



**Eat Well, Live Well**  
**Lesson: Food Safety for Older Adults**

**Getting Started:**

1. Review lesson plan before each session
2. Copy handouts.
  - a. *Four Steps to Food Safety*
  - b. *Safe Cooking Temperature Chart*
  - c. *Thermometer Tips*
  - d. *Foods Seniors are Advised Not to Eat*
3. Gather supplies needed for lesson and activities.

**Supplies Needed:**

1. Handouts for participants
2. Questions and answers for game.
3. Prizes for Game:
  - a. First place: four instant hand sanitizers, or food thermometers
  - b. Second place: four antibacterial soaps, or freezer packs, or freezable containers

**Beginning the Lesson:**

1. Introduce yourself and the organization you represent.
2. Summarize the lesson by reading the objectives.
3. Let the group know the lesson will be informal and they can ask questions any time.

**Note to Educator:**

The Food Safety lesson is divided into four topics: Clean, Separate, Cook, and Chill. Please review the materials and make any adjustments according to the needs of your audience. For example, you may decide to split this lesson into two lessons, one for Clean and Separate, and another for Cook and Chill.

**Objectives:** The participants will:

1. Learn about foodborne illnesses and who is at increased risk for getting sick.
2. Understand the importance of keeping hands and kitchen surfaces clean and how to follow safe cleaning procedures.
3. Learn about cross-contamination and ways to avoid cross-contamination in their kitchens.
4. Know safe cooking procedures, including safe cooking temperatures and reheating leftovers.
5. Learn how to chill foods properly and store foods safely in the refrigerator and freezer.



## Script

### Introduction

Today we are going to talk about safely handling, preparing, and storing food. I know all of you have a lifetime of experience shopping and preparing food. In fact, federal studies show that older adults do a better job of handling food safely than any other group. Even so, when it comes to your health and safety, you can never know too much. Although we have one of the safest and most healthy supplies of food in the world, a lot has changed in your lifetime-- from where food is produced, to the way it is prepared and eaten.

What is also changing is your ability to fight-off dangerous bacteria that may invade your body through the food you eat. Foodborne illnesses are caused by harmful bacteria in your food. You can't see, smell or taste these bacteria, but they can cause you to get violently sick within 20 minutes or up to 6 weeks of eating them, depending on the type of bacteria. *How many of you know you have gotten sick from a foodborne illness?* The Center for Disease Control and Prevention (CDC) estimates that 76 million Americans get sick, more than 300,000 are hospitalized, and 5,000 die each year from illnesses caused by contaminated foods or beverages. If you get a foodborne illness, you might be sick to your stomach, vomit, or have diarrhea. Or, you could have flu-like symptoms with a fever and headache, and body aches. The best thing to do is call your doctor if you become ill.

### Why are Older Adults more Susceptible to Foodborne Illnesses?

Everyone's ability to fight off disease is different, but seniors have a greater risk of getting sick from harmful bacteria in food. Our immune systems weaken as we age, making it easier to get sick in our later years. Also, as we get older, our stomach produces less acid, which helps to reduce the number of bacteria in our intestinal tract. With less stomach acid, we have an increased risk for getting sick from harmful bacteria. Also, illnesses associated with advanced age, such as diabetes, cancer, and kidney disease, increase our risk for foodborne illness.

Foodborne illnesses can be dangerous, especially for seniors, but it's not that hard to prevent. By following the basic rules of safety, you can prevent foodborne illness for yourself and others. We are going to go over four basic rules for food safety- **Clean, Separate, Cook and Chill**. Refer to your handout, *Four Steps to Food Safety*, for a summary of these rules.



## Four Steps to Food Safety

### 1. Clean:

- Wash your hands, utensils, and all surfaces with hot, soapy water before and after preparing food.
- Wash cutting boards with hot, soapy water after each use.
- Use paper towels or cloth towels to clean kitchen surfaces. Be sure to wash cloth towels often in the hot cycle of your washing machine.
- Wash all fruits and vegetables well under running water.



