to separate products–for example, separating raw foods from cooked foods. Another example is storing chemicals in a separate location from food.



One of the most common causes of foodborne illness is cross contamination. Cross contamination may occur when 1) a sick employee handles food, 2) raw food contaminates a ready-to-eat food, 3) food contact surfaces are not cleaned and sanitized properly and come in contact with a ready-to-eat food, or 4) equipment is used for multiple foods without cleaning and sanitizing between preparing foods.

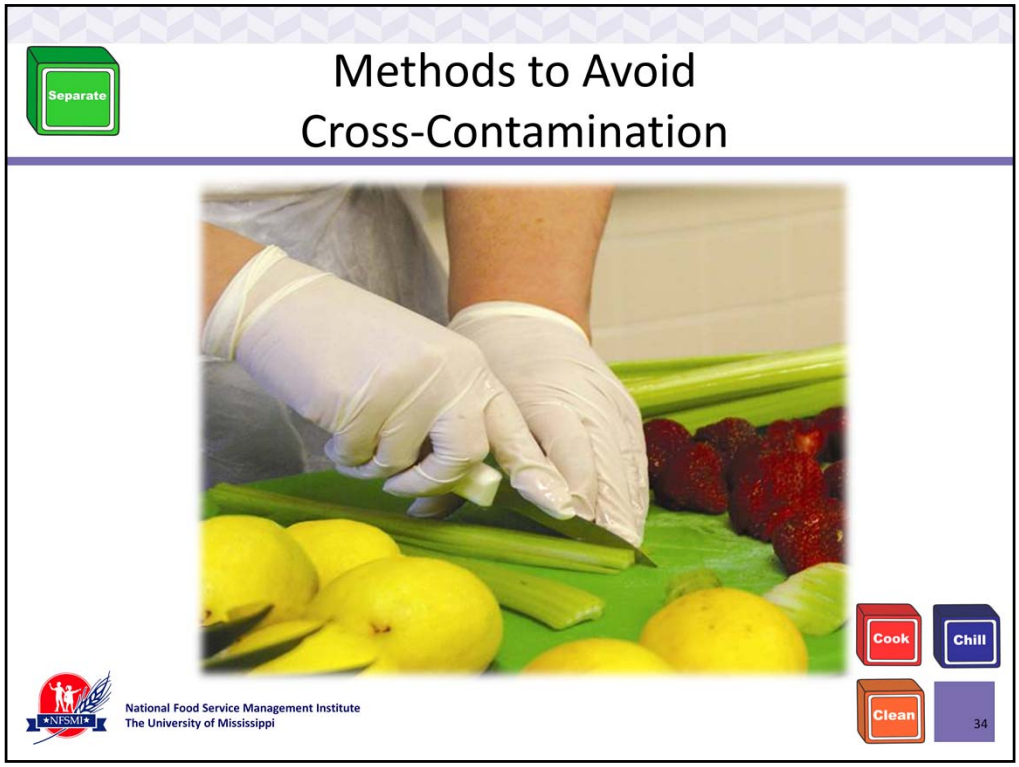


In this topic area we will discuss and describe ways food can be contaminated in a child care facility, list methods to avoid cross-contamination and describe appropriate storing techniques for food and chemicals.

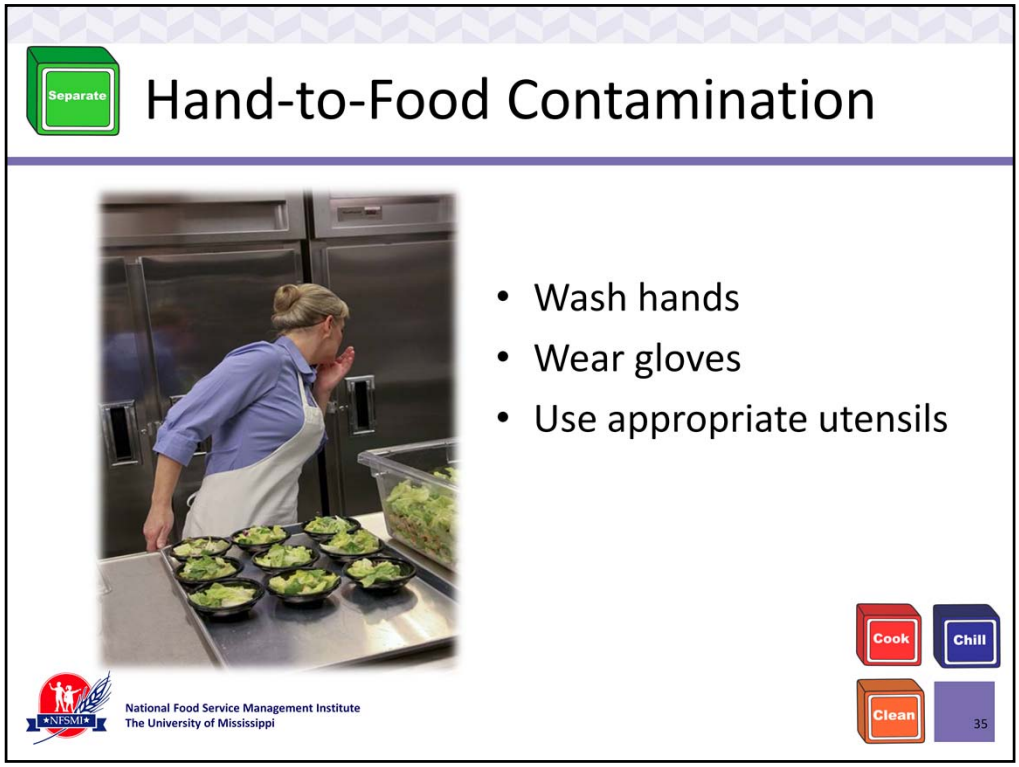


One of the most common causes of foodborne illness is cross contamination. Cross contamination may occur when a sick employee handles food, raw food contaminates a ready-to-eat food, food contact surfaces that are not cleaned and sanitized properly come in contact with a ready-to-eat food, or equipment is used for multiple foods without cleaning and sanitizing between preparing foods. Proper food storage also is important in preventing contamination.

There are four ways for a food to become contaminated. Hand to Food, Food to Food, Equipment to Food and Chemicals to Food.



Lets look at the best ways to avoid these types of cross-contamination.

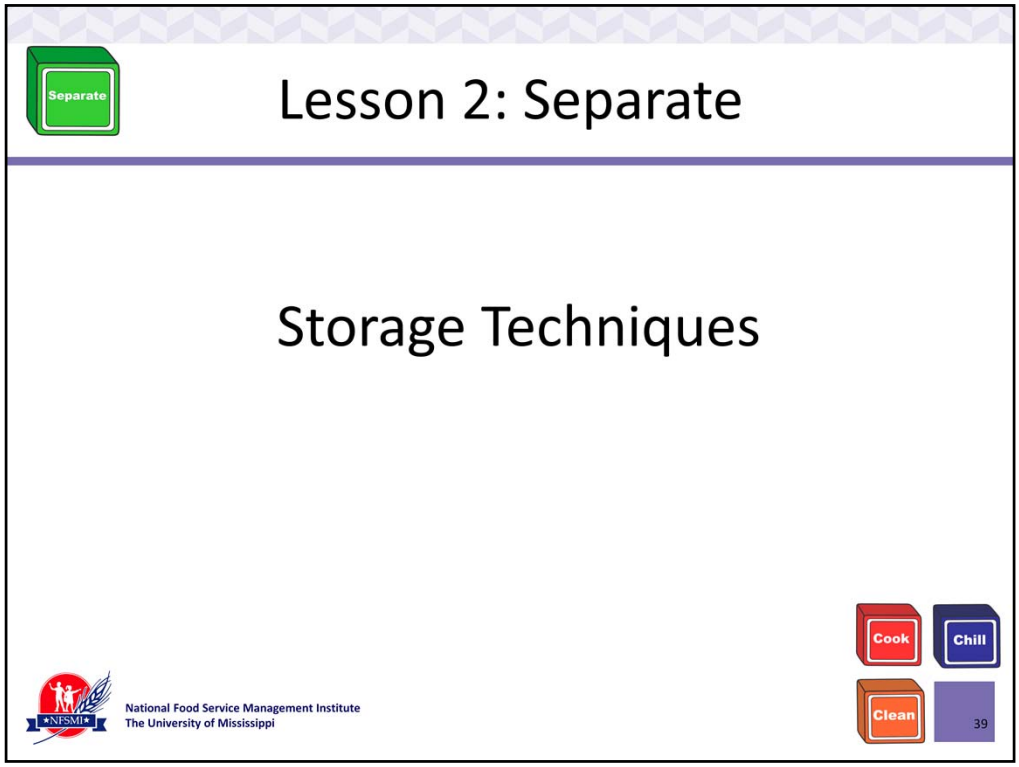


The best ways to avoid hand to food contamination are to wash hands properly, frequently, and at appropriate times. Wash hands before putting on single-use gloves and change gloves frequently. Wear gloves when handling ready-to-eat foods. Cover cuts, sores, and wounds. Keep fingernails short, unpolished, and clean. Avoid wearing jewelry. Do not allow sick employees to work.

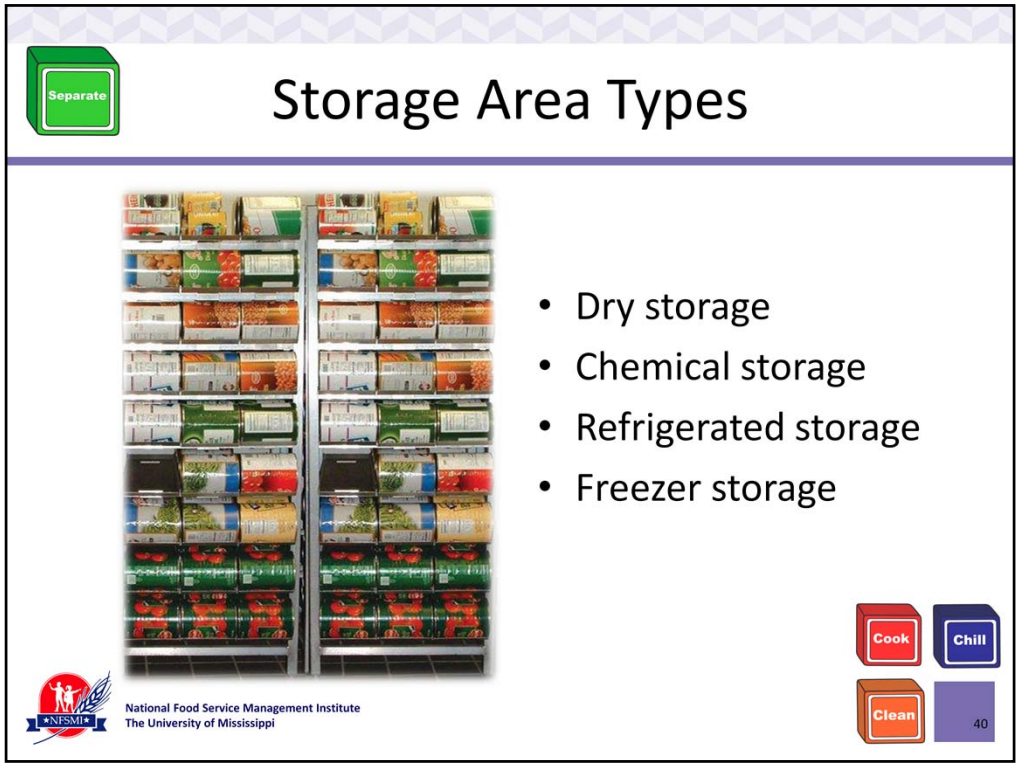
Separate raw animal foods such as eggs, fish, meat, and poultry from ready-to-eat foods such as lettuce, cut melons, and lunch meats during storage. Separate different types of raw animal foods such as eggs, fish, meat, and poultry from each other except when combined in recipes. Store raw animal foods in refrigerators or walk-in coolers by placing the raw animal foods on shelves in the following order of cooking temperature: whole beef or pork on top shelf, raw ground meats on middle shelf, and poultry on bottom shelf. Separate unwashed fruits and vegetables from washed fruits and vegetables and other ready-to-eat foods. Place food in covered containers or packages except during cooling and store in the refrigerator or cooler. Designate an upper shelf of a refrigerator or walk-in cooler as a “cooling” shelf. Uncover containers of food during the initial quick cool-down phase to facilitate cooling.

To avoid equipment /surface to food contamination, Use only dry, cleaned, and sanitized equipment and utensils for food preparation. Clean and sanitize work tables, equipment, and cutting boards after each use and before beginning a new task. For example, after slicing ham, the slicer should be cleaned and sanitized before slicing turkey. Clean and sanitize surfaces that are handled often, such as refrigerator and freezer handles. Maintain a fresh bucket of cleaning solution and a fresh bucket of sanitizing solution in the work area so that cleaning and sanitizing can be done easily. Check the concentration of the sanitizing solution to make sure it is at appropriate levels to sanitize.

To avoid chemical to food cross contamination, store all chemicals away from food products, preferably in a separate storeroom and limit access of chemical storage areas to designated personnel.



Chemicals are used in foodservice operations for a variety of cleaning and sanitizing functions. Foodservice employees must use and store these chemicals properly to minimize the risk of food contamination. Chemical hazard is one of the three major types of hazards in a foodservice operation. A foodborne illness can result from a harmful chemical getting into a food that is eaten by a person.



There are four types of storage areas in all foodservice operations: dry storage, chemical storage, refrigerated storage, and freezer storage.

Often, refrigerator storage space is limited and many types of food are stored in the same refrigerator. When that occurs, the placement of food in the refrigerator unit is extremely important. In the refrigerator cover food tightly, label and date food, and rotate inventory to minimize opportunity for bacterial growth. When storing foods in a refrigerator it is good to remember that where you place the food in the refrigerator makes a difference with growth as well. The end-point cooking temperature is higher for the foods at the bottom, and the temperature will kill pathogens associated with foods on the next higher shelf should cross contamination occur. Therefore “no cook” foods should be stored on the top shelf, with cooked foods toward the bottom

Refrigerator Shelves

1. No cook—milk, raw carrots, cake
2. 145 °F—roast
3. 160 °F—ground beef
4. 165 °—poultry

National Food Service Management Institute
The University of Mississippi

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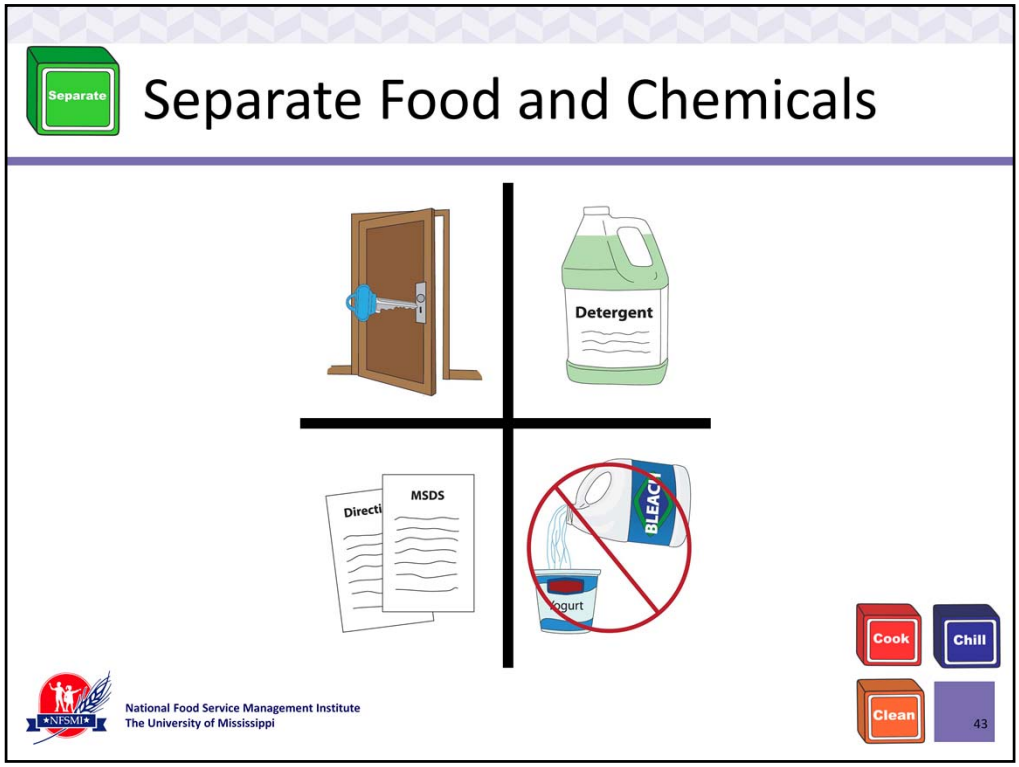
This slide shows an example of the optimal placement of foods in a refrigerator for food safety.



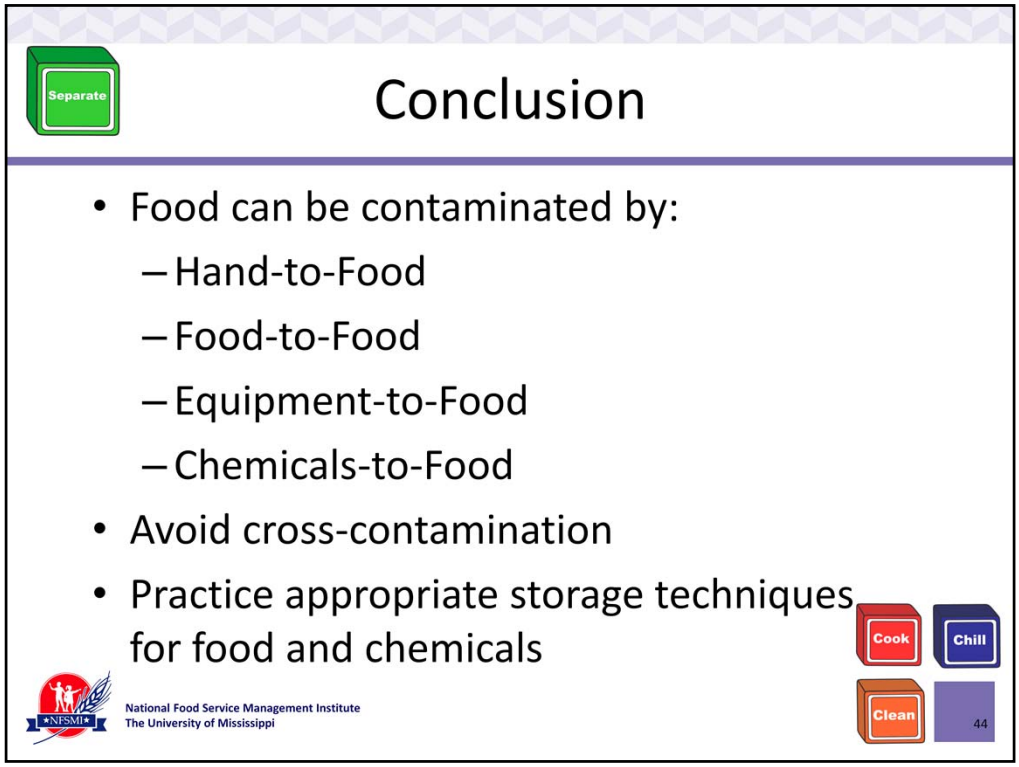
Look at the diagram on the slide, start with the top left corner and we will discuss the importance of proper chemical storage

Chemicals should be stored away from food and lock chemicals in a cabinet or storeroom to limit access to them. You should only provide keys to individuals who really need to be using the chemicals. Always keep chemicals separate from food storage areas to avoid contamination.

