



Food Safety for Seniors Leader Guide

Lesson objectives:

Participants will avoid foods that are riskier for older adults to eat.
Participants will clean well, cook thoroughly, and cool properly to keep food safe to eat.

Materials:

FCD08-08 Participant handout
FCD08-09 Consent letter/evaluation form

Optional:

To Your Health – Food Safety for Seniors (14 minute FDA/USDA video – available for loan from the OSU Extension Family and Community Development program)

Food Safety for Seniors (Oklahoma State Cooperative Extension)(4 short videos on cooling food, thawing meat properly, storing leftovers, and grilling meat)

<http://www.fcs.okstate.edu/food/food/lessons/video.htm>

Before the lesson:

- Copy the participant handout.
- Copy the consent letter and evaluation form (on separate sheets).
- Print and cut out one set of the Food Safety Myth Information cards.

	<i>Italicized type gives teaching instructions.</i> Bold type is summary statements.
Incidence of foodborne illness It's estimated that there are 76 million cases of foodborne illness in the U.S. every year; 325,000 require hospitalization; 5,000 result in death. Older adults can experience more serious foodborne illness complications that require hospitalization and can result in long-term disability and even death. Although frail elderly (such as nursing home residents) may be most at risk, even older adults in relatively good health can be more susceptible. As we age, our immune system weakens.	Older adults are more susceptible to foodborne illness and experience more serious complications.

<p>Although many seniors have a lifetime of experience preparing food, some of their long-term food handling practices may no longer guarantee food safety. A lot has changed over the years from the way food is produced and distributed to the way that it is prepared and eaten.</p>	<p>Changes in the way food is produced, distributed, prepared and eaten have affected food safety risks.</p>
<p>Changes that affect food safety 1 Bacteria that cause disease (called pathogens) New, more harmful pathogens are contaminating foods. Some are antibiotic resistant, making recovery from foodborne illness more of a concern. E. coli O157:H7 bacteria were first identified at a fast food restaurant outbreak in Medford, Oregon, in 1982.</p> <p>Salmonella enteritidis was another bacteria that was identified in the 1980s. These bacteria can appear in eggs before they are laid. Older adults are especially susceptible to the type of foodborne illness that they cause.</p> <p>Thorough cooking destroys bacteria such as Salmonella and E. coli O157:H7.</p>	<p>New, more harmful bacteria that cause disease (pathogens) are contaminating foods.</p> <p>Thorough cooking destroys bacteria.</p>
<p>2 Food sources A lot of our food is now imported from outside the U.S. Seafood, fruits and vegetables are examples. Occasionally contamination with microorganisms has been a concern. For example, Cyclospora parasites were found on raspberries imported from Guatemala in 1996.</p> <p>Much of our U.S. food supply is now grown/produced in centralized areas and shipped around the U.S. A 2006 outbreak of E coli O157:H7 linked to California-grown raw spinach was experienced nationwide.</p>	<p>A lot of our food is now imported from outside the U.S. Much of our U.S. food supply is now grown in centralized areas. There have been food safety implications.</p>
<p>3 Types of food and equipment to prepare it Food is available in more forms today. We now have a wide choice of ready-to-eat foods at the grocery store (such as frozen entrees). Temperature control and adequate cooking have become even more important.</p> <p>Food preparation equipment has changed over the years, too. When microwave ovens were introduced, we had to learn about rotating food so that it would be evenly cooked and safe to eat. We learned that slow cookers should be started on a high setting to quickly kill bacteria.</p>	<p>Food is available in more forms today. Safe food handling has become even more important.</p> <p>The introduction of new food preparation equipment (such as microwave ovens and slow cookers) had food safety implications.</p>