### 2. Separate:

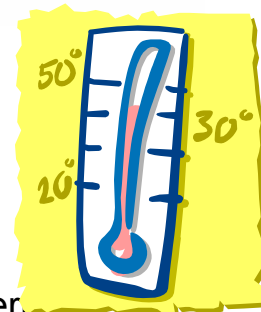
- Wash hands, cutting boards, dishes, and utensils with hot, soapy water after they touch any raw meat, poultry, or seafood.
- Use one cutting board for fresh produce and another for raw meats.
- Never place cooked food back on the same plate that previously held raw food.
- Separate and keep sealed all raw meats from other foods in your grocery cart and refrigerator.
- Do not reuse marinades that were used for raw meat, poultry or seafood, unless it is boiled before reusing.





### 3. Cook:

- Use a food thermometer to measure the food's internal cooking temperature to ensure safe cooking.
- Use the Safe Cooking Food Chart to determine safe internal temperatures.
- When using a microwave, cover, stir, and rotate food during cooking.
- Throw away leftovers that have been reheated once already.



### 4. Chill:

- Refrigerate or freeze perishables within 2 hours.
- Thaw foods in the refrigerator, in cold water, or in the microwave, if you are cooking it immediately.
- Separate large amounts of leftovers into small, shallow containers.
- Don't overstuff the refrigerator.
- Keep foods out of the Temperature Danger Zone (unsafe temperatures between 40-140°F, which allow bacteria to grow rapidly).
- Throw out foods that spoil easily, such as meat and dairy, that are left out at room temperature for more than 2 hours.





## Topic 1: **Clean: Wash Hands and Surfaces Often**

Harmful bacteria can spread throughout the kitchen on cutting boards, countertops, utensils, and sponges.

*Did you know that 20% of consumers don't wash their hands and kitchen surfaces before preparing food?*

We want to make sure we are not one of them! Follow these three tips below to keep your hands, surfaces, and utensils safe from harmful bacteria.

### 1. **Wash Up:**

- Wash your hands, utensils, and all surfaces with hot, soapy water before and after preparing food and especially after preparing raw meat, poultry, eggs or seafood.
- Using a disinfectant cleaner or a mixture of bleach and water on surfaces can provide some added protection against bacteria.
- Remember to wash your hands after using the bathroom, changing diapers, or handling pets. Clean under your fingernails, also.

### 2. **Be Careful with Cutting Boards:**

- Cutting boards (including plastic, non-porous, acrylic, and wooden boards) should be run through the dishwasher or washed in hot, soapy water AFTER EACH USE.
- Discard boards that are excessively worn.

### 3. **Toss those Towels:**

- Consider using paper towels to clean kitchen surfaces. When done, throw away the towel.
- If you use cloth towels, wash them OFTEN in the hot cycle of your washing machine.

*How long do you think you should wash your hands to get bacteria off your hands? Five seconds? Ten seconds? What about 20 seconds? The answer is at least 20 seconds! To ensure you wash for 20 seconds, try singing "This is the Way We Wash Our Hands" two times.*



### **Safe Handling of Fruits and Vegetables:**

Although we hear the most about being careful with raw meat, fruits and vegetables can be a source of harmful bacteria. Here are a few steps that you can take to safely prepare fruits and vegetables:

1. Wash your hands and clean and sanitize your cutting board and utensils with hot, soapy water before and after using them.
2. To remove any lingering dirt, thoroughly wash fresh produce under running water. Don't use soap or other detergents.
3. If necessary, use a vegetable brush to remove any surface dirt from fruits and vegetables with firm surfaces, such as potatoes or carrots.
4. Cut away any damaged or bruised areas on produce, because bacteria can thrive in these places.
5. Use a smooth, durable and nonabsorbent cutting board that can be cleaned and sanitized easily.
6. Store cut, peeled and broken apart fruits and vegetables, such as melon balls, at or below 40°F in the refrigerator.