Keep chemicals in their original containers if at all possible. If they must be moved to another container, the container needs to be clearly labeled with the name of the chemical, the manufacturer's name and address, and potential hazards of the chemical.

It is important to follow manufacturer's directions for mixing chemicals and checking the proper concentration or parts per million (ppm) for sanitizers. Keep current MSDS (Material Safety Data sheets) for all chemicals in case you need information about handling accidents with chemicals.

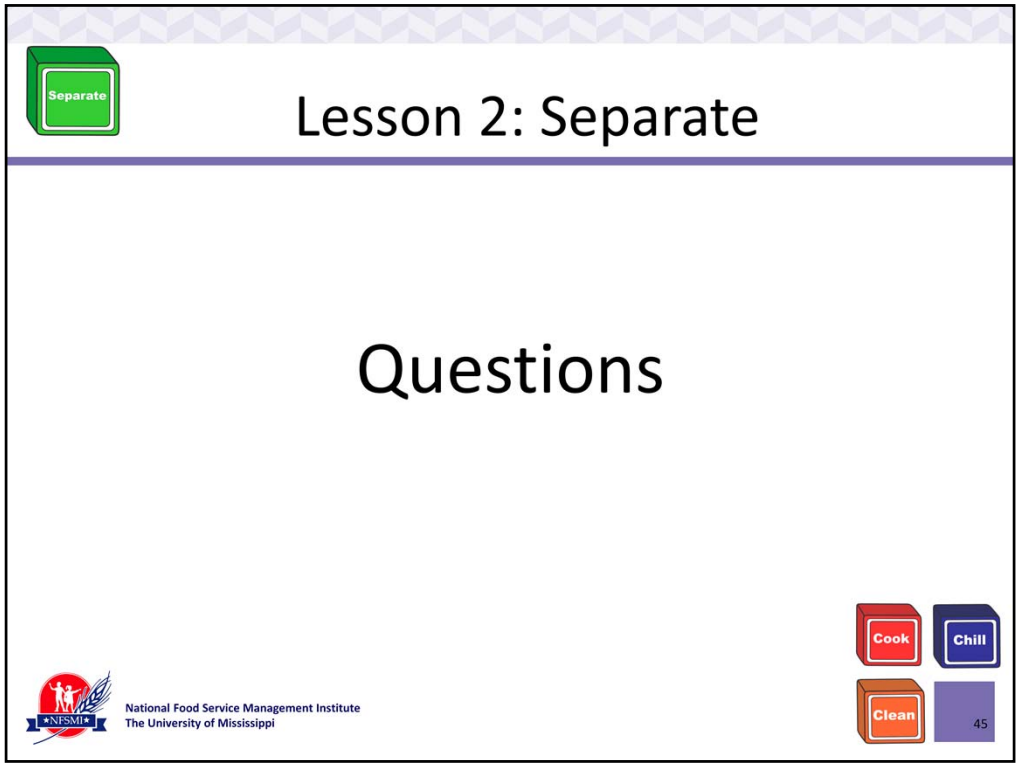
Chemicals should never be put into food containers!



We have learned many good food handling practices that can be used every day in a foodservice operation to avoid cross contamination. Remember to the four paths to cross contamination and try to avoid them.

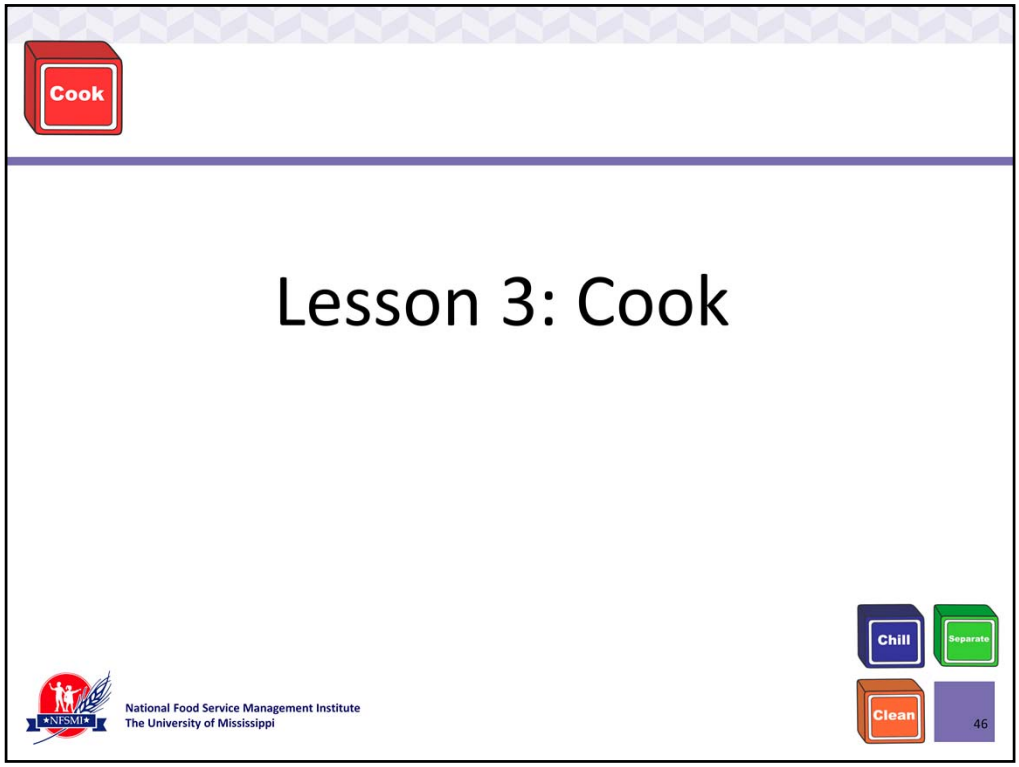
Do:

Ask the participants of examples of the different forms of contamination for example, hand to food could be grabbing a raw slice of watermelon (without gloves) after using the telephone. Write good examples on the flipchart.

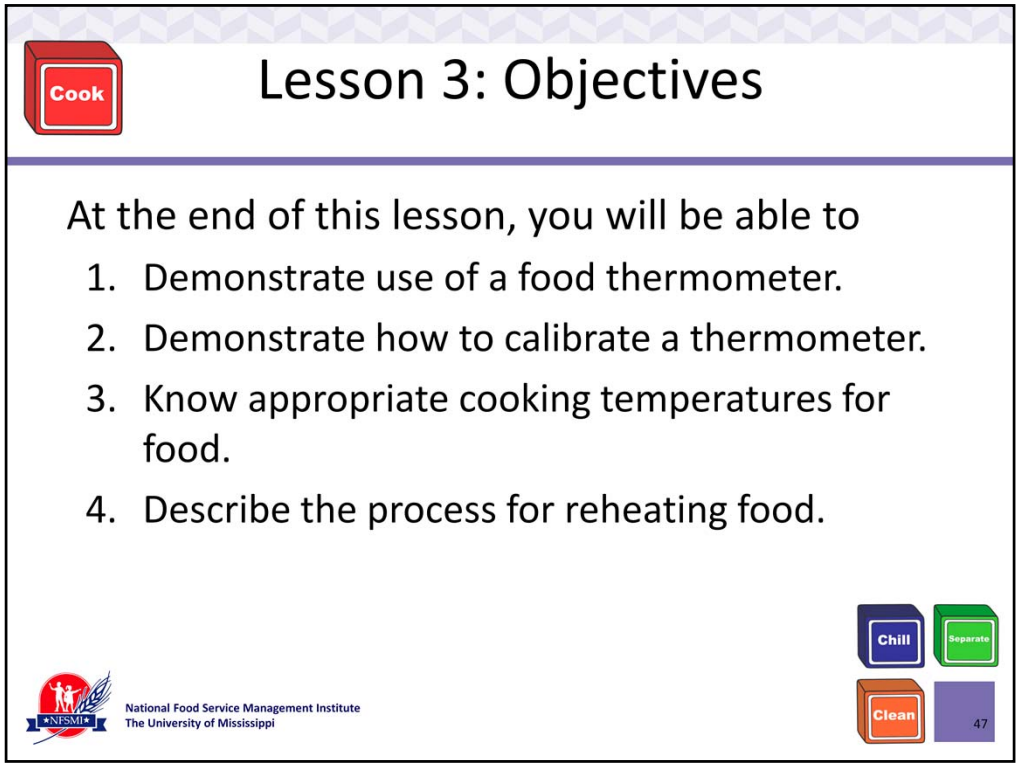


Any questions?

Do
Write any good questions on flip chart and allow discussion, time permitting.

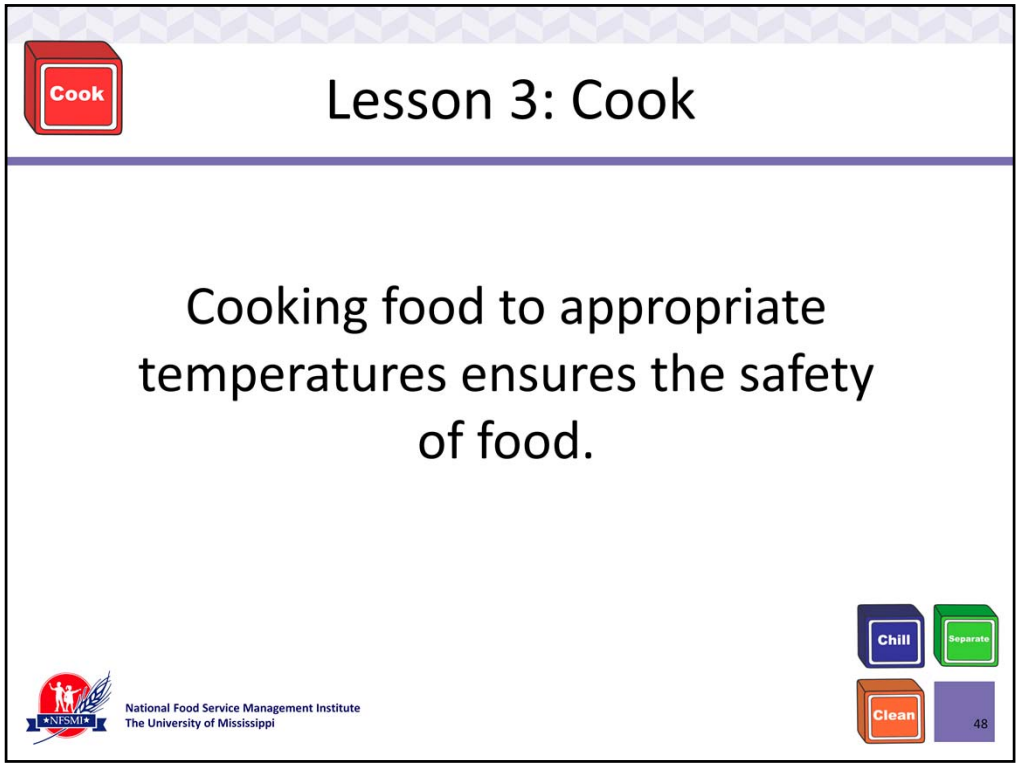


Lesson 3 will focus on cooking. When food is cooked properly, any bacteria present are killed. Different types of foods have different end-point temperatures for cooking. Thermometers are the tools needed to check cooking temperatures, and thermometers need to be accurate to verify that appropriate cooking temperatures are met.



At the end of this lesson, you will be able to

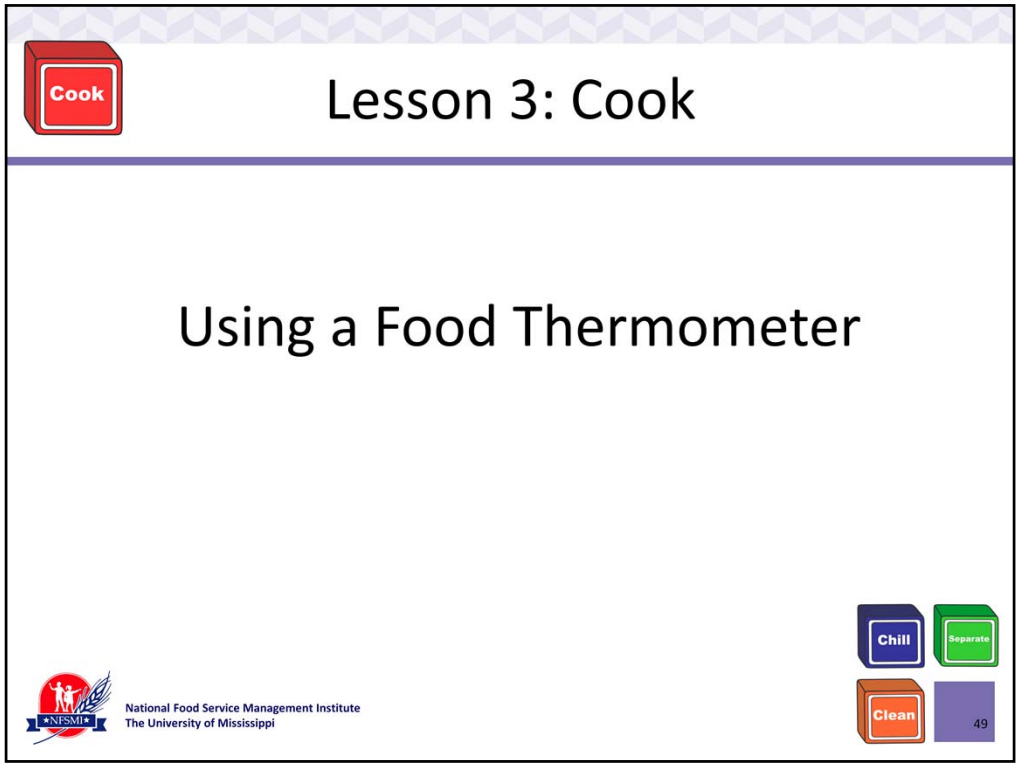
1. Demonstrate use of a food thermometer.
2. Demonstrate how to calibrate a thermometer.
3. Know appropriate cooking temperatures for food.
4. Describe the process for reheating food.



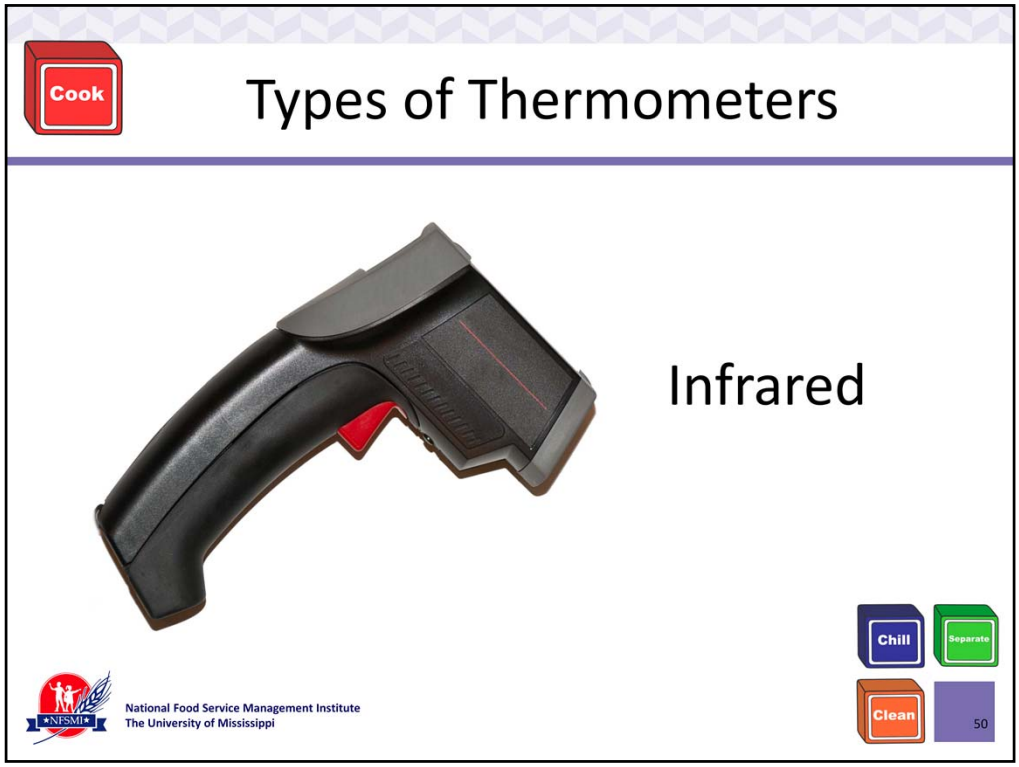
Cooking is an important step to ensure the safety of food. When food is cooked properly, bacteria are killed. Different types of foods have different end-point temperatures for cooking.

Thermometers are the tools needed to check cooking temperatures, and thermometers need to be accurate to verify that appropriate cooking temperatures are met.