<p>4 Our bodies</p> <p>As we age, our bodies go through physiological changes:</p> <ul style="list-style-type: none"> ●Our immune system (which fights disease) weakens. That makes us less able to fight off harmful bacteria. The effects of medications and chronic disease (such diabetes, cancer or cardiovascular disease) may weaken our immune system. Having recent major surgery does, too. ●We lose stomach acidity. That increases the likelihood of infection if we ingest a pathogen (harmful bacteria). ●Our digestive system slows down. That allows pathogens to grow and form toxins in our intestines. ●Our liver and kidney function changes. That means that we may not readily rid our bodies of bacterial toxins. ●Our senses of taste, smell and sight change. We may not be able to see or smell that a food is spoiled or that counters or utensils aren't clean. If we're forgetful, we may not remember that we've left food cooling on the kitchen counter. 	<p>Changes in our bodies as we age make us more susceptible to foodborne illness and less able to recover.</p> <p>Our immune system weakens, we lose stomach acidity, our digestive system slows down, our liver and kidney function changes, and our senses of taste, smell and sight change.</p>
<p>Foodborne illness characteristics</p> <p>Bacteria (such as Salmonella and E. coli O157:H7) are responsible for a large share of foodborne illness outbreaks. Viruses (such as Norovirus) also contribute. Parasites and chemicals/toxins cause a smaller portion of outbreaks.</p> <p>The symptoms and duration of foodborne illness vary depending on the type of microorganism, the amount of contaminated food eaten, and the susceptibility of the person. Nausea/vomiting and diarrhea are common symptoms. Symptoms rarely strike immediately after eating a contaminated food. There is usually a lag of several hours, but sometimes it can be several days or weeks before they appear. Often the contaminated food was not eaten at your last meal.</p> <p>Foodborne illness can last for a few hours or for several days. A few people have permanent side effects (such as reactive arthritis).</p>	<p>Foodborne illness is caused by bacteria, viruses, parasites and chemicals/toxins.</p> <p>Their symptoms and duration of foodborne illness vary. There is usually a lag of several hours before symptoms appear.</p>
	<p><i>Talk about it... Only a physician can diagnose foodborne illness. Has anyone had diagnosed foodborne illness?</i></p>

<p>Choosing foods wisely Several foods are more frequently linked to foodborne illness outbreaks.</p>	<p><i>Activity: Ask participants to complete the risky food checklist in their handout.</i></p>
<p>Although you may have been able to eat anything without ill effects in your younger years, that may no longer be the case.</p>	<p><i>Refer participants to the list of higher and lower risk foods in their handout.</i></p>
<p>Preventing Foodborne Illness As we age, we have to make some changes in the way we've done things to compensate for changes in our bodies. For example, older adults may start wearing bifocals or using hearing aids. We may need to change the way that we've always handled food, too. Food safety risks change over time.</p> <p>Older adults can minimize their risk of getting foodborne illness by handling food safely.</p>	<p>Food safety risks change over time. Older adults may need to change the way that they've always handled food to compensate.</p> <p><i>Activity: Ask participants to assess their food handling practices by using the rating in their handout.</i></p>
<p>There are three simple rules for keeping food safe:</p> <p>Keep it Clean; Cook it Well; Cool it Soon</p>	<p>There are three simple rules for keeping food safe: Keep it clean; Cook it well; Cool it soon <i>Refer participants to an explanation of these food handling recommendations in their handout.</i></p>
<p>Refrigerated food safety Refrigerate foods properly to help prevent foodborne illness. Consumers are advised to clean refrigerators regularly, use a refrigerator thermometer, and keep refrigerator temperature at 40° or below.</p>	<p>Refrigerate foods properly to help prevent foodborne illness. Clean refrigerators regularly, use a refrigerator thermometer, and keep refrigerator temperature at 40° or below.</p>
<p>Refrigerator food safety activity answers:</p> <ol style="list-style-type: none"> 1. The turkey leftovers are unsafe. Because they sat too long at room temperature, they were unsafe before they were refrigerated. Bacteria that might have contaminated them after cooking could have grown. 2. The hard-cooked eggs are unsafe if they were held in the dangerous temperature zone (40° to 140° F.) longer than 2 to 3 hours. 3. The frozen spinach is safe. It can be refrozen, although there might be changes in quality (such as texture, flavor). 	<p><i>Activity: Ask participants to complete the Refrigerator Food Safety activity in their handout. Then share the correct responses.</i></p>

<p>4. The vegetable soup is unsafe if it wasn't cooled quickly (such as by putting the pot in a sink of ice water and stirring). It could have stayed warm for a long time and given bacteria a chance to grow.</p> <p>The soup is safe if it hasn't been held between 40° and 140° F. longer than 2 to 3 hours. To maintain top quality, freeze large quantities in meal-size containers.</p> <p>5. The doggy bag of lasagna is safe if it was brought home and refrigerated within 2 to 3 hours. Re-heat to 165° before eating. If in doubt about safety, throw it out.</p>	
<p>Federal Food safety regulation Fifteen federal agencies collectively administer at least 30 laws related to food safety. The primary agencies that inspect and regulate food are the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA).</p>	<p>Fifteen federal agencies administer at least 30 laws related to food safety. The primary agencies that inspect and regulate food are USDA and FDA.</p>
<p>FDA is responsible for ensuring that all domestic and imported food products – except for most meats & poultry – are safe, nutritious, wholesome, and accurately labeled. Examples of FDA-regulated food are produce, dairy products, seafood, and processed foods.</p> <p>The Food Safety and Inspection Service (FSIS) of USDA regulates the safety, wholesomeness, and proper labeling of most domestic and imported meat and poultry and their products sold for human consumption. (FDA shares the responsibility for egg safety with FSIS.)</p>	<p>FDA regulates domestic and imported foods such as produce, dairy products, seafood, and processed foods.</p> <p>USDA regulates domestic and imported meat and poultry products.</p>
<p>Hazard Analysis Critical Control Points (HACCP) Both FDA and USDA have developed HACCP regulations for processing plants (meat/poultry – USDA; seafood and juice – FDA). HACCP is based on a system developed by NASA (National Aeronautic and Space Administration) to ensure safe food for astronauts. It is a science-based approach that requires processors to identify potential hazards that cause food to be unsafe to eat and to monitor targeted critical control points to minimize risks and keep records of results. For example, adequate heating might be a critical point.</p>	<p>HACCP regulations have been developed for meat/poultry, seafood and juice processing plants. Processors are required to identify potential food safety hazards and monitor critical points in processing to minimize risks.</p>