**This is the Way We Wash Our Hands**

(sing two times to ensure hand washing for 20 seconds)

This is the way we wash our hands

Wash our hands

Wash our hands

This is the way we wash our hands

To keep our bodies clean



## Topic 2:

## Separate: Don't Cross-Contaminate

Now that we talked about keeping our hands and kitchen clean, we are going to talk about preventing cross-contamination. Cross-contamination is the scientific word for when harmful bacteria spread from one food or surface to another. *Did you know that improper handling of raw meat, poultry, and seafood creates a perfect environment for cross-contamination?* Then, harmful bacteria can spread to food and throughout the kitchen.

Here are some tips from the USDA and FDA to avoid cross-contamination in your kitchen:

- **Lather Up:** Always wash hands, cutting boards, dishes, and utensils with hot, soapy water after they come in contact with raw meat, poultry, and seafood.
- **Take Two:** If possible, use one cutting board for fresh produce and use a separate one for raw meat, poultry, and seafood.
- **Clean Your Plate:** Never place cooked food back on the same plate that previously held raw food.
- **Safely Separate:** Separate raw meat, poultry, and seafood from other foods in your grocery cart and in your refrigerator.
- **Seal It:** To prevent juices from raw meat, poultry, or seafood from dripping onto other foods in the refrigerator, place these raw foods in sealed containers or plastic bags.
- **Marinating Mandate:** Sauce that is used to marinate raw meat, poultry, or seafood should not be used on cooked foods, *unless* it is boiled before applying.

We all know—it's not easy washing your hands and utensils every time they touch raw meat, but slacking off is not worth the health risk! Each time you avoid washing with hot, soapy water, but instead, wipe your contaminated hands or counter with a towel, you dramatically increase your risk of getting sick. You cannot see, smell, or taste the harmful bacteria that could be traveling on your hands or in your kitchen, so be extra-careful!

**Topic 3: Cook: Using Proper Temperatures**

Now that we know how to avoid cross-contamination, we are going to talk about how to cook foods properly. *How do you determine when a food is done cooking?* Well, food safety experts agree that foods are properly cooked when they are heated for a long enough time—and at a high enough temperature—to kill harmful bacteria that can cause foodborne illness. And these temperatures vary, depending on the type of food.

**Measure It:**

*How many of you have used a food thermometer before?* Food thermometers are easy to use and inexpensive at stores that carry kitchen supplies. They cost only a few dollars but can help you from getting sick from harmful foodborne bacteria. Look at your handout *Thermometer Tips* to learn more about the different types of thermometers. When measuring the temperature of the food, be sure to insert the thermometer in the thickest part of the meat, poultry, egg dish or casserole. Always use a *clean* thermometer, washing it after each use in hot, soapy water.

**Cooking Temperatures are Key:**

Look at your *Safe-Cooking Temperature Chart* for the temperatures at which various foods should reach for safe cooking. We will highlight just a few:

- Cook roasts and steaks to at least 160°F. Whole poultry should be cooked to 180°F for doneness in the thigh. Chicken breasts should be cooked to 170°F.
- Cook ground beef, where bacteria can spread during processing, to at least 160°F.
- Cook eggs until the yolk and white are firm. Don't use recipes in which eggs remain raw or only partially cooked. Do not eat cookie or cake batter that was made with raw eggs!
- Fish should be opaque and flake easily with a fork.

Once the foods are cooked, you want to serve them immediately to prevent any bacteria from growing as the food cools. On a buffet table, hot foods should be kept at 140°F or higher. You can use chafing dishes, crock pots and warming trays to keep foods hot.

**Microwaving and Reheating Leftovers:**

When cooking in a microwave oven, make sure there are no cold spots in food where bacteria can survive. For best results, cover food, stir, and rotate for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking.