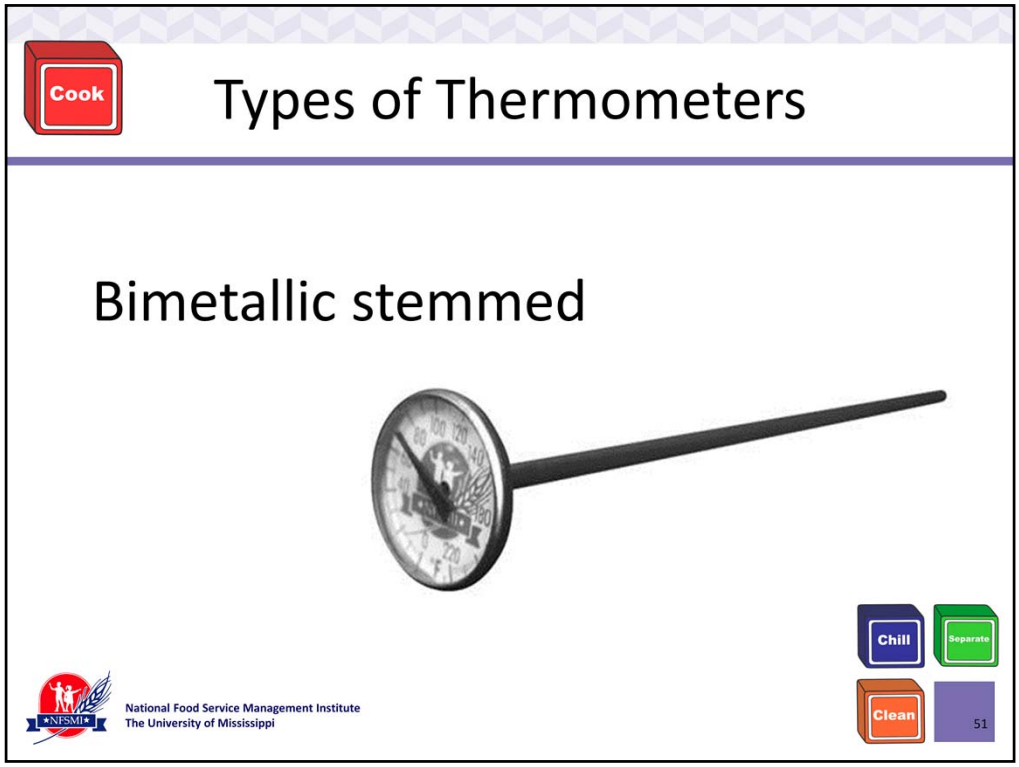
When we talk about temperatures in child care, please be aware that some of the temperature guidelines are different than those for other types of foodservice operations. Since child care settings are more similar to homes and they serve a vulnerable population, USDA recommends following the consumer-based Food Safety and Inspection Service (FSIS) temperatures in child care. For example, the temperature danger zone is 40 °F to 140 °F in child care and the recommended cooking temperature for ground beef is 160 °F.



Cooking food to the appropriate internal temperature is very important for food safety. We must take food temperatures to make sure that we cook food properly to kill bacteria. To take temperatures, we need to have appropriate thermometers and use them properly. Thermometers are designed for different uses and different temperature ranges. Food thermometers need to measure temperatures between 0 °F and 220 °F. Thermometers needed to check food temperatures include the following:



Infrared-An infrared thermometer is good to use for taking temperatures at receiving.



Bimetallic stemmed thermometer is the most versatile and commonly used. This is also the lease expensive, most durable thermometer to purchase.

Types of Thermometers

Thermocouple

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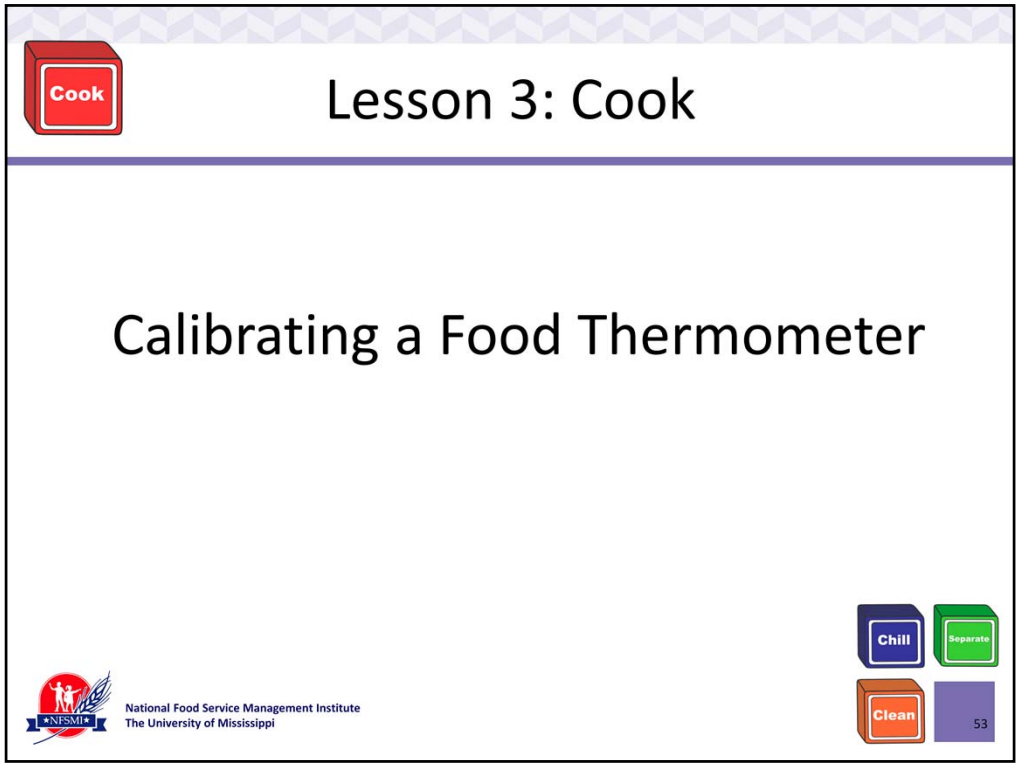
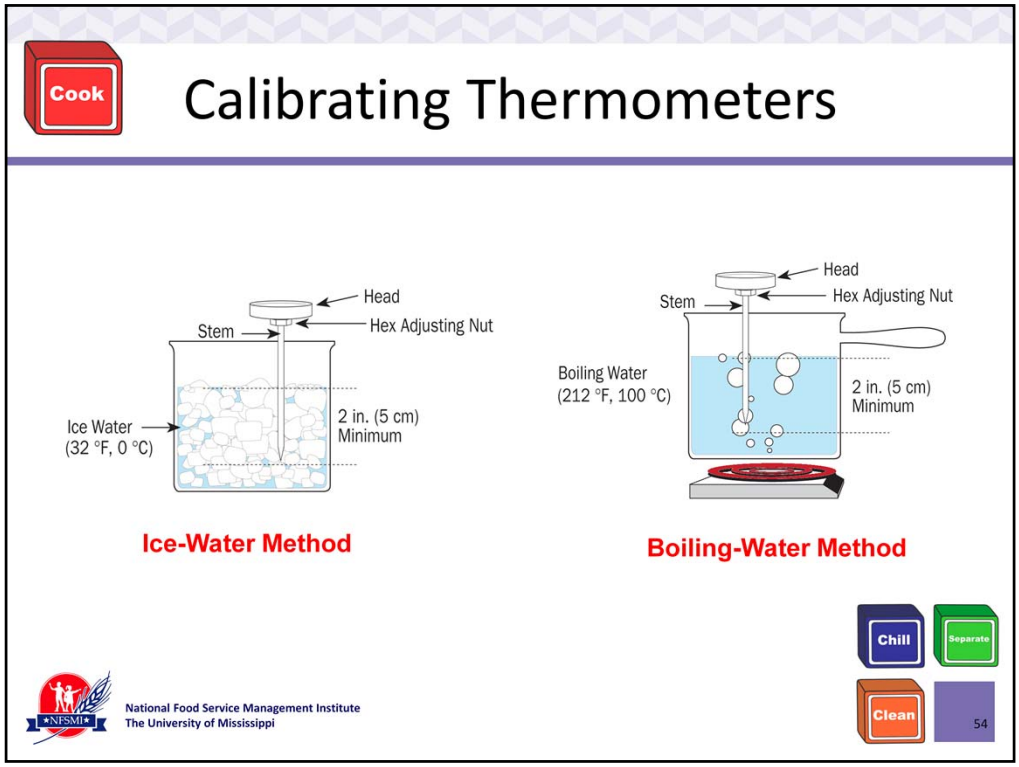
Thermocouple thermometers are designed to check for final cooking temperatures, because of their speed, they can be used to check temperature in a number of places.



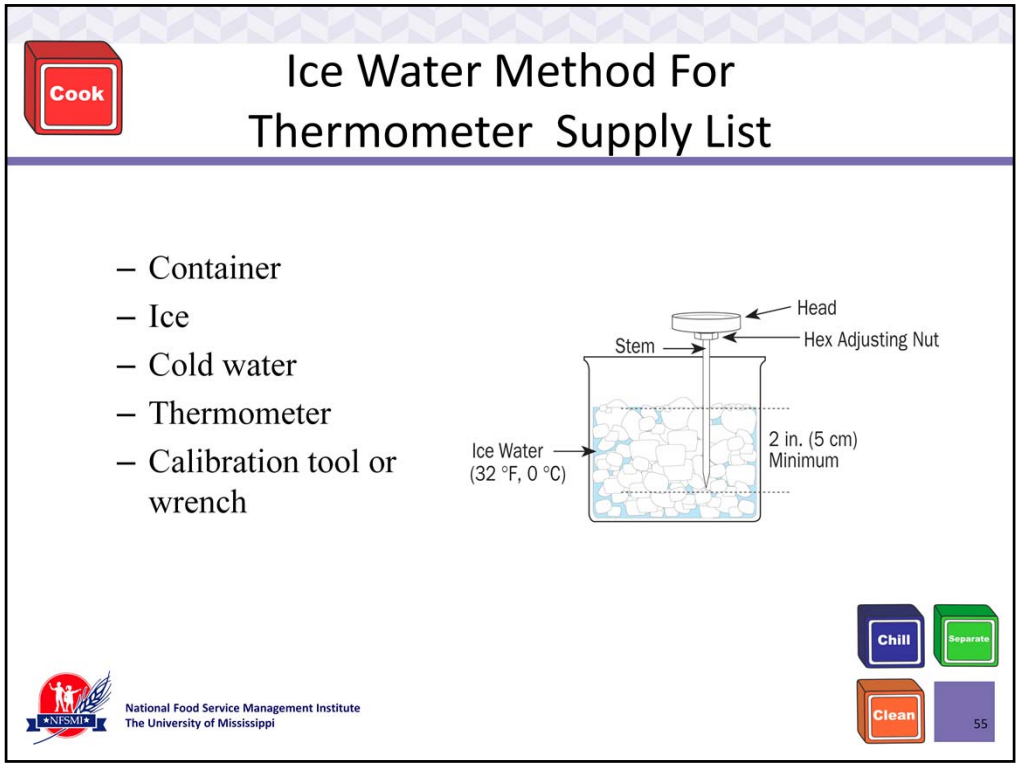
If cooking is so important for food safety, what happens if the temperatures taken are not accurate? Let's use an example. The USDA FSIS guidelines specify that chicken must be cooked to an internal temperature of 165 °F. That recommendation is based on science– that is the temperature at which bacteria most often associated with poultry are destroyed.

Let's say that the cook takes the temperature of chicken and records that she cooked it to 165 °F. When the thermometer is checked, it measures 8 ºF higher than the actual temperature. This means that the chicken was only cooked to 157 °F, a temperature that is too low to kill the harmful bacteria.

To make sure that thermometers are accurate, they need to be calibrated. Food temperatures must be checked throughout the food preparation process and thermometers used must be accurate. Child Nutrition employees are responsible for checking the accuracy of thermometers and calibrating them if they are not accurate.



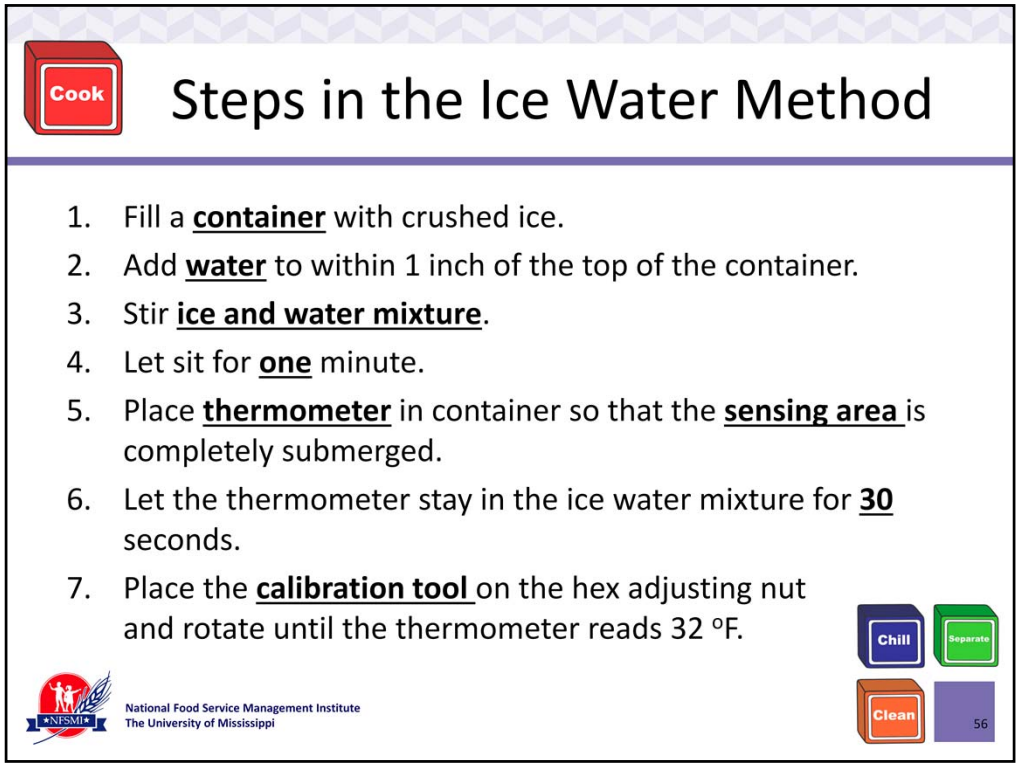
Thermometers should be calibrated frequently–ideally on a daily basis. Each time the thermometers are dropped, they must be calibrated, too. Using the same thermometer to take temperatures of very cold and very hot foods may require the thermometer to need to be calibrated more frequently. This slide shows examples of two methods of calibrating a thermometer.



Lets look at the ice water method and then we will try to calibrate some thermometers ourselves. To calibrate a thermometer with ice water you will need: Container, Ice, Cold water, Thermometer and a Calibration tool or wrench.

Do:

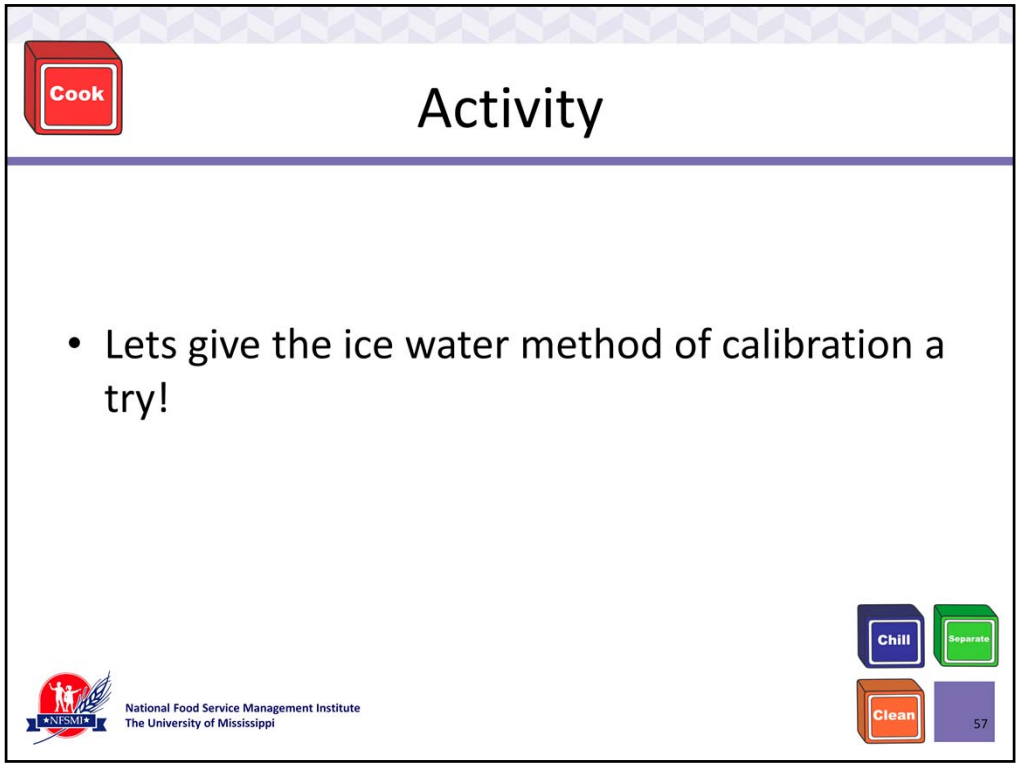
Set out each item as you are verbally listing them for demonstration.



To calibrate using the Ice Water Method first -Fill a 2-quart measure with ice. Then- Add water to within 1 inch of top of container. Continue by stirring mixture well**. Let sit for one minute**. (**Use this time to ask if anyone is very familiar with this concept, allow answers**) Next- Place thermometer in container so that the sensing area of stem or probe is completely submerged over the dimple and remember to keep the thermometer from touching sides or bottom of container. **Let thermometer stay in ice water for 30 seconds or until the dial stops moving. Then-**Place the calibration tool on the hex adjusting nut and rotate until the dial reads 32 °F, while in ice water. Remember that some digital stemmed thermometers (thermistors) and thermocouples have a reset button that should be pushed. Now, you can repeat process with each thermometer that may need calibration. Are you ready to give this a try?