<p>Produce safety FDA initiated a Produce Safety Action Plan in 2004. It addresses microbial food safety hazards and good agricultural and management practices for growing, harvesting, washing, sorting, packing and transporting of most fruits and vegetables sold to consumers in an unprocessed or raw form.</p> <p>FDA is now focusing on more commodity-specific guidance for produce that's been associated with foodborne illness outbreaks. They have provided technical assistance to help industry develop food safety guidance for cantaloupe, tomatoes, and lettuce/leafy greens. Work on guidances for herbs and green onions is ongoing.</p>	<p>FDA initiated a Produce Safety Action Plan in 2004. FDA is now focusing on more commodity-specific guidance for produce that has been associated with foodborne illness including cantaloupe, tomatoes, and lettuce/leafy greens.</p>
<p>Imported food FSIS/USDA is responsible for certifying that foreign meat and poultry plants are operating under an inspection system equivalent to the U.S. system before they can export their product to the U.S. FSIS inspectors located at U.S. ports of entry carry out a statistical sampling program to verify the safety of imported meats and poultry before they are released into domestic commerce.</p> <p>FDA conducts targeted inspection of food imports based on the past history of the product. For example, presence of filth, pesticide residues or bacterial contamination might be assessed in addition in accuracy of labeling.</p> <p>FDA has developed a Food Protection Plan in conjunction with an Action Plan that has been proposed by an Interagency Working Group on Import Safety.</p>	<p>USDA inspects samples of imported meat and poultry to verify safety.</p> <p>FDA conducts a targeted inspection of food imports based on past history of the product. A new Food Protection Plan for imports has been developed.</p>
<p>There is a FDA Public Affairs Officer in Beaverton, Oregon, who responds to both food and drug regulation issues in Oregon, Idaho, and Montana. The Food Safety and Inspection Service (USDA) has a regional office in Denver, Colorado, that has jurisdiction over states in the Pacific Northwest. They regulate meat and poultry processing plants.</p>	<p>FDA and FSIS/USDA staff have multi-state responsibilities.</p>
	<p><i>Activity: Food Safety Myth Information. Hand out the cards. Ask volunteers to read the statement, ask for a myth or truth response from the group, and then read the answer.</i></p>

<p>Food safety regulation in Oregon</p> <p>The Food Safety division of the Oregon Department of Agriculture (ODA) is responsible for monitoring the safety of foods sold in grocery stores, convenience stores, domestic kitchens, bakeries, meat markets and food processing plants. ODA also has jurisdiction over dairy farms and milk processing plants as well as shellfish harvesting. Some of their inspections are done on behalf of FDA. They have a statewide network of food sanitarians that do these food establishment inspections.</p> <p>The Foodborne Illness Prevention Program of the Oregon Department of Human Services (DHS) is responsible for monitoring the safety of food sold in restaurants. They oversee a statewide network of Environmental Health Specialists that do food facility inspections in the counties. Both ODA and DHS use the FDA Food Code as their source of food regulations.</p>	<p>The Food Safety Division of the Oregon Dept. of Agriculture monitors the safety of food sold in grocery and convenience stores and other food establishments.</p> <p>The Foodborne Illness Prevention Program of the Oregon Dept. of Human Services monitors the safety of food sold in restaurants.</p>
<p>Foodborne illness outbreaks</p> <p>Outbreaks of foodborne illnesses are primarily investigated by state and local health departments. They sometimes call on the federal Centers for Disease Control and Prevention (CDC) to help investigate large or multi-state outbreaks. CDC is also responsible for nationwide surveillance of outbreaks and for tracking new and emerging pathogens.</p> <p>In 1995, CDC launched FoodNet (Foodborne Diseases Activity Surveillance Network) in collaboration with FDA and USDA to detect, respond to, and prevent foodborne illness nationwide. Oregon is one of 10 national sites participating in FoodNet. When a physician diagnoses foodborne illness, this is reported to the Oregon Department of Health and Human Services. They, in turn, report this data to the CDC.</p>	<p>Foodborne illness outbreaks are primarily investigated by state and local health departments. The federal Center for Disease Control investigates large or multi-state outbreaks.</p> <p>Oregon is one of 10 national sites participating in FoodNet, a foodborne illness surveillance network.</p>
<p>If you suspect that you have foodborne illness, there are steps to take.</p>	<p><i>Refer participants to the list of steps to take if they suspect they have foodborne illness.</i></p>
<p>Stay healthy by handling food safely.</p>	<p><i>Refer participants to the list of food safety tips in their handout.</i></p>
	<p><i>Distribute the lesson evaluation and informed consent letter. Invite participants to complete the evaluation. Please return them to your county Extension office.</i></p>