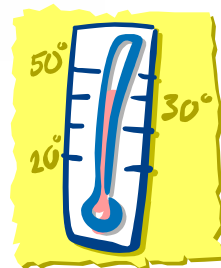
If you are reheating foods, leftovers should be heated to 165°F. Bring all sauces, soups and gravies to a rolling boil to make sure all harmful bacteria are killed. It is very important that you do NOT reheat leftovers twice. Instead, when you are storing leftovers, separate portions in containers, like freezable bags or plastic Tupperware, and reheat only the amount you are going to eat. Throw away any reheated leftovers that you do not finish.



## Safe-Cooking Temperature Chart

<b>Beef/Pork</b>	
Beef roasts and steaks	160°F for medium
Ground beef	At least 160°F
Raw sausages	160°F
Ready-to-eat sausages	165°F
Pork roasts and chops	160°F for medium, 170°F for well-done
Ground patties	160°F for medium, 170°F for well-done
<b>Poultry</b>	
Whole poultry	180°F
Chicken breasts	170°F
Stuffing	165°F
<b>Eggs</b>	
Whole eggs	Until the yolks & whites are firm
<b>Fish</b>	
Fish fillets	Until it's opaque & flakes easily with fork
Oysters or shellfish	Avoid eating uncooked
<b>Leftovers</b>	
Heat thoroughly to at least 165°F	
<b>Sauces, soups &amp; gravies</b>	
Bring to rolling boil when reheating	





## Thermometer Tips

Use a food thermometer to make sure the food you are cooking reaches a safe internal temperature. Plus, you won't overcook your food! There are several types of thermometers available:

### Dial Oven-Safe:

This type of thermometer is inserted into foods before cooking them and remains in the food throughout cooking. This type helps you know exactly when thick cuts of meat, such as roasts or turkeys, are cooked to the correct temperature. This type is NOT appropriate for use with food that is thin, like a boneless chicken breast. (Pop-up timers are reliable to within 1 to 2 degrees, but it's best to check with a food thermometer)

### Dial Instant-Read:

This type is **not** designed to stay in the food during cooking, but is used when you think the food is done cooking. Just insert the instant-read thermometer sideways into the thickest part of the food for 15 to 20 seconds, and the dial will show the internal temperature. This type can be used for thinner foods, such as chicken breasts and hamburger patties.

### Digital Instant-Read:

This type does **not** stay in the food during cooking, but is used when you think the food is done cooking. The advantage to this type is that the heat-sensing device is at the tip of the probe. Place the tip of the probe in the thickest part of the food, and 10 seconds later, the internal temperature will be displayed. This is great for thin foods like hamburger patties.



## Topic 4: Chill: Refrigerate Promptly

Chilling foods properly is just as important as cooking them safely. Many people do not even think twice about leaving food out on the counter. For example, *at Thanksgiving, how long is the average serving dish left out?* Usually too long! Bacteria grow most rapidly in the *Danger Zone*, which is the unsafe temperatures between 40 and 140°F. You can keep these bacteria from growing on your food by refrigerating them *quickly*. It's important to periodically check the temperature of your refrigerator with a thermometer to make sure it stays at or below 40°F. According to the Partnership for Food Safety Education, there are four main points to remember about safely chilling foods:

1. **The Chill Factor:** Refrigerate or freeze perishables, prepared foods, and leftovers within 2 hours or less. Marinate foods in the refrigerator.
2. **The Thaw Law:** Never defrost food at room temperature. Thaw food in the refrigerator, in cold water, or in the microwave if you'll be cooking it immediately.
3. **Divide and Conquer:** Separate large amounts of leftovers into small, shallow containers for quicker cooling in the refrigerator.
4. **Avoid the Pack Attack:** Don't overstuff the refrigerator. Cold air must circulate to keep food safe.

### Serving Food at a Buffet or Picnic:

Keeping foods cold at a buffet, picnic or barbeque can be a challenge, especially during hot weather. *How do you keep your cold foods at 40 degrees or cooler when you are outside?* First, keep all perishable foods chilled right up until serving time. Then, try placing containers of cold food on ice for serving to make sure they stay cold. It's particularly important to keep custards, cream pies, and cakes with whipped-cream or cream cheese frostings refrigerated. Don't serve them if refrigeration is not possible. It's better to be safe than get the whole family sick!

