Is Your Food Safe to Eat?
Carolyn Bednar, PhD, RDN
Symptoms of Foodborne Illness

- Weakness
- Fever
- Vomiting
- Stomach cramps
- Diarrhea
- Kidney failure
What Causes Foodborne Illness?

• Bacteria
• Viruses
• Toxins
• Parasites
• Chemicals
• Molds
Bacteria in Food

• Grow rapidly in:
  – Food improperly cooked or held between 41-135F.
  – Low acid and moist foods

• Growth influenced by:
  – Time
  – Oxygen levels
Bacteria Causing Foodborne Illness

• **Salmonella**
  – 1 million illnesses, 23,000 hospitalizations, 453 deaths
  – Foods: Raw chicken & turkey, shell eggs, dairy
  – Cook to appropriate temps

• **Listeria**
  – 1,595 illnesses, 13,000 hospitalizations, 119 deaths
  – Foods: Deli meat/cheese, raw milk, soft cheese, RTE foods such as pre-cut cantaloupe
  – Cook to appropriate temps, avoid cross-contamination; do not use unpasteurized dairy foods
Bacteria Causing Foodborne Illness

• **Campylobacter**
  – 800,000 illnesses, 13,000 hospitalizations, 119 deaths
  – Raw poultry & meat, stews, gravies
  – Cook to appropriate temps, prevent cross-contamination

• **E. Coli 0157:H7**
  – 61,153 illnesses, 3,268 hospitalizations, 31 deaths
  – Ground beef, fresh lettuce & spinach, sprouts, RTE salads
  – Cook meat to appropriate temps, wash fresh produce
Viruses Causing Foodborne Illness

• **Norovirus** - 5 million foodborne illnesses, 2,000 hospitalizations, 571 deaths

• **Hepatitis A** - 1,577 foodborne illnesses, 2,000 hospitalizations, 171 deaths

• Found in RTE foods and shellfish
• Spread by workers who are ill and do not wash hands properly.
• Prevent by proper handwashing & keeping ill employees out of the kitchen.
Foods
High Risk vs Low Risk

- Raw or undercooked meat or poultry
- Raw or undercooked fish or shellfish
- Food containing raw or undercooked eggs
- Raw plant sprouts
- Unwashed fresh veggies
- Soft cheeses made from unpasteurized milk
- Hot dogs, deli meat & lunch meat not reheated

- Fully cooked meat or poultry
- Seafood cooked to 145F
- Canned fish & seafood
- Fully cooked eggs or pasteurized egg products
- Cooked sprouts
- Washed fresh veggies or cooked veggies
- Hard, processed or cream cheese.
- Hot dogs, lunch meat & deli meat reheated to 165F
Chemicals in Food

- Arsenic in rice and fruit juice
- Mercury in fish
- Acrylamide in fried, roasted, baked foods
Food Safety Information

• U.S. Department of Agriculture
  – *Kitchen Companion: Your Safe Food Handbook*
  – *Older Adults & Food Safety*

• U.S. Food & Drug Administration
  – *Food Safety for Older Adults*
  – *Food Safety for People with Cancer*
  – *Food Safety for People with Diabetes*
Dietary Risk Levels

• Very High:
  – Green beans (U.S.), peppers (Mexico)

• High:
  – U.S.: peaches, tangerines, strawberries, peppers, cucumbers, summer squash, sweet potatoes
  – Chile: peaches, tangerines, plums, nectarines
  – Mexico: strawberries, green beans, cucumbers, tomatoes
Mold

- Molds are fungi that spoil food
- Can cause allergic reactions & respiratory problems
- Aflatoxins in grains & nuts can cause cancer
- Advice:
  - Throw out soft foods that have mold
  - For hard cheeses, cut off 1 inch around & below the mold
Shopping for Food

• Shop for dry/canned items first and dairy, eggs, meat, poultry, and fish last
• Keep raw meat, poultry & fish separate in the cart. Bag them separately
• Check egg cartons for cracked eggs.
• Do not buy dented or bulging canned food
• Head home immediately
• Keep your reusable shopping bags clean
Cooking at Home

Clean

Separate: Don’t cross contaminate

Cook to proper temperatures

Chill: Refrigerate promptly

Throw out when in doubt.
<table>
<thead>
<tr>
<th>Food</th>
<th>Type</th>
<th>Internal Temperature (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground meat</td>
<td>Beef, pork, veal, lamb</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>Turkey, chicken</td>
<td>165</td>
</tr>
<tr>
<td>Fresh beef, veal, lamb</td>
<td>Steaks, roasts, chops</td>
<td>145 for 3 minutes</td>
</tr>
<tr>
<td>Poultry</td>
<td>Whole bird or cuts</td>
<td>165</td>
</tr>
<tr>
<td>Pork or ham</td>
<td>Precooked (to reheat)</td>
<td>165</td>
</tr>
<tr>
<td></td>
<td>Precooked, USDA inspected</td>
<td>140</td>
</tr>
<tr>
<td>Eggs</td>
<td>Eggs</td>
<td>Until yolk &amp; white are firm</td>
</tr>
<tr>
<td></td>
<td>Egg dishes (quiche)</td>
<td>160</td>
</tr>
<tr>
<td>Leftovers/Casseroles</td>
<td>Leftovers &amp; casseroles</td>
<td>165</td>
</tr>
<tr>
<td>Seafood</td>
<td>Fish with fins</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>Shrimp, lobster, crab, scallops</td>
<td>Until pearly, white &amp; opaque</td>
</tr>
<tr>
<td></td>
<td>Clams, oysters, mussels</td>
<td>Until shells open</td>
</tr>
</tbody>
</table>
Discard: Throw it Out

• Discard food that has been too long in the refrigerator.

• Maximum storage times:
  – Ground meat/poultry or fresh fish: 1-2 days
  – Fresh beef or pork: 3-5 days
  – Leftovers: 3-4 days
  – Lunch meat: 5 days after opening
Food Safety When Eating Out

• Do not order:
  – Rare hamburgers or steaks
  – Eggs “over easy”
  – Raw seafood or shellfish

• Do not eat meat or poultry that is served undercooked.

• If you have a food allergy:
  – Check the menu for ingredients
  – Do not eat off a buffet line
  – Ask the manager or head cook
Food Allergies

- Over 1 million Americans have food allergies
  - Each year 50,000 ER visits, 2,000 hospitalizations, 150 deaths
- Cooking does not kill food allergens
- If you have food allergies, you must avoid eating those foods
- 8 major food allergens:
  - Milk, eggs, fish, shellfish, wheat, soy, peanuts, tree nuts