Do

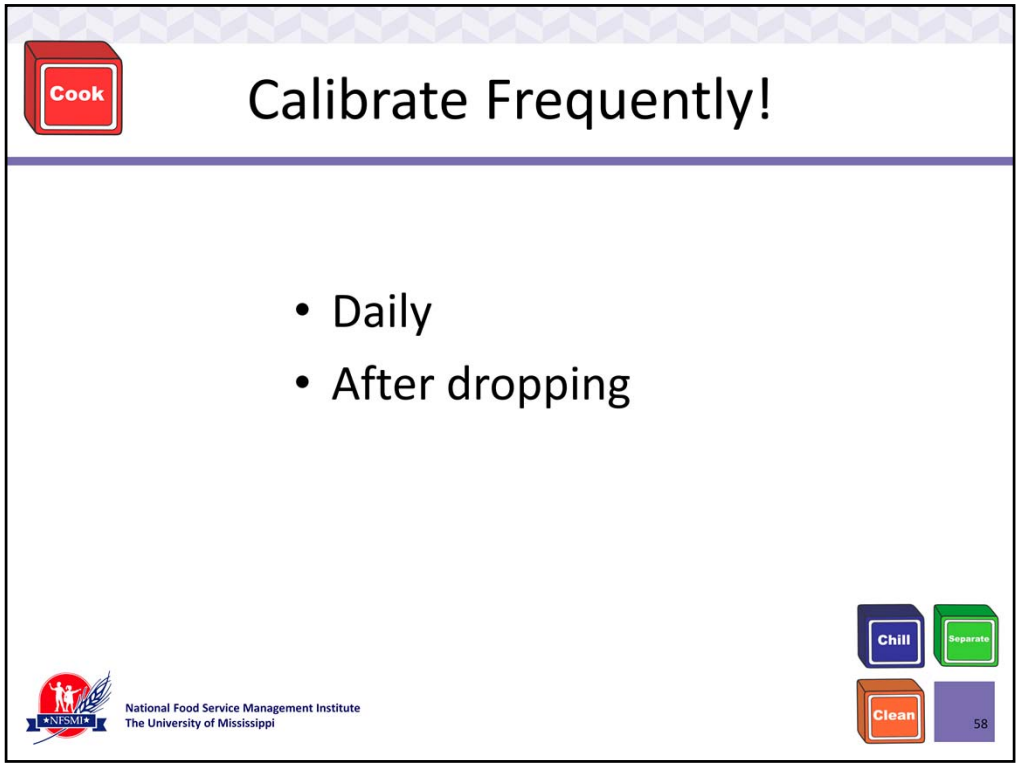
Demonstrate each step as you are verbally describing how to do it.



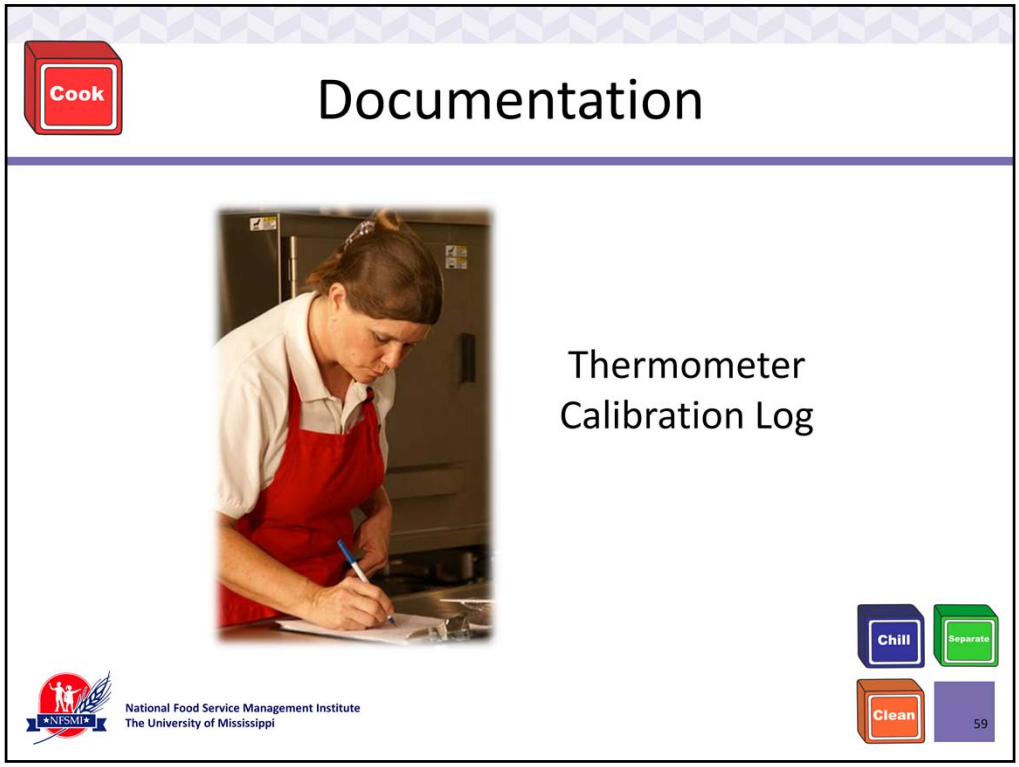
First we are going to take a ten minute break, then lets give the ice water method of calibration a try!

Do:

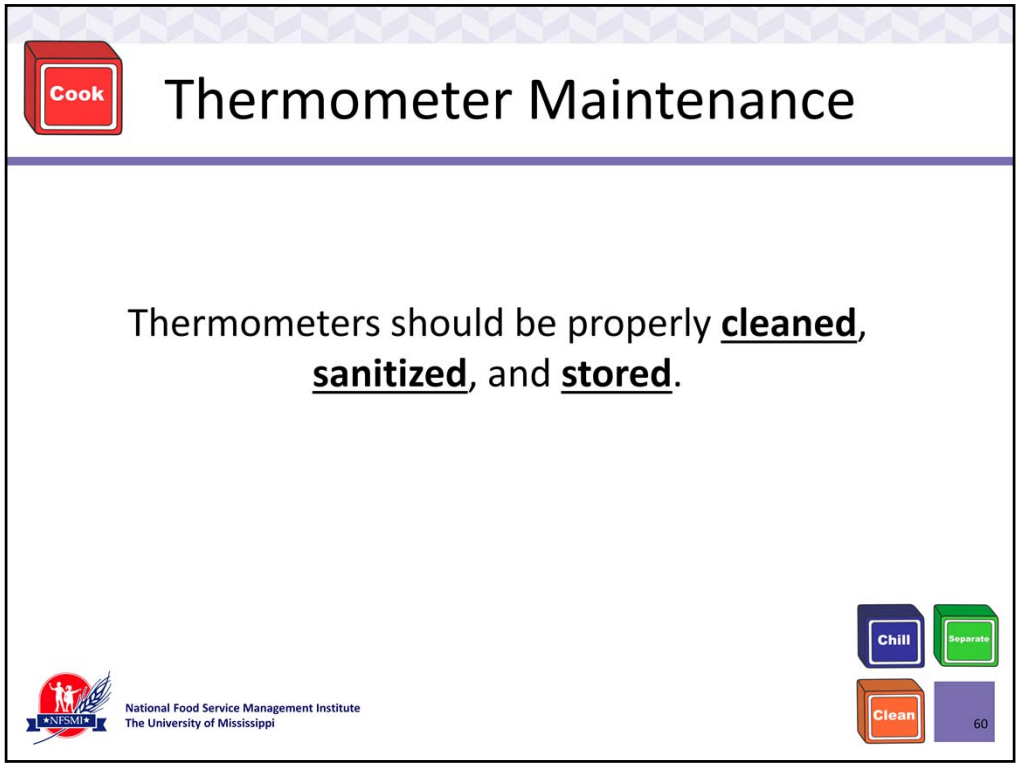
Set out equipment/supplies for group activity during the break. Allow participants to break into groups and practice ice water method of calibration. Groups will be dependent on the size of the group and the equipment you have available and time!



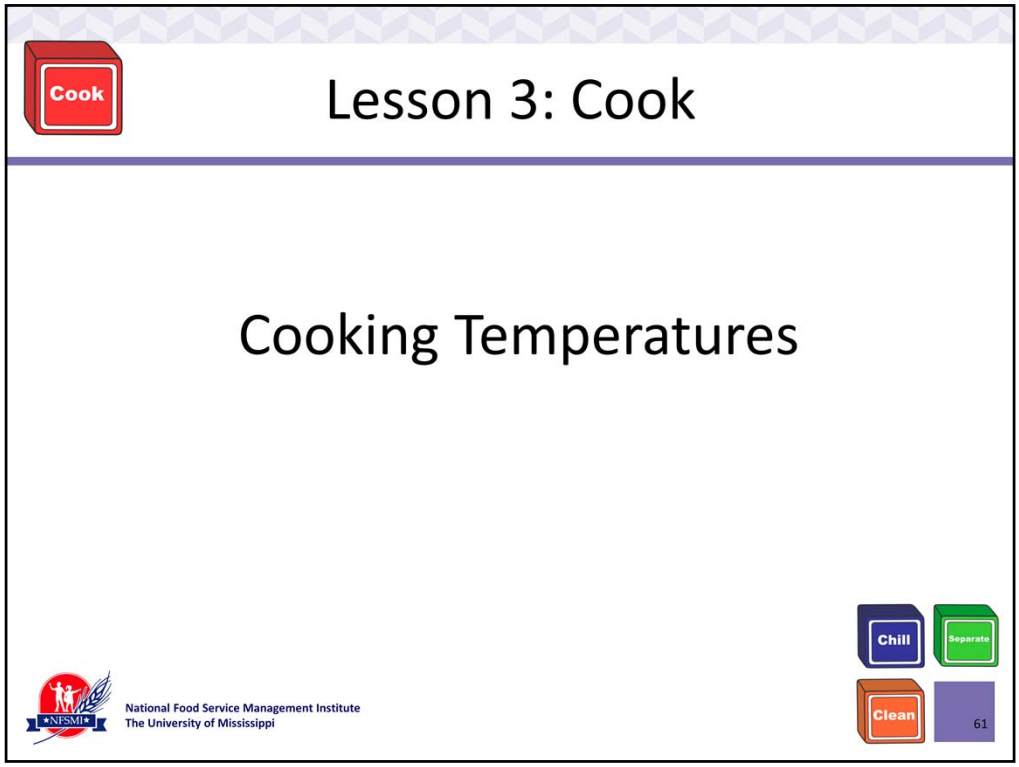
Thermometers should be calibrated frequently–ideally on a daily basis. Each time the thermometers are dropped, they must be calibrated, too. Using the same thermometer to take temperatures of very cold and very hot foods may require the thermometer to need to be calibrated more frequently.



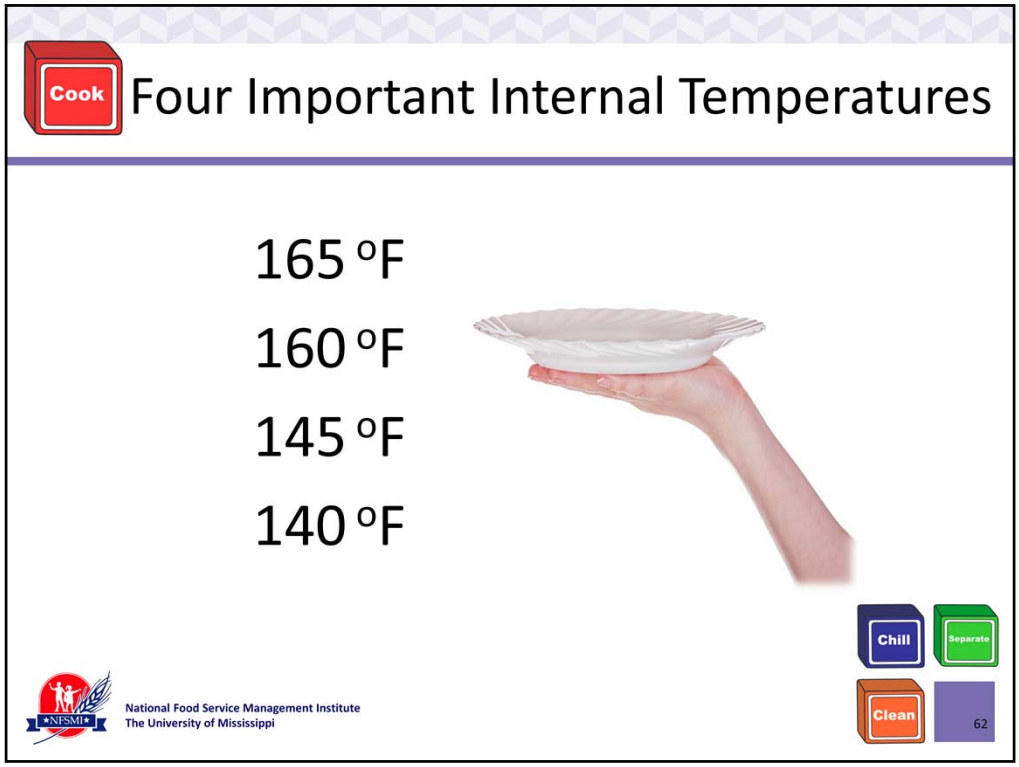
Each time you calibrate a thermometer, it is recommended that you record or document that you have calibrated it. You may have a thermometer calibration record that you use in your operation or you may use the documentation form. A form for documenting the calibration process of each thermometer will be available at the end of the class.



Clean and sanitize thermometers before each use. Wash the stem of the thermometer, and sanitize by dipping stem into sanitizing solution or wiping with a sanitizing wipe. Allow to air dry. Store food thermometers in an area that is clean and where they are not subject to contamination. Check and change batteries in digital thermometers on a routine basis.



Cooking is a critical control point, or a point at which reaching proper temperatures can help ensure that a food is safe to eat. Cooks must know the proper temperatures for cooking food, monitor end-point cooking temperatures, and record cooking temperatures. The appropriate temperature for cooking foods is based on temperatures that will kill bacteria associated with that specific food. That is why, for example, poultry products have a higher cooking temperature than beef. It is important to know the temperature requirements for menu items used in your foodservice operation.



There are four important key internal temperatures in child care.

140 °F Ready-to-eat foods taken from a commercially processed, hermetically sealed package; vegetables (frozen or canned)

145 °F Fresh beef, veal, or lamb

160 °F Ground meats, such as hamburger, ground pork, or sausage; egg dishes; Pork

165 °F Poultry, stuffing, stuffed meats, stuffed pasta, casseroles, leftovers

The final cooking temperature is based on the temperature that is needed to destroy the bacteria that is most likely to be associated with the product. Also, keep in mind that there is a time related to that temperature–the product must be heated to that temperature for at least 15 seconds.

Cook

Internal Temperature	Food Items
165 °F	• Roasted turkey • Frozen chicken patties (uncooked) • Leftover lasagna • Chicken noodle casserole • Stuffed pasta shells
160 °F	• Sausage • Hamburger patties • Chili
145 °F	• Lamb Chops • Roast beef
140 °F	• Canned green beans • Frozen broccoli • Canned chicken noodle soup • Corn dogs • Frozen chicken patties (precooked)

Chill Separate Clean

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Lets look at some more examples of temperatures on the chart. Does this look familiar? Having these temperature posted in a visible area of you kitchen is a helpful reminder of the correct cooking temperatures.

Measure the internal temperature of food by inserting the stem of the thermometer into the thickest part of the food being sure to cover the sensor. Wait for the dial or digital indicator to stabilize at desired temperature for about 15 seconds. Take temperatures based on the type of food.

- **Meats**

Roasts—insert thermometer in the middle of the roast avoiding any bones.

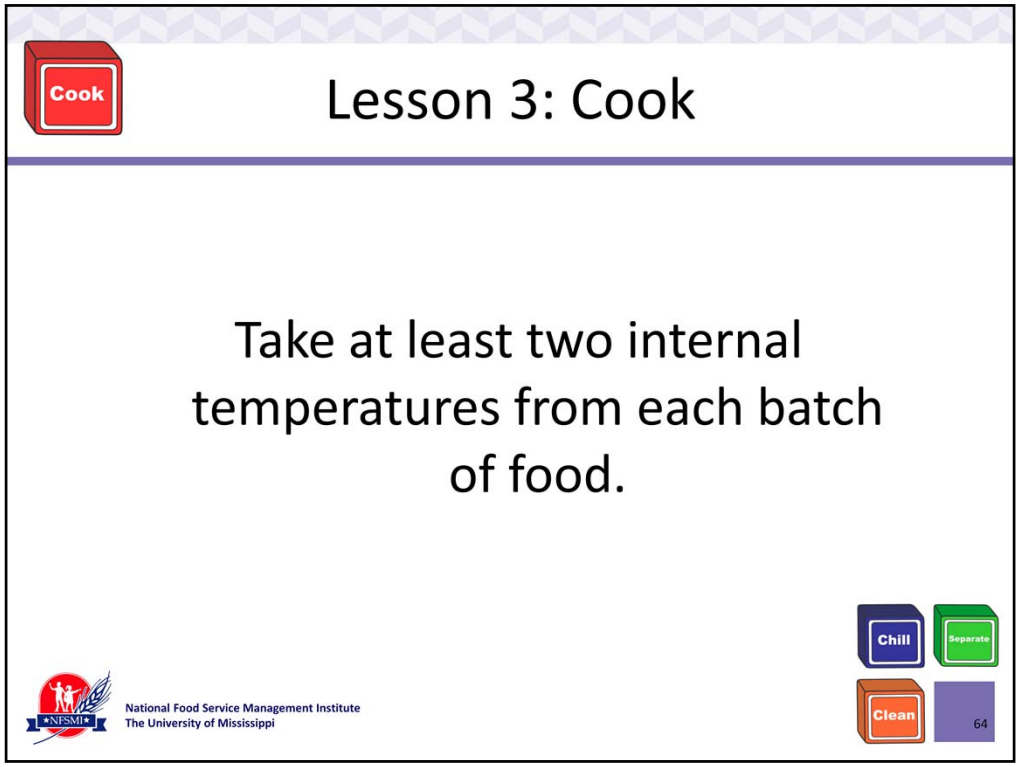
Poultry—insert thermometer at the thickest part avoiding any bones.

Casseroles—check temperature in the center and at several other points.

