Food Safety in Older Adults: Disease Prevention Strategies and Educational Resources

Adam Ghering – Public Affairs Specialist
USDA - FSIS
Outline

• Foodborne illness in the United States
• Why older adults at higher risk
• Common foodborne pathogens
• 4 steps of food safety (Clean, Separate, Cook & Chill)
• USDA consumer food safety resources
  • Publications
  • Mobile apps
  • Presentations
Food Safety and Inspection Service
Protecting Public Health and Preventing Foodborne Illness
Food Safety and Inspection Service: The Threat of Foodborne Illness in U.S.

Each year, foodborne illness... Sickens 1 in 6 Americans, Results in 128k Hospitalizations, Causes 3,000 deaths, Costs U.S. economy $15.6 billion.

4 pathogens most frequently affect our regulated products: E. coli, Listeria, Salmonella, Campylobacter.
Adults 65+ are at an increased risk of hospitalization and death from foodborne illness.

Why?

- Medication side effects (like a weakened immune system)
- Changes in functioning of organs like liver and kidneys
- Underlying chronic conditions (such as diabetes or kidney disease)
- Age-related changes to GI tract
Why Older Adults At-Risk

Changes in the Gastrointestinal Tract

• GI tract holds on to food for longer periods of time (more time for bacterial growth)

• Liver and kidneys may not properly rid our bodies of foreign bacteria and toxins

• Stomach may produce less acid. Less acid can result in more bacterial growth
Why Older Adults At-Risk

Medication Side Effects

- Weakened immune system
- Changes in sense of taste or smell
Why Older Adults At-Risk

Underlying Chronic Conditions

- Diabetes
- Cancer
- Transplant Recipient
- Autoimmune Disease (MS, IBD, SLE)
About Foodborne Illness:

**Campylobacter**

**Foodborne Illness in Older Adults**

- *Campylobacter*
- *E. coli*
- *Salmonella*
- *Listeria monocytogenes*

**Incubation Period:** 2-4 days

**Symptoms:** cramping abdominal pain, fever, nausea and vomiting, watery diarrhea.

Most people recover in 5 to 8 days.

**Complications:** 1 in 1,000 develop Guillain-Barre syndrome and infection may spread to heart or brain

**Sources:** contaminated poultry, water, unpasteurized milk & cheese, or fresh produce
About Foodborne Illness:

**E. Coli**

Foodborne Illness in Older Adults

- *Campylobacter*
- *E. coli*
- *Salmonella*
- *Listeria monocytogenes*

**Incubation Period:** 1-10 days
**Symptoms:** severe diarrhea that is often bloody, severe abdominal pain and vomiting. Symptoms last 5-10 days.
**Complications:** In some cases, patients can develop Hemolytic Uremic Syndrome (HUS) which can result in kidney failure or even death in extreme cases.
**Sources:** contaminated beef, contaminated water, unpasteurized milk & cheese, or fresh produce.
About Foodborne Illness:

**Salmonella**

**Foodborne Illness in Older Adults**

- *Campylobacter*
- *E. coli*
- *Salmonella*
- *Listeria monocytogenes*

**Incubation Period**: 12 to 72 hours

**Symptoms**: nausea, vomiting, abdominal cramps, diarrhea, fever, chills, headache.

  Symptoms last 4 to 7 days.

**Complications**: An estimated 400 people die annually from acute infection and young children are more likely to develop severe cases.

**Sources**: Eating food contaminated with animal feces. These are often beef, poultry, milk or eggs but may include vegetables.
About Foodborne Illness:

Listeria monocytogenes

Foodborne Illness in Older Adults

- Campylobacter
- E. coli
- Salmonella
- Listeria monocytogenes

**Incubation Period:** 3 to 70 days

**Symptoms:** fever, muscle aches, sometimes preceded by diarrhea

**Complications:** those with a weakened immune system, such as older adults, can develop more serious illness

**Sources:** deli meats, smoked seafood, unpasteurized milk, store made salads such as tuna, chicken or seafood salad, soft cheeses such as feta or queso blanco, and raw sprouts.
Foods to Avoid

- Raw or undercooked meat, poultry, eggs and seafood
- Hot dogs, deli meat and lunch meats (unless reheated to steaming hot)
- Unpasteurized refrigerated pâtés or meat spreads (Canned or shelf-stable pates/meat spreads may be eaten)
- Unwashed fresh fruits and vegetables
- Soft cheeses (unless labeled “made with pasteurized milk”)
- Raw or unpasteurized milk
- Raw sprouts (alfalfa, clover and radish)
The Four Steps of Food Safety

- Clean
- Separate
- Cook
- Chill
The Four Steps: CLEAN

- Wash hands for 20 seconds with soap and warm water
- Sanitize surfaces that contact raw meat or poultry with a solution of 1 tablespoon bleach per 1 gallon of water
The Four Steps:
CLEAN

Do NOT Wash Raw Meat or Poultry!