### Road Trips:

When you are traveling with food, keep the cooler in the air-conditioned passenger compartment of your car, rather than in the hot trunk. Always use ice or cold packs, filling your cooler completely with food and ice packs. A full cooler will maintain its temperatures longer than a partially filled cooler.

### Doggie Bags and Groceries:

If you have leftovers from a restaurant, be sure to put it in the refrigerator within 2 hours of *servicing*. When grocery shopping, be aware of the time you take and how long cold items have been sitting in the cart and trunk. You want to make sure no more than 2 hours pass from the time you take the food out of the cooler to the time you place it in the refrigerator.

It's very important to discard any perishable food left at room temperature for longer than 2 hours. The little bit of money lost is less than it would cost to battle a foodborne illness.



## Review:

In today's lesson, we went over the proper procedures for safely handling, preparing, and storing food. *Can anyone tell me the four main topics we went over?* The four topics were:

1. **Clean:** Wash your hands, work surfaces, and utensils frequently when you are cooking and after using the bathroom, changing diapers, or handling pets.
2. **Separate:** Separate cooked and uncooked foods, as well as foods eaten raw and those cooked before eating, to avoid cross-contamination.
3. **Cook:** Cook food to a safe internal temperature to destroy any harmful bacteria.
4. **Chill:** Chill foods to keep them out of the Temperature Danger Zone, the unsafe temperatures between 40 and 140°F that allow bacteria to grow most rapidly.

**Remember—you cannot tell if a food is unsafe by how it looks, smells, or tastes. Some foods that look, taste and smell right may actually be contaminated. By following these four basic rules of food safety, you can help prevent a foodborne illness.**

Before we start our activity, I want to go over some foods that seniors are advised not to eat. These foods contain bacteria that can be especially harmful to seniors and cause serious illness. Refer to your handout, *“Foods Older Adults are Advised Not to Eat.”* You can look at these on your own to help prevent getting sick from harmful bacteria. *(Or if you have time, you can read them in class.)*

## Activity: (for more mobile groups that like to move around and work in teams)

Now that we all have learned more about food safety, we are going to play *Don't Put Yourself In Jeopardy*. *Who has seen the game show Jeopardy on TV?* This game is just like real Jeopardy, but the categories are about how you can *get yourself out of jeopardy* of getting a foodborne illness. The four main categories are: Clean, Separate, Cook, and Chill. There is only one question per category. I am going to break you up into teams of four.

*(Create groups by tables/sections so that there are four people in each team.)*

The first team to go will choose a category, and I will read the question. If you do not know the answer, you can talk with your team members. The first person to raise their hand after I read the question will be called on to answer. A right answer will win 100 points for your team. There will be one bonus question in the end worth 300 points. The team with the most points in the end will win *instant hand sanitizers (or food thermometers, or hand soap, or antibacterial lotion)*. The second place team will win *antibacterial hand soap (or freezer packs- be creative with prizes)*. We are going to start with the group with the oldest member of the senior center. *(Go around and ask how many “years young” they are.)* What category would you like to choose? *Refer to handout for questions and answers.*



## **Foods Older Adults are Advised Not to Eat**



To reduce risks of illness from bacteria in food, older adults are advised not to eat:

- Raw finfish and shellfish, including oysters, clams, mussels, and scallops.
- Raw or unpasteurized milk or cheese.
- Soft cheeses such as feta, Brie, Camembert, blue-veined, and Mexican-style cheese. (Hard cheeses, processed cheeses, cream cheese, cottage cheese, and yogurt are okay)
- Raw or lightly cooked eggs or egg products, including salad dressings, cookie or cake batter, sauces, and beverages such as eggnog. (Foods made from commercially pasteurized eggs are safe to eat.)
- Raw meat or poultry.
- Raw sprouts.
- Unpasteurized or untreated fruit or vegetable juice (these juices will carry a warning label).