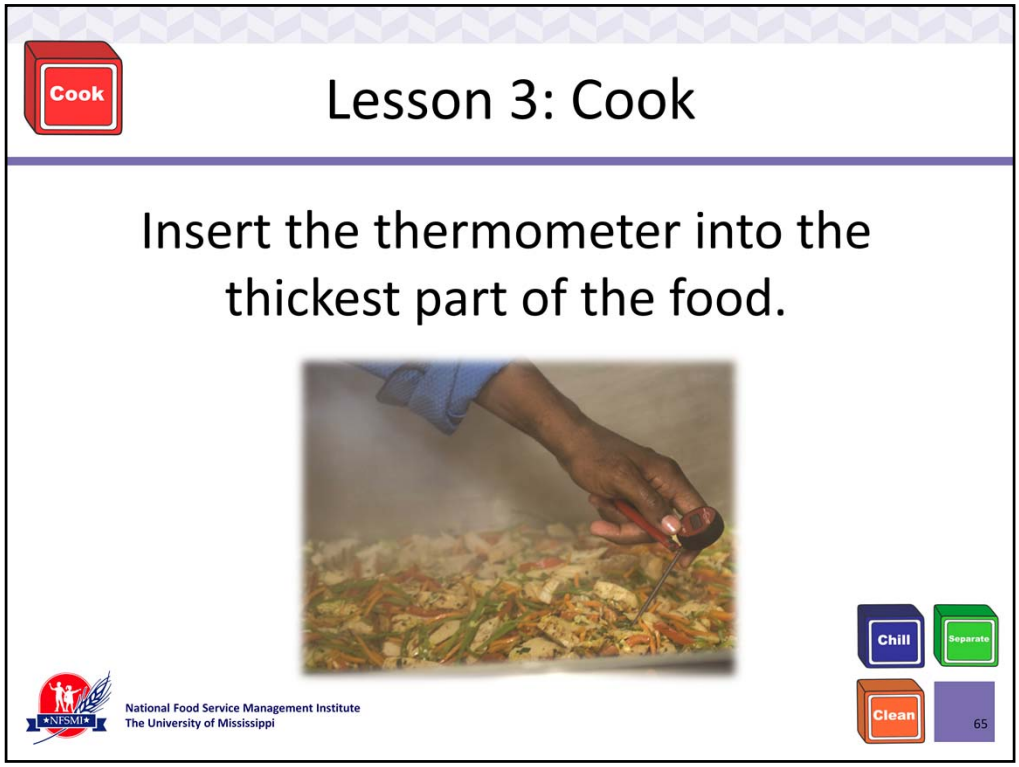
Thin meats, such as hamburger patties—use a probe that is tip sensitive to check temperatures.

Milk—open a carton and insert thermometer at least 2 inches into the milk.

Packaged foods—insert the thermometer between two packages without puncturing the packages.

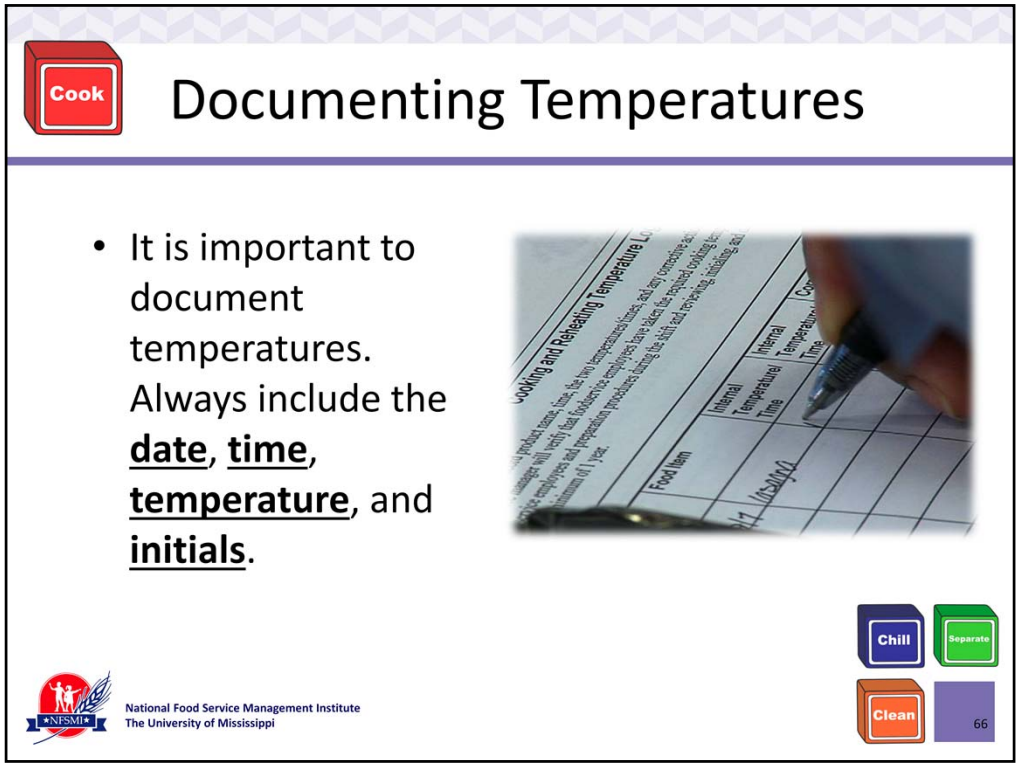


Take at least two internal temperatures from each batch of food. Food does not cook evenly. For example, a casserole will be hotter at the edges than in the middle. Meat cooks from the outside in, so the outer parts of meat will be hotter than the middle. If a temperature is taken and it does not meet the standard, the typical corrective action is to continue cooking until the appropriate temperature is reached.



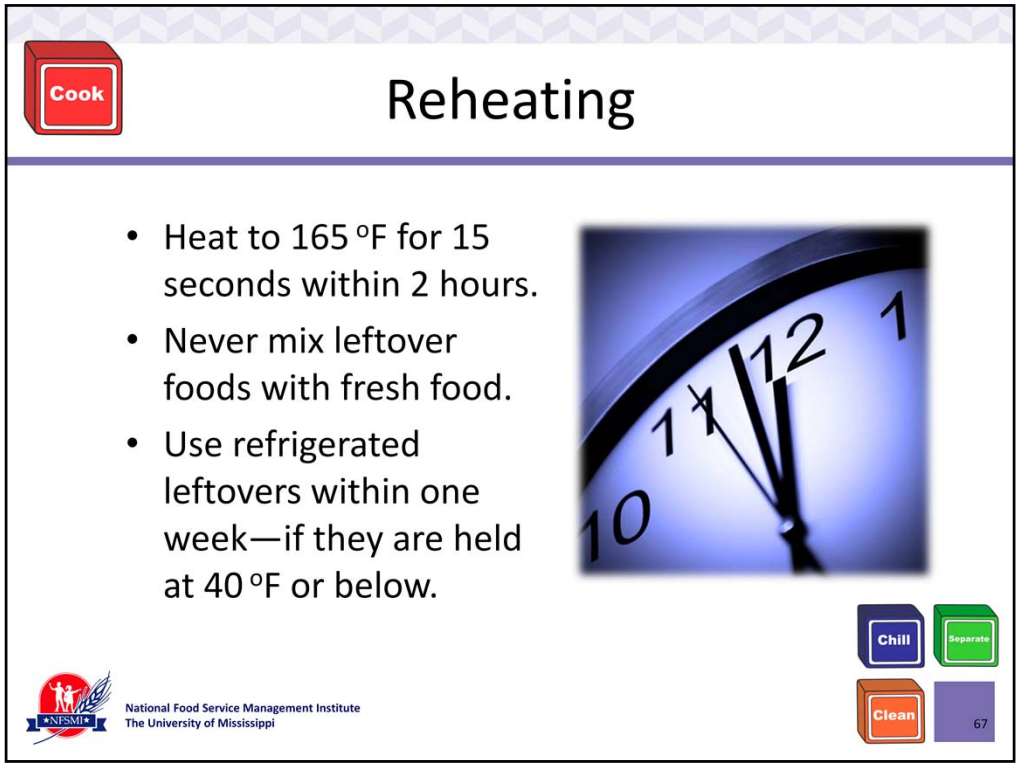
Insert the thermometer into the thickest part of the food. The thickest part of the food will be the last to reach the recommended end-point cooking temperature. Temperatures should be taken at multiple locations for foods such as casseroles.

Once food is cooked to the appropriate end-point cooking temperature, it is important to hold it at 140 °F or warmer until the food is served to children. To ensure that food is held at appropriate temperatures, food should be cooked as close to serving time as possible and food should be kept warm in warming cabinets or ovens.



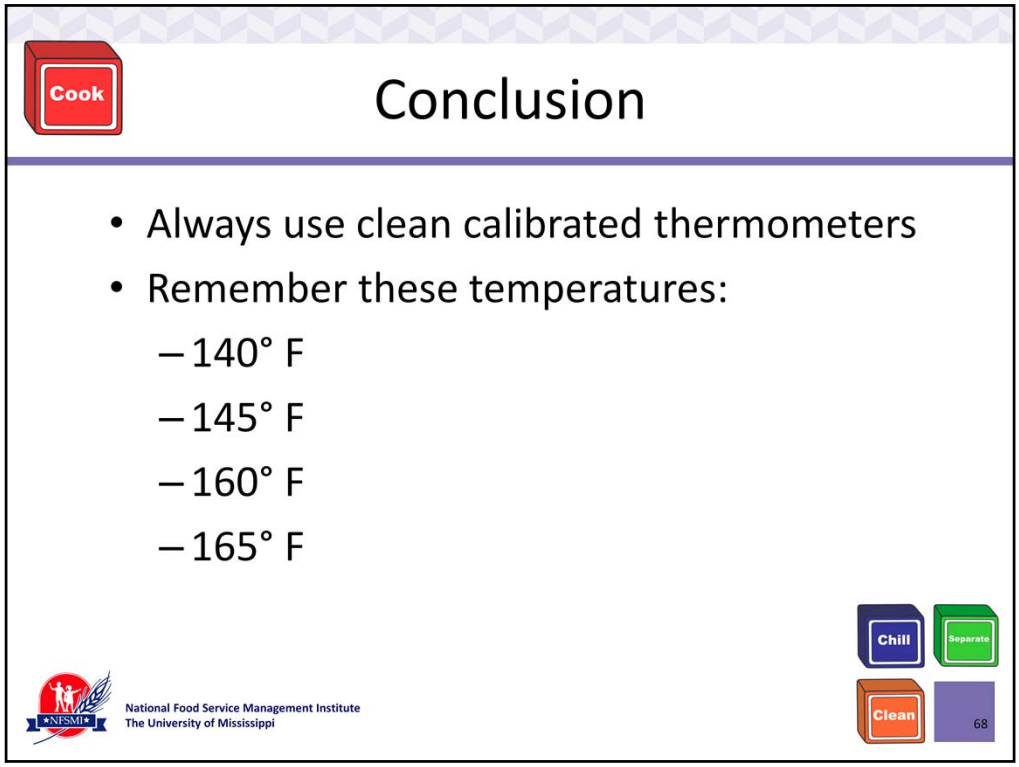
When food temperatures are taken, they should be recorded on the production record or on a separate cooking and reheating log. It is important to document cooking temperatures. Documentation shows that appropriate food handling practices are being followed. Documenting temperatures should include the time the temp was taken and be initialed by the cook taking the temperatures.

Temperatures should be taken after cooking and holding and before serving food. If a temperature is taken and it does not meet the standard, the typical corrective action is to continue cooking until the appropriate temperature is reached.

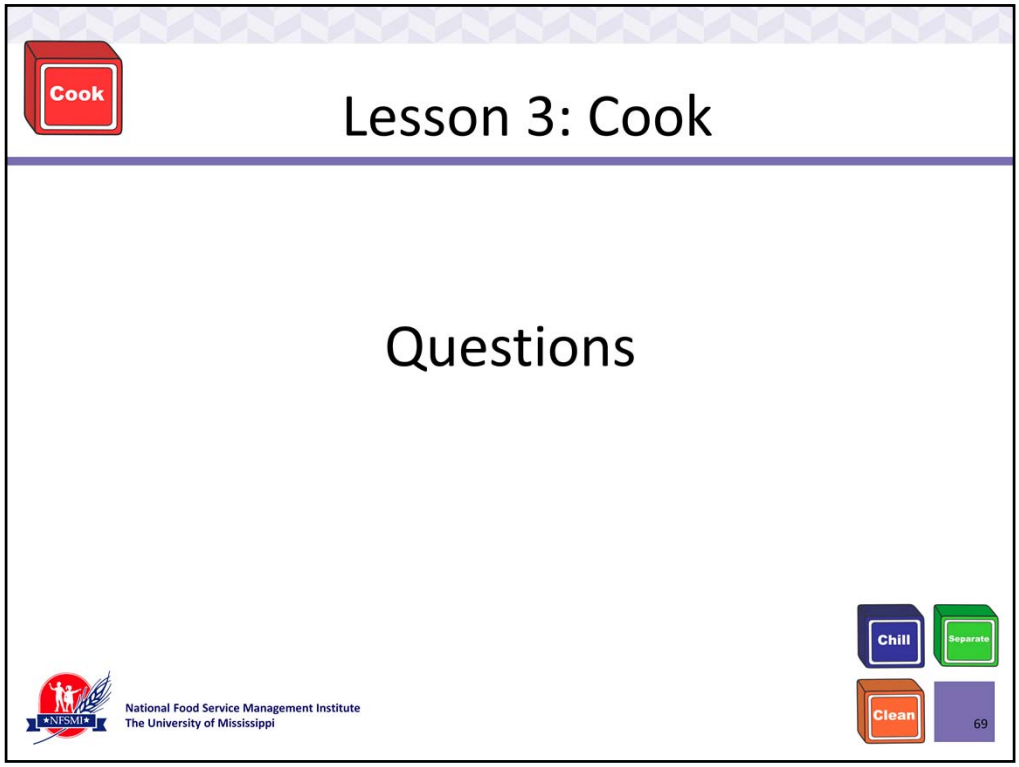


Reheating is the process of heating a previously cooked food or a leftover. Reheating must be done to the appropriate temperature, and it must be done quickly. The rule for reheating is that food must be heated to 165 °F for 15 seconds within 2 hours. The goal is to take the food through the temperature danger zone as quickly as possible.

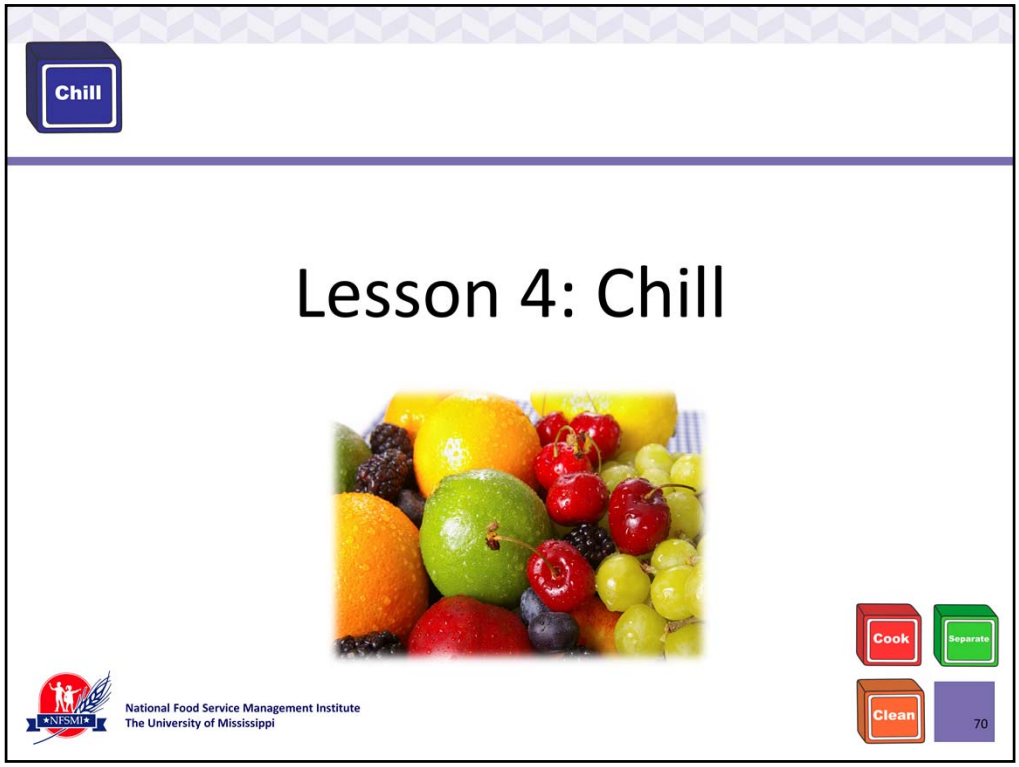
There are a couple of other guidelines to keep in mind when reheating: 1. Never mix leftover foods with fresh food. 2. Use refrigerated leftovers within one week–if they are held at 40 °F or below. Reheat foods rapidly. When reheating food, the total time the temperature of the food is between 40 °F and 140 °F cannot exceed 2 hours. Serve reheated food immediately or place in appropriate hot holding unit.



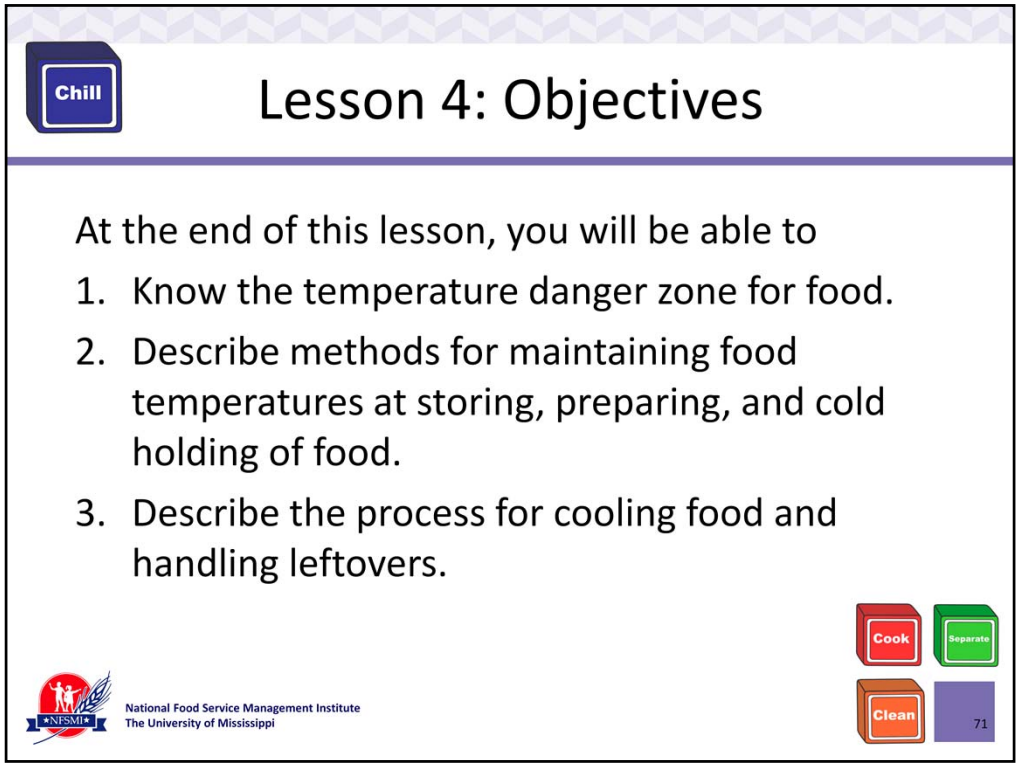
Always use clean calibrated thermometers. Remember these temperatures: 140° F, 145° F, 160° F, 165° F. Take at least two internal temperatures from each batch of food. Record the temperature and the time the temperature is checked. Reheat foods to 165 for 15 seconds within 2 hours.