Courtesy of New Mexico State University
The Four Steps: SEPARATE

- Prevent cross-contamination of foods, hands or equipment
- Keep raw meat away from ready-to-eat food
- Use separate cutting boards and utensils for raw meat or poultry

Separate raw turkey from fresh food, and use separate cutting boards, plates, and utensils.

Keep dishes that touch raw food separate, too!

Wash items that touch raw meat with soap and warm water.
The Four Steps: COOK

- Always use a food thermometer when cooking meats
- All poultry: 165°F
- Ground meats: 160°F
- Whole cuts of red meat: 145°F
The Four Steps: CHILL

- Food at room temperature for more than 2 hours should be discarded
- Use all refrigerated leftovers within 3 to 4 days
- Reheat leftovers to 165°F
  - Rotate for even heating in microwave

Take your time around the dinner table, but refrigerate leftovers within 2 hours!

- Safe in fridge: 3-4 days
- Safe frozen, but use within 2-6 months for best quality

- Leftover turkey should be cut into smaller pieces, and store items separately in smaller containers.
- Be sure to pack leftovers in a cooler if traveling.
- Reheat thoroughly to a temperature of 165 °F.

Remember, bacteria that cause foodborne illnesses can’t be smelled or tasted!
The Four Steps: CHILL

- Leftovers should be cut into smaller pieces
- Store in small shallow containers
- No need to wait for leftovers to cool to room temperature before refrigerating
## Cold Food Storage

These storage guidelines for home-refrigerated foods will keep them from spoiling or becoming dangerous to eat. The guidelines for freezer storage are for quality only; frozen foods remain safe indefinitely.

<table>
<thead>
<tr>
<th>Product</th>
<th>Refrigerator (40 °F)</th>
<th>Freezer (0 °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eggs</td>
<td>3 to 5 weeks</td>
<td>Don’t freeze</td>
</tr>
<tr>
<td>Hard cooked</td>
<td>1 week</td>
<td>Don’t freeze well</td>
</tr>
<tr>
<td>Liquid Pasteurized Eggs, Egg Substitute</td>
<td>3 days</td>
<td>Don’t freeze well</td>
</tr>
<tr>
<td>Unopened</td>
<td>10 days</td>
<td>1 year</td>
</tr>
<tr>
<td>Deli and Vacuum-Packed Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egg, chicken, ham, tuna &amp; macaroni salads</td>
<td>3 to 5 days</td>
<td>Don’t freeze well</td>
</tr>
<tr>
<td>Hot Dogs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opened package</td>
<td>1 week</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Unopened package</td>
<td>2 weeks</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Luncheon Meat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opened package or deli sliced</td>
<td>3 to 5 days</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Unopened package</td>
<td>2 weeks</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Bacon &amp; Sausage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacon</td>
<td>7 days</td>
<td>1 month</td>
</tr>
<tr>
<td>Sausage, raw — from pork chicken, turkey &amp; beef</td>
<td>1 to 2 days</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Ham Burger &amp; Other Ground Meats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamburger, ground beef, turkey, veal, pork, lamb &amp; mixtures of them</td>
<td>1 to 2 days</td>
<td>3 to 4 months</td>
</tr>
<tr>
<td>Fresh Beef, Veal, Lamb &amp; Pork</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steaks</td>
<td>3 to 5 days</td>
<td>6 to 12 months</td>
</tr>
<tr>
<td>Chops</td>
<td>3 to 5 days</td>
<td>4 to 6 months</td>
</tr>
<tr>
<td>Roasts</td>
<td>3 to 5 days</td>
<td>4 to 12 months</td>
</tr>
<tr>
<td>Fresh Poultry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken or turkey, whole</td>
<td>1 to 2 days</td>
<td>1 year</td>
</tr>
<tr>
<td>Chicken or turkey, pieces</td>
<td>1 to 2 days</td>
<td>9 months</td>
</tr>
<tr>
<td>Seafood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean fish (Bass, haddock, halibut, etc.)</td>
<td>1 to 2 days</td>
<td>6 to 8 months</td>
</tr>
<tr>
<td>Fatty fish (salmon, tuna, etc.)</td>
<td>1 to 2 days</td>
<td>2 to 3 months</td>
</tr>
<tr>
<td>Soups &amp; Stews</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable or meat added</td>
<td>3 to 4 days</td>
<td>2 to 3 months</td>
</tr>
<tr>
<td>Leftovers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooked meat or poultry</td>
<td>3 to 4 days</td>
<td>2 to 6 months</td>
</tr>
<tr>
<td>Chicken nuggets or patties</td>
<td>3 to 4 days</td>
<td>1 to 3 months</td>
</tr>
<tr>
<td>Pizza</td>
<td>3 to 4 days</td>
<td>1 to 2 months</td>
</tr>
</tbody>
</table>