**CAUTION**



### ***Don't Put Yourself In Jeopardy:*** **Instructor's Copy** **Questions and Answers**

<p><b>Clean:</b> (100 points)</p> <p>Q: <i>How long should you wash your hands to get bacteria off your hands?</i></p> <p>A: 20 seconds-which is about how long as it takes to sing the song "This is the Way We Wash Our Hands" two times</p>	<p><b>Cook:</b> (100 points)</p> <p>Q: <i>To what internal temperature should you cook ground meat?</i></p> <p>A: To at least 160°F.</p>
<p><b>Separate:</b> (100 points)</p> <p>Q: <i>What is the scientific word for when harmful bacteria spread from one food or surface to another?</i></p> <p>A: Cross-contamination</p>	<p><b>Chill:</b> (100 points)</p> <p>Q: <i>What is the Danger Zone?</i></p> <p>A: The unsafe temperatures between 40 and 140°F, which allow microorganisms to grow rapidly</p>

### **Bonus Question:** (300 points)

Q: Fill in the blank: *You should discard all perishable foods that have been sitting at room temperature for \_\_\_ hours.*

A: 2 hours





***Don't Put Yourself In Jeopardy:***  
**Instructor's Copy**  
**Questions and Answers**



(This game is for those who aren't as active)

Suggestions: Give prizes to those with the **fastest correct** response.

**Clean:**

**Q: How long should you wash your hands to get bacteria off your hands?**

A: 20 seconds-which is about as long as it takes to sing "This is the Way We Wash our Hands" two times.

**Separate:**

**Q: What is the scientific word when harmful bacteria spread from one food to another?**

A: Cross-contamination.

**Cook:**

**Q: To what internal temperature should you cook ground meat?**

A: To at least 160°F.

**Chill:**

**Q: What is the danger zone?**

A: The unsafe temperatures between 40 and 140°F which allow microorganisms to grow rapidly.

**Bonus Question:**

**You should discard foods that spoil easy that have been sitting at room temperature for \_\_\_ hours? (answer = 2)**



## References:

Food Safety. Centers for Disease Control. June 11, 2004.  
<http://www.cdc.gov/communication/tips/foodborne.htm>

Fight BAC! Four Steps—Clean, Separate, Cook and Chill. Partnership for Food Safety and Education. <http://www.fightbac.org/foursteps.cfm>

Nutrition and Your Health. Dietary Guidelines for Americans. USDA, CNPP (2004). 2005 Dietary Guidelines Advisory Committee Report. September 1, 2004.  
<http://www.health.gov/dietaryguidelines/dga2005/report/>

To Your Health! Food Safety for Seniors. FDA/Center for Food Safety and Applied Nutrition. June 11, 2004. <http://vm.cfsan.fda.gov/~dms/seniors.html>

The Food Stamp program provides nutrition assistance to people with low income. It can help buy nutritious foods for a better diet. To find out more, contact your local food stamp office, food bank or senior center.

Primary authors: Angela Ruhlen, MFCS  
[NOAHnet@uga.edu](mailto:NOAHnet@uga.edu)

Primary reviewers: Mary Ann Johnson, PhD & Tiffany Sellers, BS

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## Food Safety Post-Test

<b>Date:</b>	<b>Name:</b>
<b>County:</b>	<b>Age:</b>

**Please Circle your answers:**

- How long should you wash your hands to get bacteria off your hands? (circle one)
  - 10 seconds
  - 1 minute
  - 20 seconds
- You should discard all perishable foods that have been sitting out at room temperature for \_\_\_\_\_ hours.
  - 12 hours
  - 2 hours
  - 24 hours
  - 6 hours
- I plan to use a food thermometer to decide if meat, poultry, and seafood are done before serving:

No	Yes
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- I learned something from this lesson:

No	Yes
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