For more information:

To Your Health!– Food Safety for Seniors (FDA/USDA)

<http://www.cfsan.fda.gov/~acrobat/sr2.pdf>

Seniors and Food Safety

<http://www.cfsan.fda.gov/~dms/seniorsa.html> (FDA)

Food Safety for Older Adults (FSIS/USDA)

http://www.fsis.usda.gov/PDF/Food_Safety_for_Older_Adults_Text.pdf

You Can Prevent Foodborne Illness (PNW 250 – Pacific Northwest Extension Services)

<http://cru.cahe.wsu.edu/CEPublications/pnw0250/pnw0250.pdf>

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Agriculture, 4-H Youth, Family & Community Development, Forestry, and Extension Sea Grant Programs. Oregon State University, United States Department of Agriculture, and Tillamook County cooperating. The Extension Service offers its programs and materials equally to all people.

Extension Service

Food Safety Myth Information

<p>Washing food removes all bacteria.</p> <p>Myth or truth?</p>	<p>You can tell whether a food is safe to eat by smelling it.</p> <p>Myth or truth?</p>
<p>Reheating makes foods safe to eat.</p> <p>Myth or truth?</p>	<p>Hot foods should be cooled before refrigerating them.</p> <p>Myth or truth?</p>
<p>Frozen foods can be safely thawed on the kitchen counter.</p> <p>Myth or truth?</p>	<p>You can tell whether a food is thoroughly cooked by looking at it.</p> <p>Myth or truth?</p>
<p>Acrylic cutting boards are better than wooden boards.</p> <p>Myth or truth?</p>	<p>It's safe to use cottage cheese and yogurt containers for re-heating in the microwave.</p> <p>Myth or truth?</p>

<p>Myth. For some foods (such as seafood or milk), smell is the first clue that a food is spoiling. Foods contaminated with harmful bacteria (such as E. coli O157:H7) usually smell normal.</p>	<p>Myth. Although washing helps to reduce the number of bacteria, they could still be clinging. Don't wash poultry. That practice (from the days when birds were slaughtered at home and covered with feathers or bits of dirt) will have little impact on reducing the number of bacteria – but will spread bacteria in the kitchen sink.</p>
<p>Myth. This practice (from the days of ice boxes) isn't safe. Modern refrigerators can handle hotter food. Start the cooling process by pouring big pots of hot food into shallow pans. You could also put the big pan into a sink of ice water and stir it to start the cooling.</p>	<p>Myth. Although bacteria and viruses are killed by heating, one type of bacteria (Staphylococcus) makes a toxin (poison) that isn't killed during normal reheating. "Staph" can cause symptoms sometimes called the "24 hour flu".</p>
<p>Myth. Visual cues may give you a false sense of security. For example, ground beef may turn brown before all of the bacteria have been killed. Microwaved frozen pot pies might steam before the manufacturer's recommended cooking time.</p>	<p>Myth. Planning ahead and thawing in the refrigerator is the best method. This is especially important for cooked foods such as meat or vegetable leftovers or entrees. You can also thaw meat and poultry in the microwave, following manufacturers' instructions. Be sure to cook it right away.</p>
<p>Myth. These containers were designed for cold storage – not for heating. Substances used to make plastic can migrate into the heated food. Use microwave-safe containers and plastic wrap instead.</p>	<p>Myth. Either can be used as long as they aren't worn with grooves where bacteria can hide. Boards need to be cleaned and sanitized regularly. Acrylic boards can be washed in the dishwasher. Some people use one cutting board for raw meat/poultry and another one for produce and other ready-to-eat foods.</p>