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: 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
- Soft cheeses (unless labeled “made with pasteurized milk”)
- Unpasteurized milk
- Unwashed fresh fruits and vegetables
- Hot dogs, deli meat and lunch meats (unless reheated to steaming hot)
- Raw sprouts (alfalfa, clover and radish)
- Unpasteurized refrigerated pâtés or meat spreads (Canned or shelf-stable pates/meat spreads may be eaten)
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

Bacteria, which can be present inside and outside a turkey, can’t be washed off the bird! Cooking is the only way to destroy this potentially dangerous bacteria.

SO DON’T WASH YOUR TURKEY!!
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

Your bird is not safe until it reaches 165 °F — you cannot tell by the color.

Remember to ensure any stuffing cooked with the bird reaches 165 °F, too!

Use three places to check the temperature.
- Thickest part of breast
- Innermost part of wing
- Innermost part of thigh

When turkey is removed from the oven, let it stand 20 minutes before carving to allow juices to settle.
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
Food Storage Times

### Refrigerator Storage at 40 °F or Below

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

### Freezer Storage at 0 °F or Below

<table>
<thead>
<tr>
<th>Cooked meat or poultry</th>
<th>2 to 6 months</th>
</tr>
</thead>
<tbody>
<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>

### Refrigerator Storage at 40 °F or Below

<table>
<thead>
<tr>
<th>Cooked meat or poultry</th>
<th>3 to 4 days</th>
</tr>
</thead>
<tbody>
<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>
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
- Use Chicken parts - Legs or Thighs

Cooking:
- Oven
- 350°F
- 20-30 minutes per pound
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

Food Safety Before, During, and After a Power Outage

**Before**
- **Plan Ahead (If You Can)**
  - Keep your refrigerator at 40°F or below.
  - Transfer foods from affected refrigerators to a working refrigerator.
  - Freeze milk, orange juice, ice cream, and any other foods that can withstand freezing.

**During**
- **While the Power is Out**
  - Keep the refrigerator and freezer doors closed to maintain cold temperature.
  - If doors stay closed, they will hold for:
    - 48 hours: Food will be safe to eat but may lose quality.
    - 24 hours: Food will be safe to eat but may lose quality.

**After**
- **Once the Power is Back On**
  - Check the temperature inside your refrigerator and freezer. If it has been below 40°F, your food will be safe to eat.

Food Safety Tips:
- **Check the Temperature**
- **Avoid Cross-Contamination**
- **Wash Your Hands**

Products to Avoid:
- **Soft Cheese**
- **Raw or Undercooked Meat, Poultry, Seafood**
- **Unpasteurized Vegetables**
- **Unpasteurized Milk**
- **Unpasteurized Eggs**
- **Unpasteurized Cheese**
- **Unpasteurized Pancakes**
- **Unpasteurized Sausage**
- **Unpasteurized Beverages**

Safety Tips:
- **Clean**
- **Separate**
- **Cook**
- **Chill**

**Follow These Steps After a Flood:**
- **Do Not Eat** any food that may have touched flood water.
- **Sanitize** all utensils, dishes, and work areas with warm soapy water.
- **Discard** all perishable foods, canned items without a metal can lid, and non-food items with any sponginess.

**Baby Boomers and Food Safety**

**What May Make You Sick?**
- **Salmonella**
- **Campylobacter**
- **Escherichia coli**

**Why Are You at Risk?**
- **Older adults** are at higher risk of foodborne illnesses because:
  - They may have weaker immune systems.
  - They may eat and drink less frequently.

**Product Dating**
- Dates printed on food labels indicate when items will no longer be at peak quality. Dates are not for safety. Here’s what each date means:
  - **Sell by:**
  - **Use by:**
  - **Best if used by:**

**When in doubt, throw it out.**

**Additional Resources:**
- FoodSafety.gov
- USDA
- Centers for Disease Control and Prevention (CDC)
Free Resources for Consumers

SEGURIDAD ALIMENTARIA PARA PERSONAS CON CÁNCER

¿Por qué?
La seguridad alimentaria es importante para las personas con cáncer porque el tratamiento podría debilitar el sistema inmunológico. La quimioterapia y la radioterapia podrían causar neutropenia—una disminución en células blancas de la sangre que combaten infecciones.

Pregunte a su Médico:

- ¿Es un alto riesgo de padecer enfermedades transmitidas por alimentos? ¿Por cuánto tiempo dejará de estar en riesgo?
- ¿Qué alimentos expone una mayor posibilidad de ser transmitidos por alimentos?
- ¿Qué alimentos recibirán una preparación especial para prevenir enfermedades transmitidas por alimentos?
- ¿A quién debe contárselo si tiene una enfermedad transmitida por alimentos?
- ¿Qué porcentaje es curable para tratar una enfermedad transmitida por alimentos?
- ¿Hay algo más que lo debe preguntar?

TEMPERATURAS INTERNA MÍNIMA RECOMENDADAS

145°F (62°C) Carne de res, cerdo, pollo y hígado
160°F (71°C) Carnes magras
165°F (74°C) Carne de res, cerdo y pollo

Alimentos que deben EVITAR

- Carnes, pescados y mariscos crudos o sin cocción
- Leche sin pasteurizar
- Humitas crudas o bajo cocció
- Helados, helados tipo yogur, helados de fresas y otros helados
- Salsas y salsas de fresas
- Bebidas de cacao crudos a cacao crudos
- Bebidas de cacao crudos

Alimentos que deben CONSUMIR

- Carnes, pescados y mariscos cocidos o bien cocidos
- Leche pasteurizada
- Harinas cocidos con la pesta blanca
- Fresas y estampadas
- Hábitos de higiene alimentaria

La Zona de Peligro

Temperaturas que se mantienen entre de 40°F a 140°F. Estas temperaturas pueden permitir el crecimiento de bacterias y el desarrollo de enfermedades.

¿Qué es la Zona de Peligro?

La Regla de las Dos Horas

Si los alimentos se cocinan por debajo de 40°F, deben ser refrigerados dentro de un período de 2 horas. Si los alimentos se calientan por encima de 140°F, deben ser refrigerados dentro de un período de 2 horas.

Al servir alimentos, utilicé platos y cubiertos limpios a la hora de servir los alimentos.

Mantenga Caliente los Alimentos Calientes

Los alimentos cocidos deben mantenerse a 140°F a más.

Recalentando Alimentos

Mantiene caliente los alimentos calientes a 165°F (74°C). No se recomienda recalentar más de tres veces.

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"Is it done yet?"
You can’t tell by looking. Use a food thermometer to be sure.

| USDA Recommended Safe Minimum Internal Temperatures |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 145°F with 3-minute rest time | 145°F | 160°F | 160°F | 165°F |
| Beef, Pork, Veal & Lamb Steaks, Roasts & Chops | Fish | Beef, Pork, Veal & Lamb Ground | Egg Dishes | Turkey, Chicken & Duck Whole, Pieces & Ground |

www.FoodSafety.gov

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

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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
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
Food Safety 101 Presentations

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