Any questions?
Do :
Note any good questions and answers on flip chart.



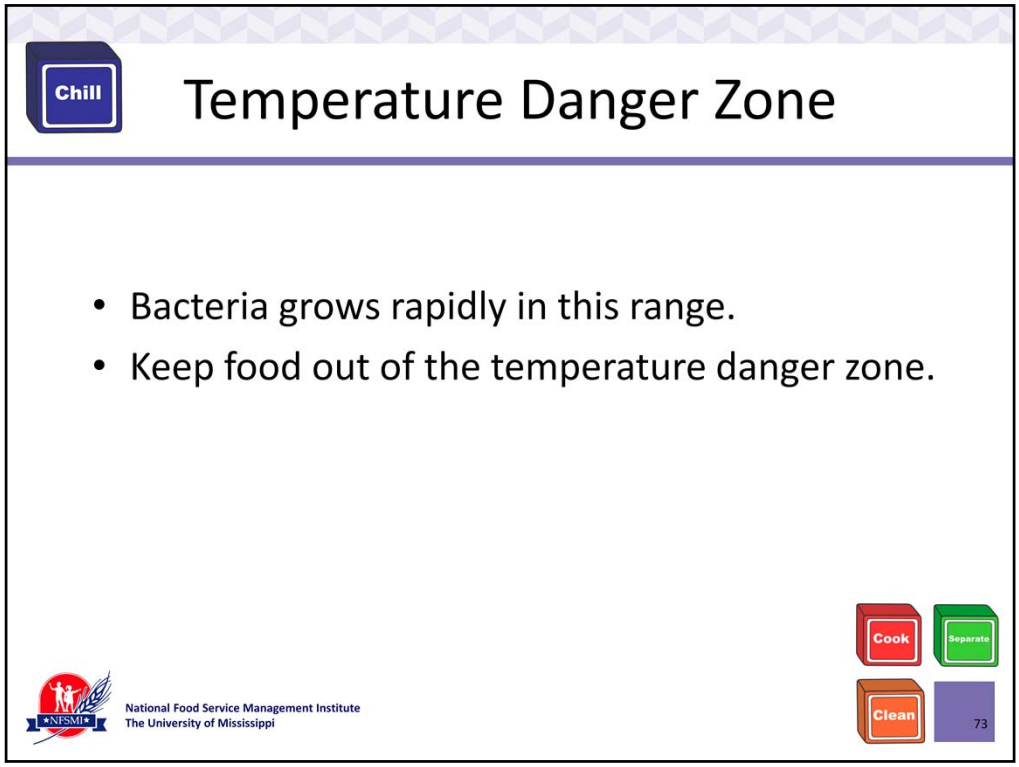
Lesson 4 will focus on chilling foods–or keeping cold foods cold. The temperature danger zone will be described so that participants will see the importance of keeping food cold. Chilling foods is important at several points in the foodservice operation: storing, preparing, and cold holding.



At the end of this lesson, participants will be able to:

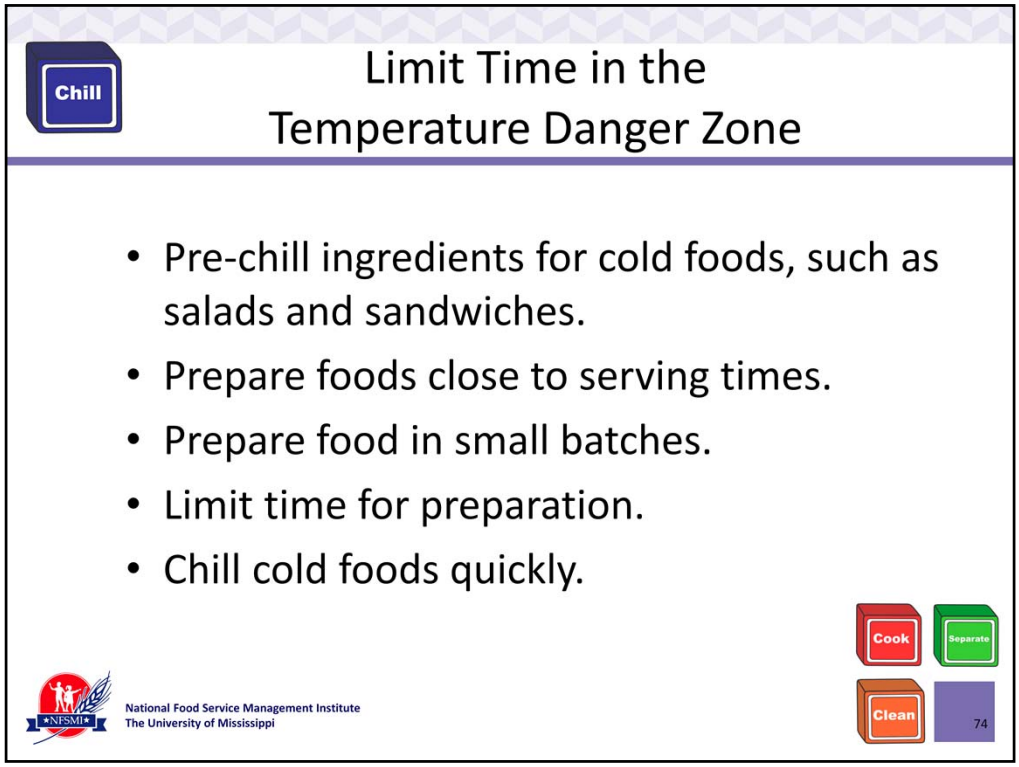
1. Know the temperature danger zone for food.
2. Describe methods for maintaining food temperatures at storing, preparing, and cold holding of food.
3. Describe the process for cooling food and handling leftovers.

One of the important ways that we control the growth of microorganisms is by controlling time and temperature. The Temperature Danger Zone is the temperature range in which bacteria grow rapidly. The temperature danger zone is 40 °F to 140 °F.



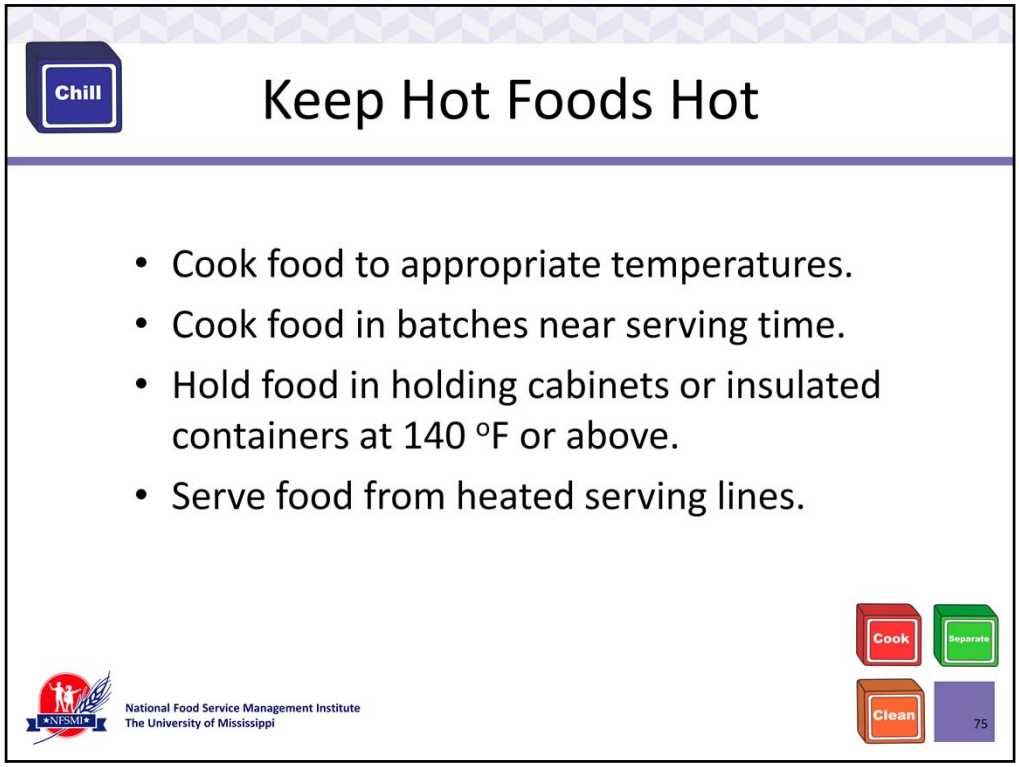
Our goal in foodservice is to keep food out of the temperature danger zone as much as possible, and when it is not possible to keep food out of the temperature danger zone, we limit the time that foods are at that temperature.

The saying “Keep hot food hot and cold food cold” is based on the importance of keeping food out of the temperature danger zone. In other words, cold foods must be kept at 40 °F or below and hot foods must be kept at 140 °F or above. It is important to limit the amount of time that foods served cold or hot are in the range of 40 °F to 140 °F.

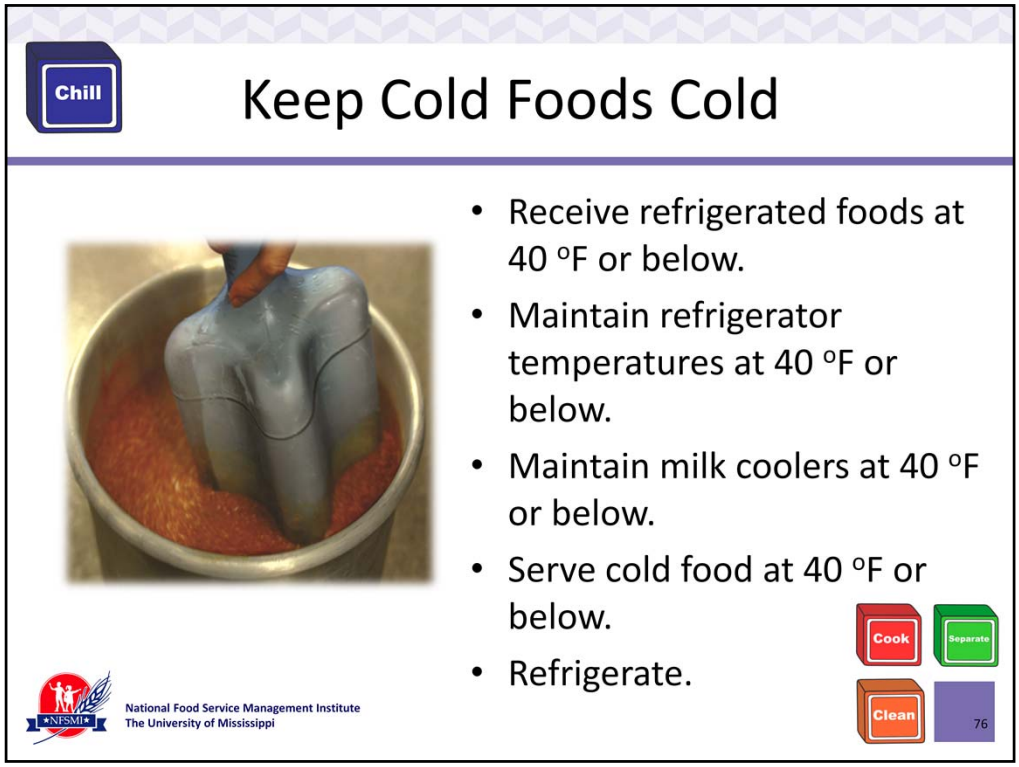


Lets look at this slide, it shows some examples of how to keep foods out of the danger zone. Can you think of any more?

Do:
Write any other good examples on the flip chart.

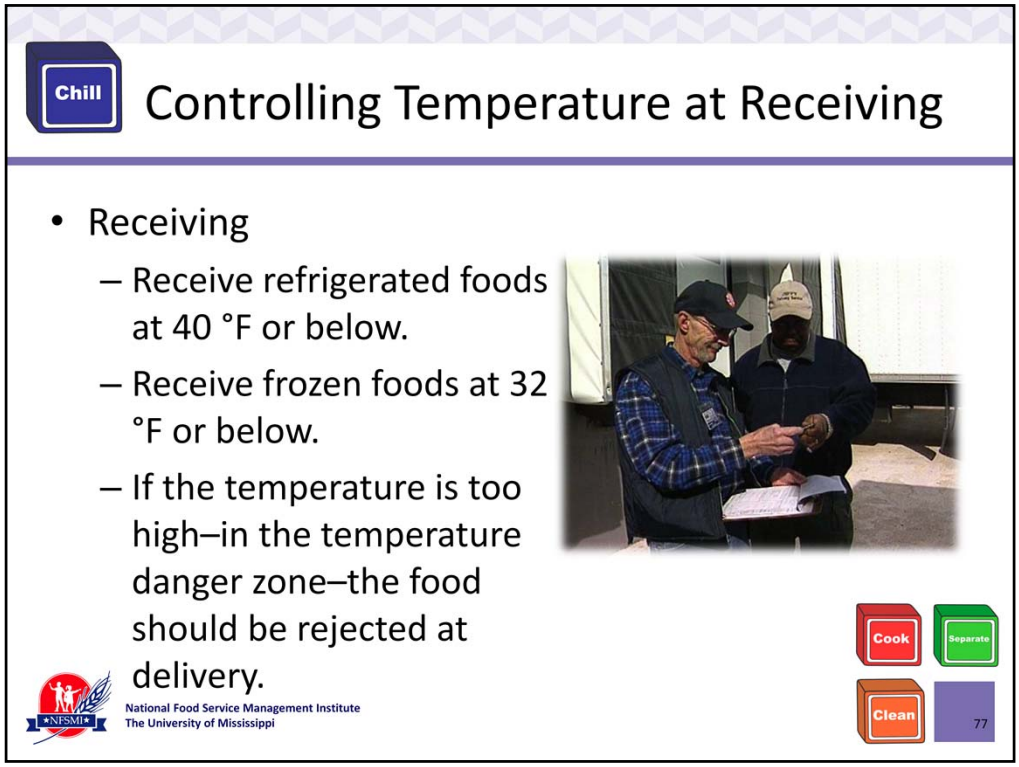


Cooking—Cook food to the appropriate temperature for that item. **Holding**—Hold hot foods at 140 °F or above. **Serving**—Serve hot food hot. Keep hot food above 140 °F.

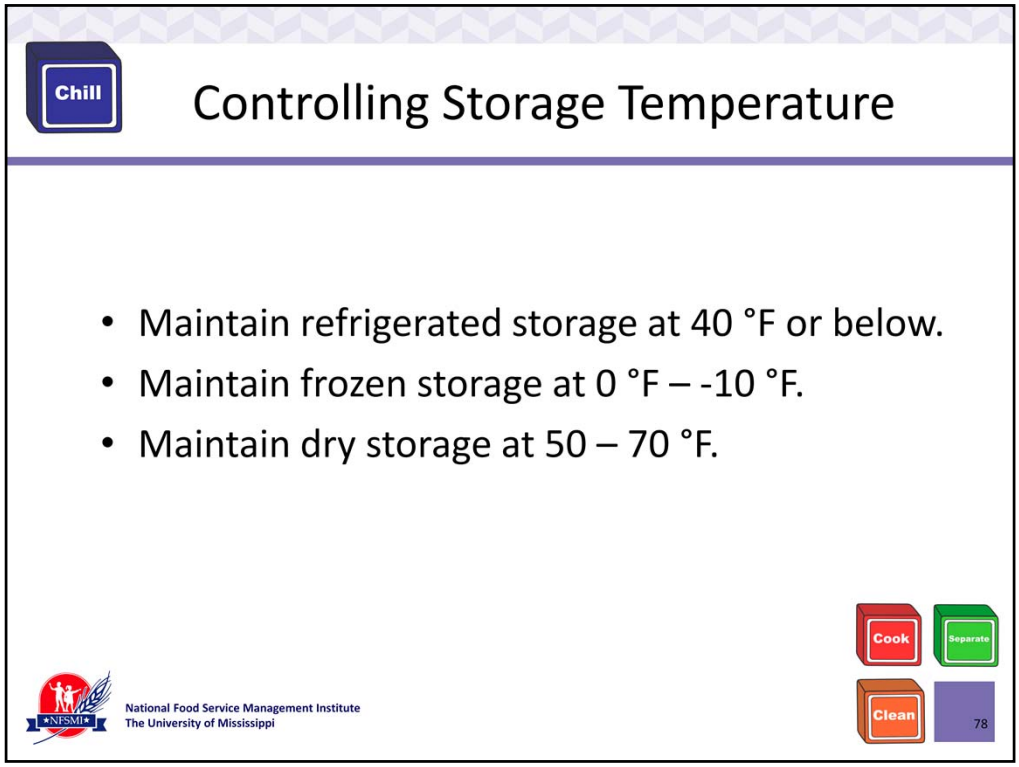


There are many steps in a foodservice operation where the temperature of cold food needs to be maintained: receiving, storing, preparing, and cold holding.