## Refrigerator Storage at 40 °F or Below

<table>
<thead>
<tr>
<th>Product</th>
<th>Storage Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooked meat or poultry</td>
<td>3 to 4 days</td>
</tr>
<tr>
<td>Pizza</td>
<td>3 to 4 days</td>
</tr>
<tr>
<td>Luncheon meats</td>
<td>3 to 5 days</td>
</tr>
<tr>
<td>Egg, tuna, and macaroni salads</td>
<td>3 to 5 days</td>
</tr>
</tbody>
</table>

## Freezer Storage at 0 °F or Below

<table>
<thead>
<tr>
<th>Product</th>
<th>Storage Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooked meat or poultry</td>
<td>2 to 6 months</td>
</tr>
<tr>
<td>Pizza</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Luncheon meats</td>
<td>1 to 2 months</td>
</tr>
</tbody>
</table>
FoodKeeper app

- Prevent food waste
- Storage advice for 500+ food and beverage items
- Receive automatic recall notifications
- Syncs to your calendar
- Access to AskKaren
FoodKeeper app

Discover specific food information

Cooking

oven
cooking method
350°F
cooking temperature
20-30
minutes per pound

Baked Goods
Deli & Prepared Foods
Food Purchased Frozen
Grains, Beans & Pasta
Free Resources for Consumers

- Publications
- FoodKeeper app
- Meat & Poultry Hotline
- Social Media
- Presentations and Toolkits
Free Resources for Consumers

Food Safety Publications:

- General Adult
- At-Risk (Older Adults, Cancer, Diabetes, etc.)
- Youth
- Spanish
- Infographic Posters
- Foodservice
Free Resources for Consumers
“Is it done yet?”
You can’t tell by looking. Use a food thermometer to be sure.

**USDA Recommended Safe Minimum Internal Temperatures**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>145°F</td>
<td>Beef, Pork, Veal &amp; Lamb Steaks, Roasts &amp; Chops, Fish</td>
</tr>
<tr>
<td>145°F</td>
<td>Beef, Pork, Veal &amp; Lamb Ground</td>
</tr>
<tr>
<td>160°F</td>
<td>Egg Dishes</td>
</tr>
<tr>
<td>160°F</td>
<td>Turkey, Chicken &amp; Duck Whole, Pieces &amp; Ground</td>
</tr>
<tr>
<td>165°F</td>
<td></td>
</tr>
</tbody>
</table>

with a 3-minute rest time

www.FoodSafety.gov

USDA Meat & Poultry Hotline
1-888-MPHotline (1-888-674-6854)

Food Safety and Inspection Service

USDA is an equal opportunity provider, employer, and lender.
Reprinted September 2016
Free Resources for Consumers

How to Order Publications:

• Fill out a publication request form and email to FSIS.Outreach@fsis.usda.gov. (This email box can be used to attain request forms)

• Call the USDA Meat and Poultry Hotline (1-888-674-6854)
USDA Meat and Poultry Hotline

Open Monday - Friday
10 a.m. to 6 p.m. ET
On Thanksgiving Day
8 a.m. to 2 p.m. ET

1-888-MPHotline
(1-888-674-6854)

Live Chat/Email:
AskKaren.gov
More Resources

1-888-MPHotline

@USDAFoodSafety

@USDAFoodSafety

www.FoodSafety.gov

FoodSafety.gov
Food Safety 101 Presentations

Empowering Older Adults

• Summer and Thanksgiving
• USDA-FSIS presenters available
• Facilitator guide available for non-FSIS presenters
• Held at senior centers and similar locations
For more information contact:

Adam Ghering
Phone: 202-260-9432
Email: adam.ghering@fsis.usda.gov
Questions?

“Are these leftovers still good?”
There’s an app for that.

FOODKEEPER