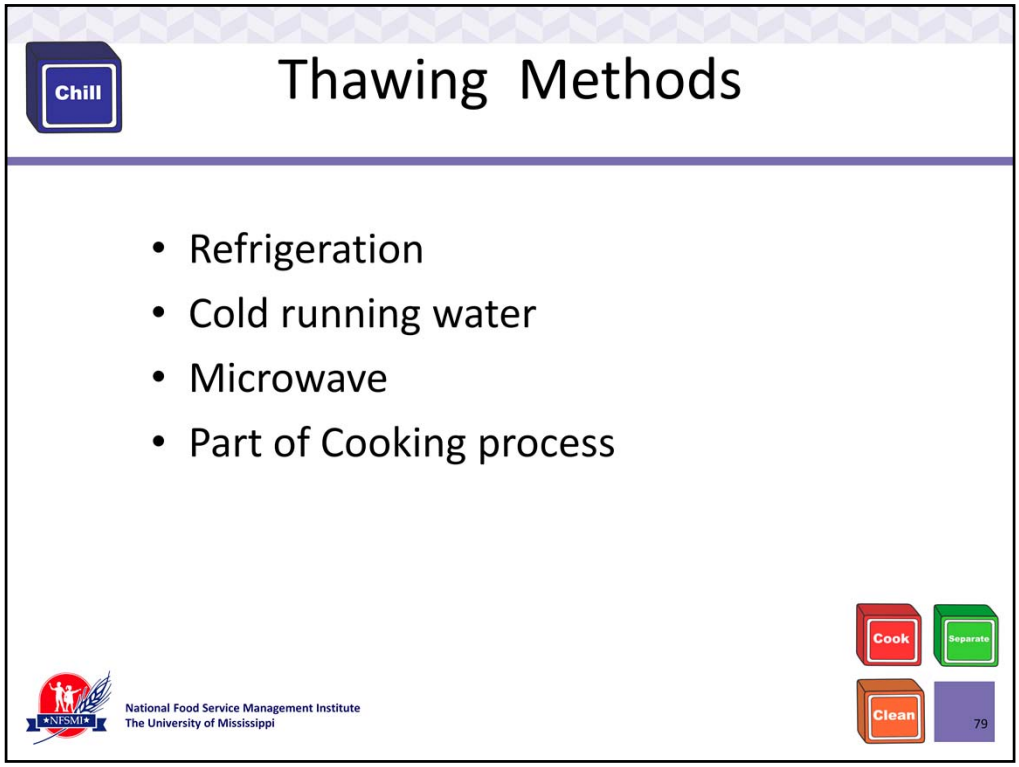
To keep cold foods cold; Receive refrigerated foods at 40 °F or below. Maintain refrigerator temperatures at 40 °F or below. Maintain milk coolers at 40 °F or below. Serve cold food at 40 °F or below. Refrigerate.



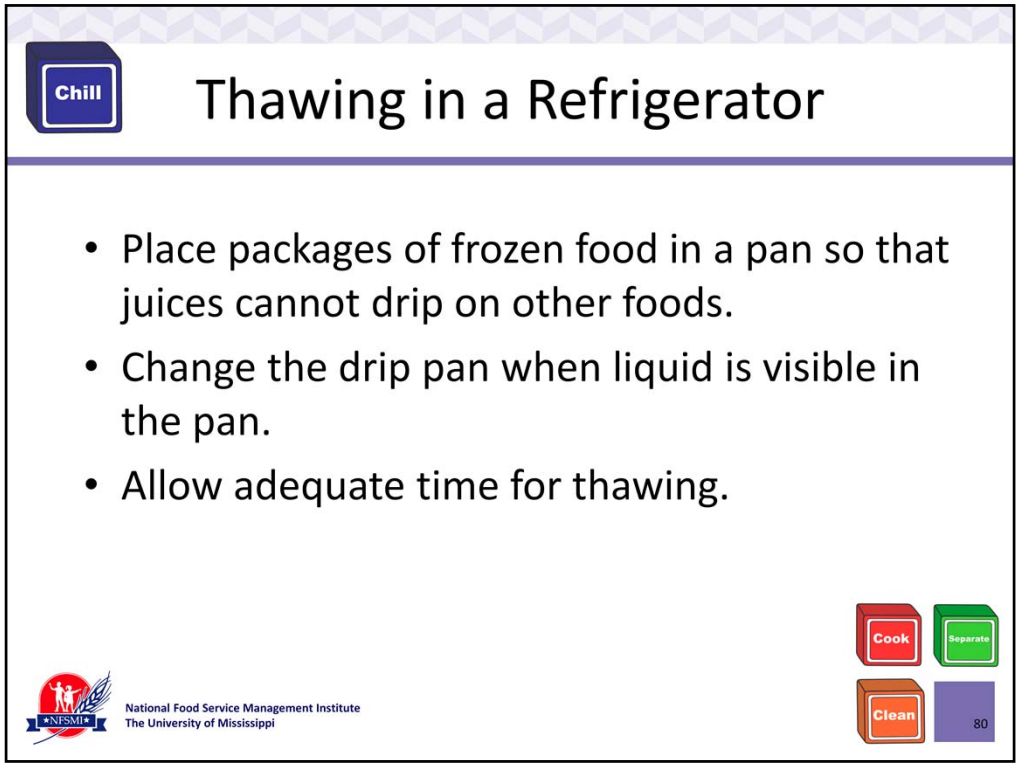
At the receiving step, the temperature of cold foods is checked. Receive refrigerated foods at 40 °F or below, and frozen foods at 32 °F or below. If the temperature is too high–in the temperature danger zone–the food should be rejected at delivery.



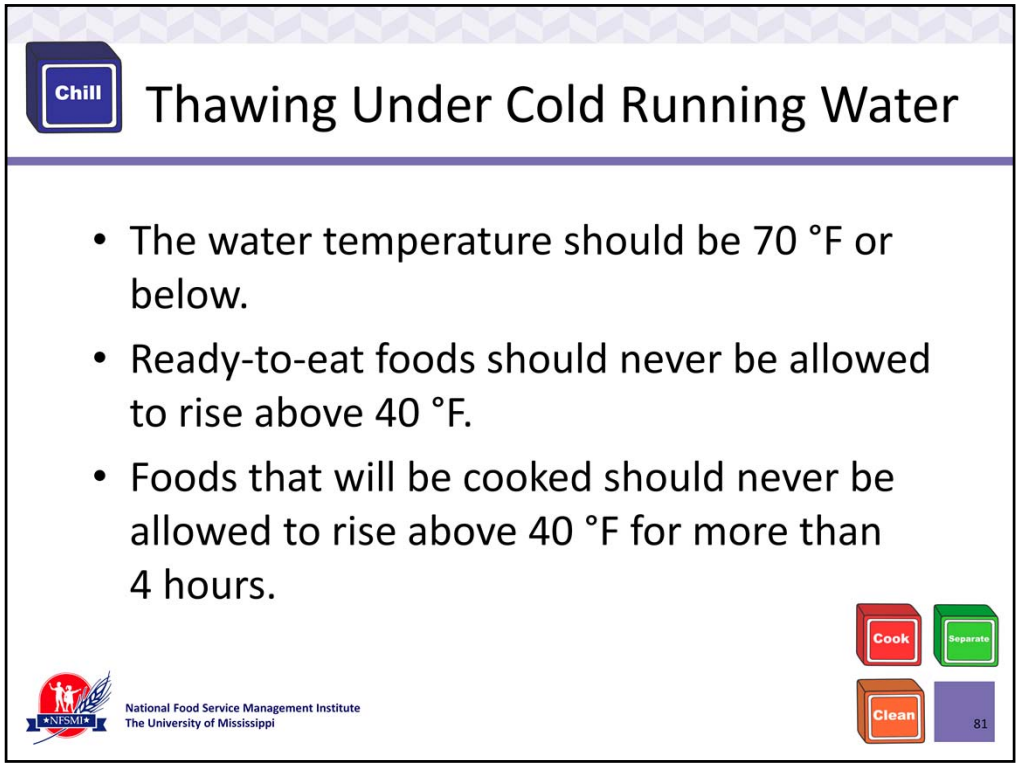
Food is a perishable product so it is important to store it at the appropriate temperature for an appropriate time. Dry storage areas should be maintained at 50–70 °F, refrigerated storage areas should be maintained at 40 °F or below, and frozen storage areas should be maintained at 0 °F – -10 °F.



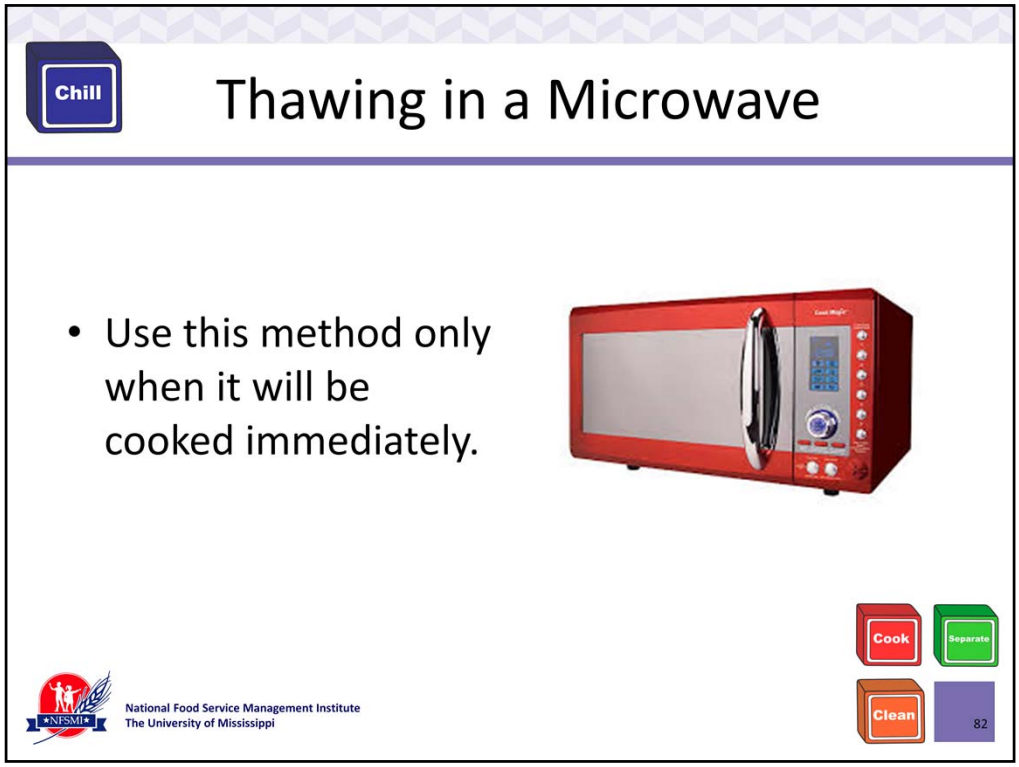
Thawing frozen food correctly is important for keeping food safe to eat. Freezing food keeps most bacteria from multiplying, but it does not kill them. If food is allowed to enter the temperature danger zone of 40 °F–140 °F, bacteria will grow rapidly. The USDA FSIS guidelines state that the temperature of food should not exceed 40 °F during the thawing process. Cooks must plan ahead so that they can use an appropriate method for thawing. There are four acceptable methods for thawing food: in a refrigerator, under cold running water, in a microwave, or as part of the cooking process.



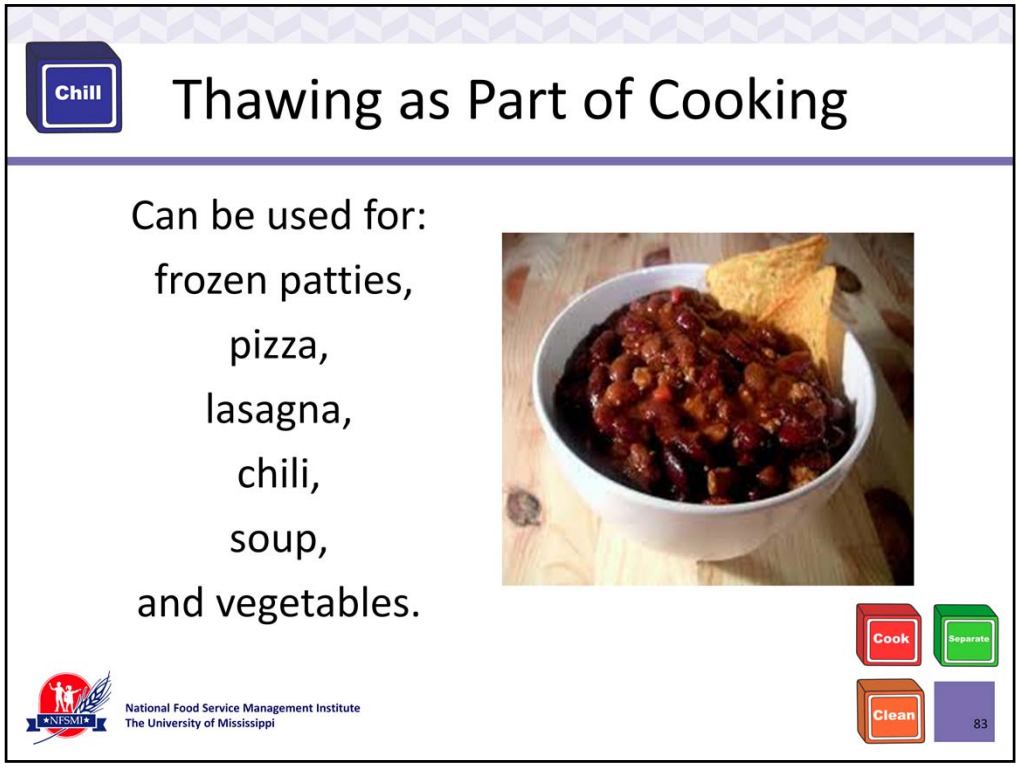
Thaw frozen food in the refrigerator at a temperature at or below 40 °F. Place packages of frozen food in a pan so that juices cannot drip on other foods. Change the drip pan when liquid is visible in the pan. Allow adequate time for thawing. A small quantity of food may thaw in one day, while a large product such as a turkey may take several days.



Thaw frozen food completely submerged under clean, drinkable running water. The water temperature should be 70 °F or below. Check the water temperature with a clean, sanitized, and calibrated thermometer if cold running water is used for thawing. The water should be at sufficient velocity as to agitate and float off loose particles in an overflow. Ready-to-eat foods should never be allowed to rise above 40 °F. Foods that will be cooked should never be allowed to rise above 40 °F for more than 4 hours, including thawing and cooking time or thawing and chilling time. Thaw frozen food in a microwave oven only if it will be cooked immediately.



Thaw frozen food in a microwave oven only if it will be cooked immediately.



Thawing frozen food can be part of the cooking process. This method typically is used for products such as frozen patties, nuggets, pizza, lasagna, chili, soup, and vegetables.

Monitoring during Thawing

Thawing Method	When to Check
Refrigerator	At end of thawing process
Under running water	Every 30 minutes
Microwave	At end of cooking process
As a part of cooking	Same procedure as for cooking

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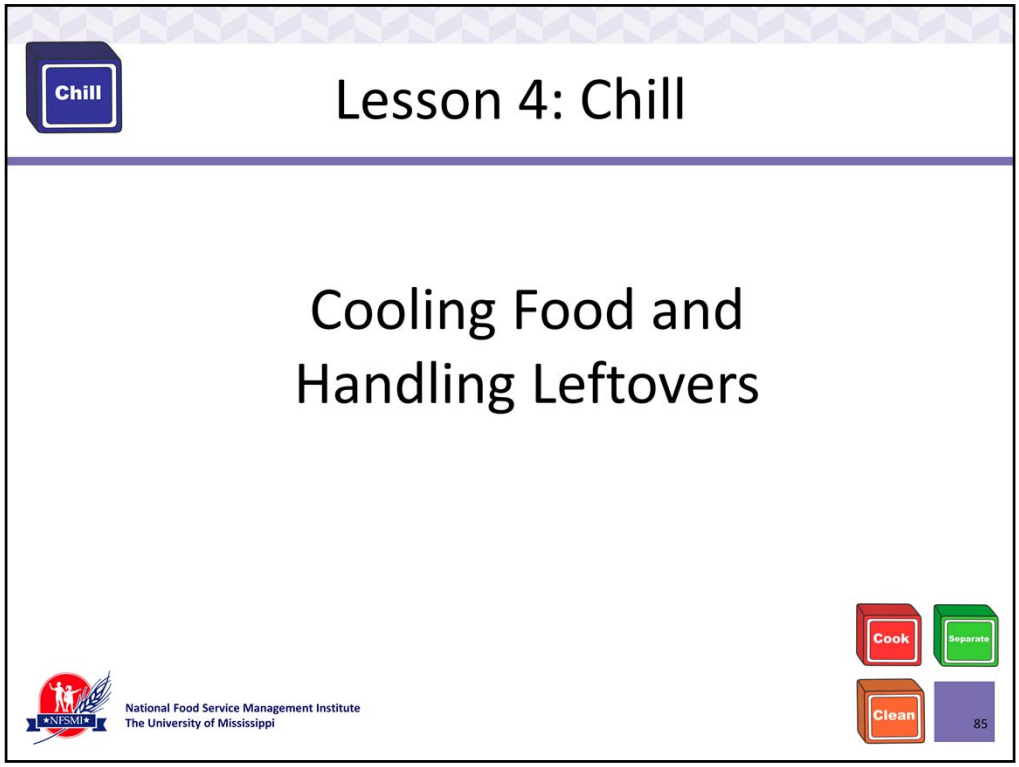
Check temperature of food during the thawing process using an infrared thermometer or a calibrated stemmed thermometer.

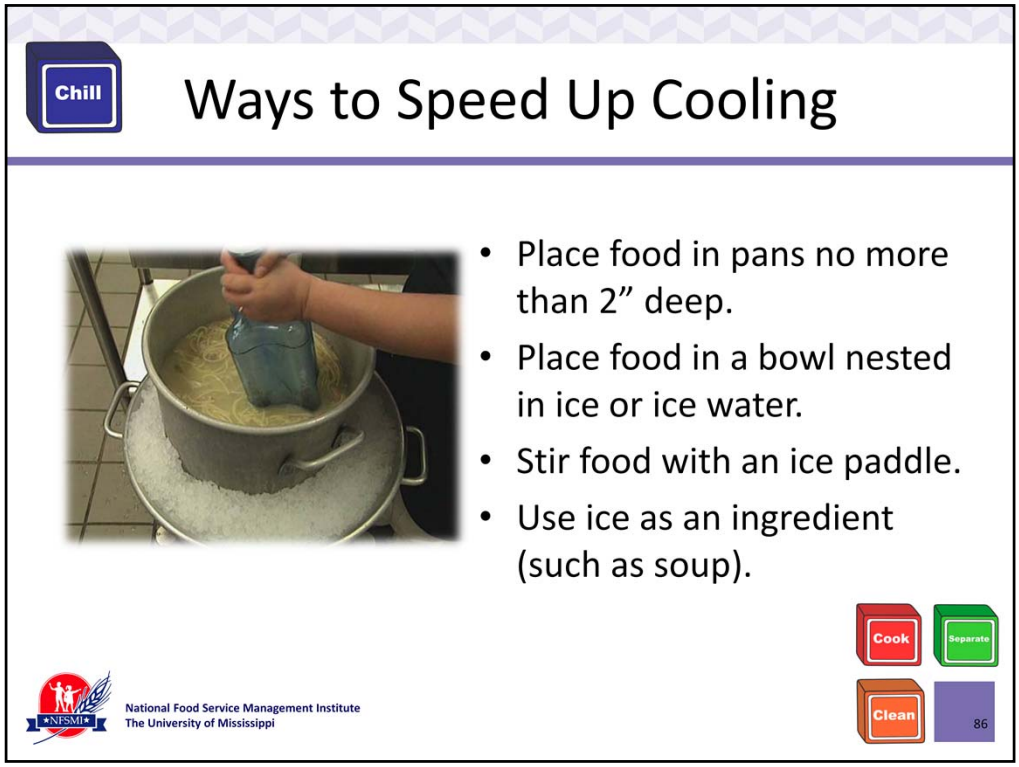
For thawing as part of the cooking process, temperatures should be checked as they would be for cooking. Food should be heated to the end-point cooking temperature within 2 hours.

For refrigerator thawing, check the temperature at the end of the thawing process. If the refrigeration unit is working properly, the food will never exceed 40 °F.

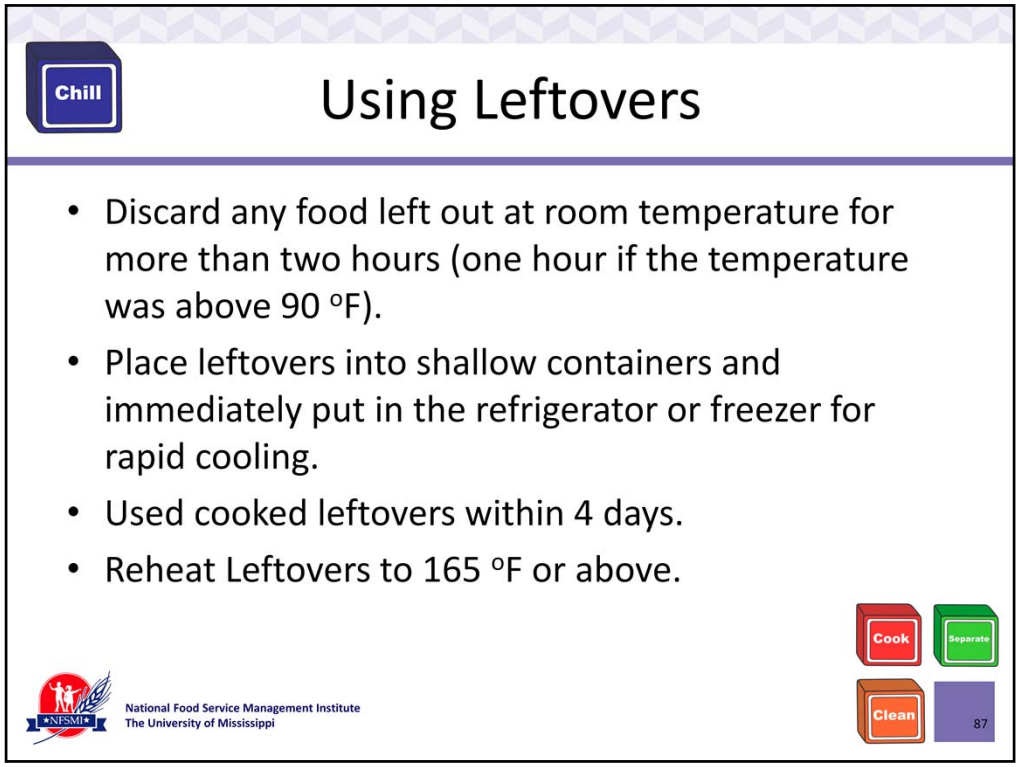
For microwave thawing, food should be cooked immediately and temperature checked at the end of the cooking process, which should not exceed 2 hours. For thawing in running water, check the temperature of the food every 30 minutes.



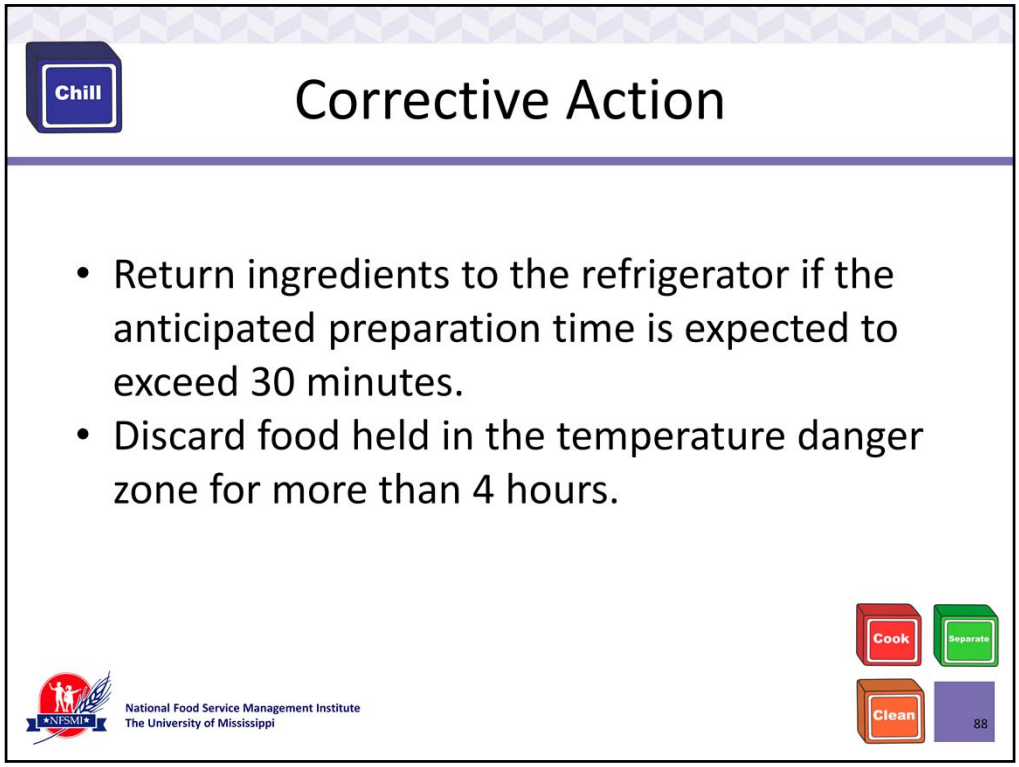
One of the most common causes of foodborne illness is improper cooling of cooked foods. Because bacteria are everywhere, even after food is cooked to a safe internal temperature, they can be reintroduced to the food and then reproduce. For this reason, leftovers must be put in shallow containers for quick cooking and refrigerated within two hours. Cooling is a step that may not occur frequently, or may not be done at all, in some child care centers. If cooling is done, temperature control is extremely important.



Rapidly chill food using an appropriate cooling method if the temperature is found to be above 40 °F and the last temperature taken was 40 °F or below and taken within the last 2 hours. The USDA FSIS guidelines requires that foods be cooled from 140 °F–70 °F within 2 hours and from 70 °F–40 °F within an additional 4 hours. If food is not cooled from 140 °F–70 °F within 2 hours, the food must be reheated to 165 °F for 15 seconds and the cooling process started over. Take actions to speed the cooling process such as dividing food into smaller portions, using ice water baths, using an ice paddle, and stirring.

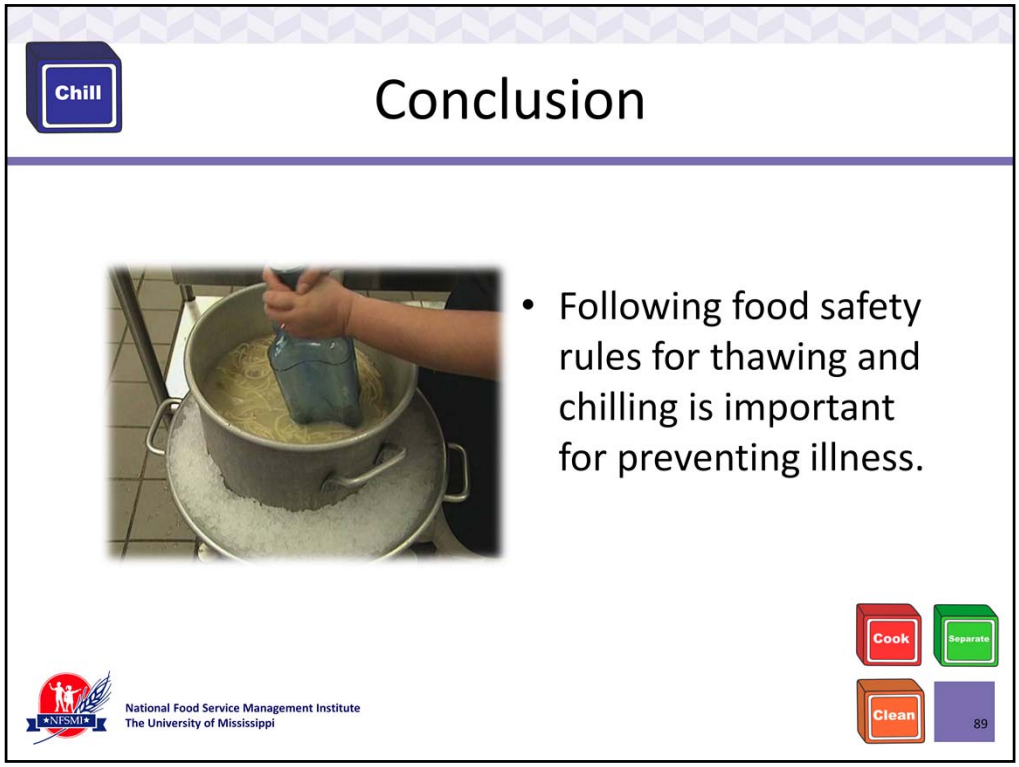


Many child care operations have a policy not to serve leftovers to children. If you do use leftovers, here are some guidelines for handling leftovers: Discard any food left out at room temperature for more than 2 hours (one hour if the temperature is above 90 °F). Place leftovers into shallow containers and immediately put in the refrigerator or freezer for rapid cooling. Use cooked leftovers within 4 days. Reheat all leftovers to 165 F or above.

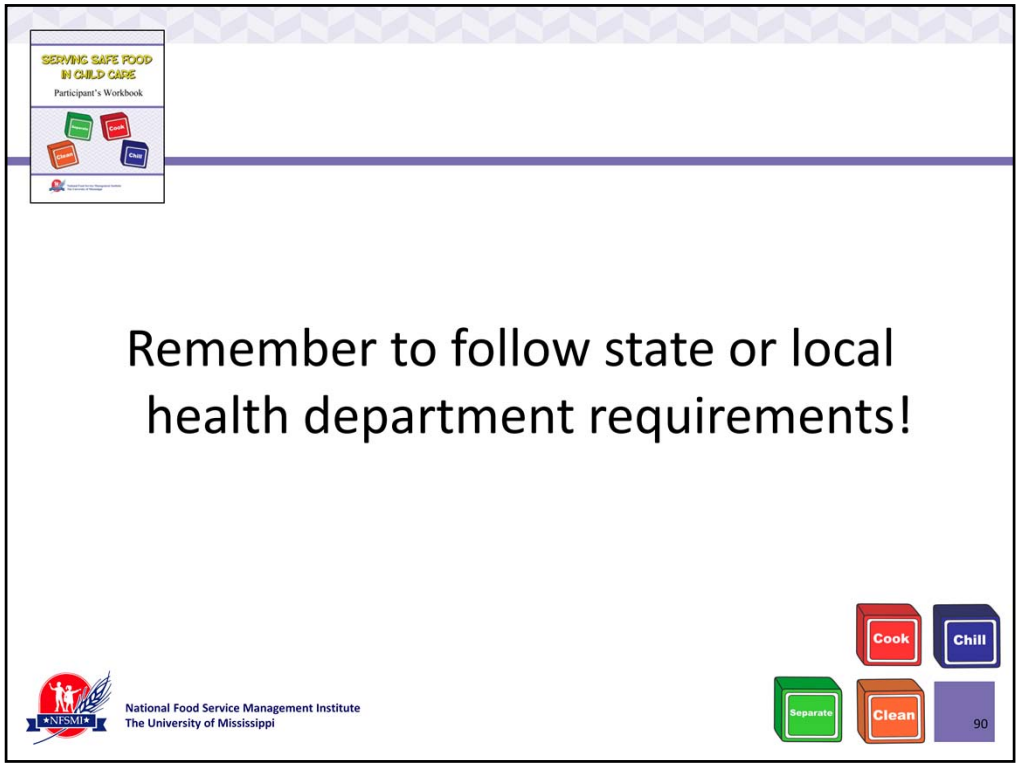


Take corrective action if appropriate thawing temperature of the food is not met**.** If water temperature is warmer than 70 °F from the tap, use another thawing method. Record corrective actions taken on production record or temperature log.

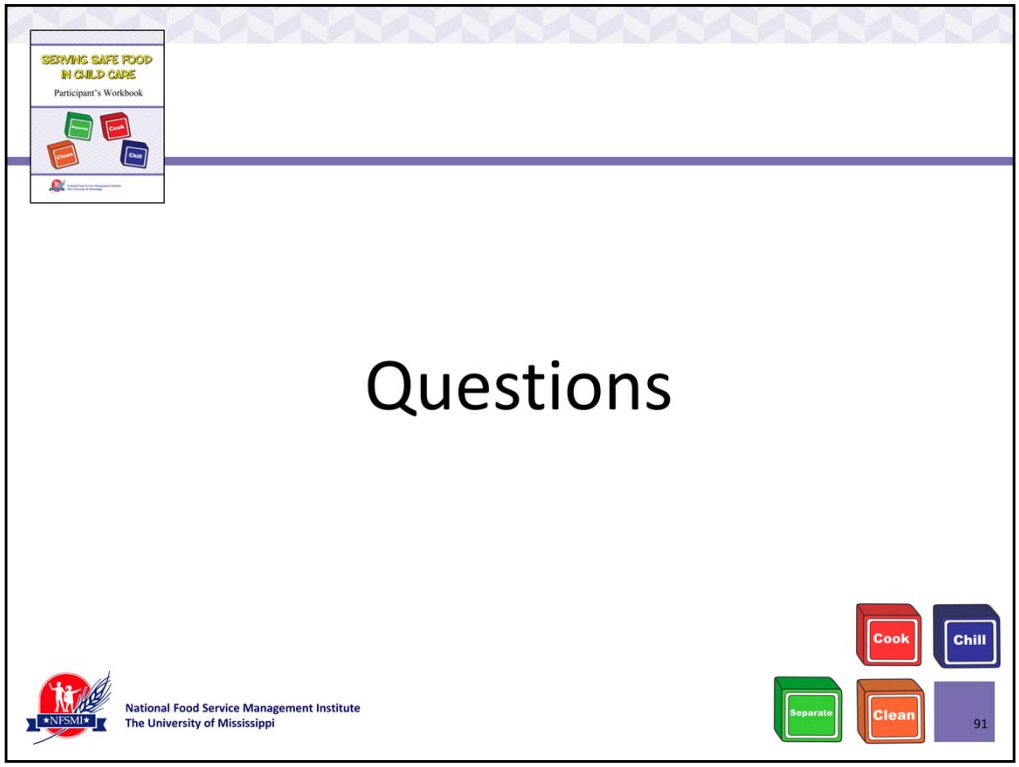
Remember, never let raw meat, poultry, eggs, cooked food, or fresh cut fruits and vegetables sit at room temperature more than two hours before putting them in the refrigerator or freezer (1 hour when the temperature is above 90 °F).



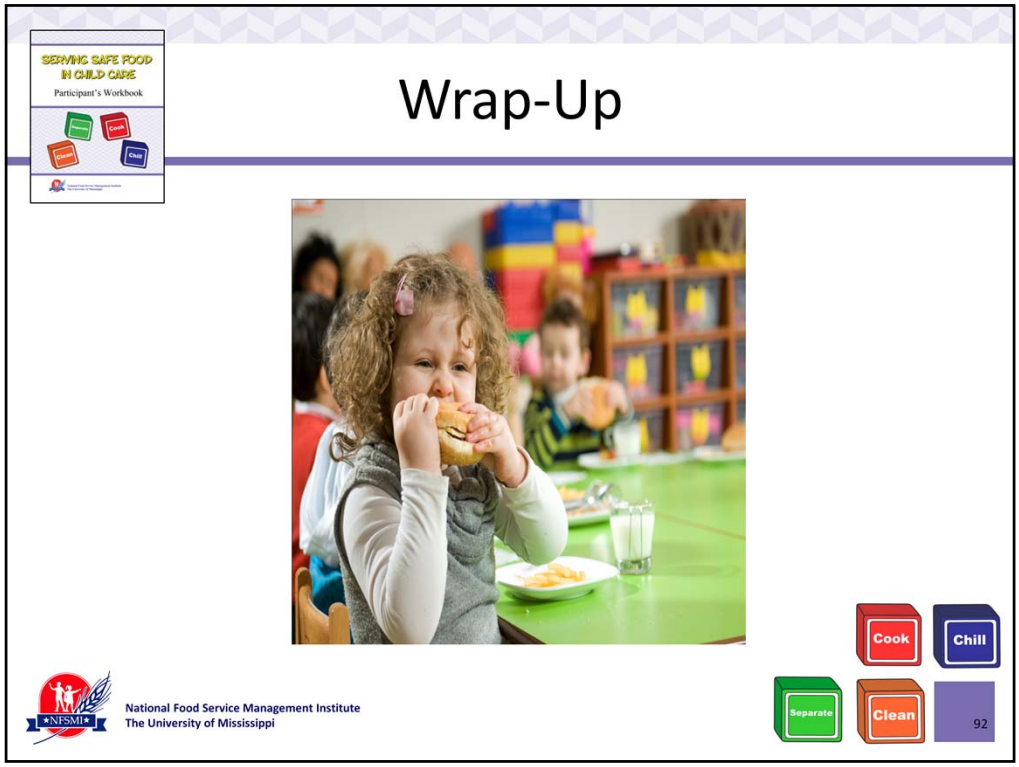
Following food safety rules for thawing and chilling is important for preventing illness. Remember the important temperatures and timing involved with cooling food. Cool food from 140 °F to 70 °F within two hours; cool from 140 °F to 40 °F in a total of 6 hours.



We have covered quite a few methods for keeping foods chilled at storing, preparing, and cold holding. Keep in mind the old adage "Keep cold foods cold and hot foods hot" and that means keeping them out of the temperature danger zone.



Any questions?



Lets take a quick moment to revisit the assessment we took at the beginning.

Do:

Hand out post assessment. Let participants have a couple of minutes to review.

I hope all the questions you were unsure about when we started are correct now! Thank you for taking the time to learn how to Serve Safe Food in your childcare center!

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