Bad Bugs Whatcha Gonna Do:
Preparing for Emerging Infectious Diseases

Mary G. McIntyre, MD, MPH
State Epidemiologist
Assistant State Health Officer for Disease Control and Prevention
FOODBORNE ILLNESS

(WHAT YOU CAN'T SEE CAN HARM YOU)
Did you know?

According to the Center for Disease Control:

- **76 million** become ill due to food / year
- **325,000** hospitalized
- **5000** die / year
- **> 250** known foodborne diseases
How Many Are There?

- There are more than 250 known foodborne illnesses.
These are symptoms of a **FOODBORNE ILLNESS**

- Stomach Pain
- Diarrhea
- Vomiting

*Not the flu!?!*
Food Poisoning and Foodborne Illness

Can be caused by eating food contaminated with:

- **BACTERIA**
- **VIRUS**
- **TOXINS**
- **CHEMICALS**
The Most Common Foodborne Bacterial Illnesses are Caused by:

- E-coli 0157:H7
- Campylobacter
- Salmonella
E-coli 0157:h7

- Lives in cattle & other similar animals.
- Found in raw meat, non-pasteurized milk, apple cider, sprouts.
E-coli 0157:h7

- Causes severe bloody diarrhea & cramps.
- Causes hemolytic uremic syndrome (HUS).
  - Kidneys fail
  - Red blood cells are destroyed
- Onset of illness 2-5 days.
- Lasts 5-10 days.
Campylobacter

Found in the intestinal tract of birds, sheep, cattle and on the surface of raw poultry.
Campylobacter

- Causes abdominal cramps, diarrhea and fever
- Onset is 2-5 days
- Lasts 7-10 days
Salmonella

Found in the intestines of birds, reptiles, & mammals.
Salmonella

- Causes fever, diarrhea & abdominal cramps.
- Can cause severe dehydration in infants and elderly.
- Onset is 6 hours - 2 days
- Lasts 1-3 days.
Biological Toxins

Biological Toxins are produced by some pathogens found in food contamination.

They could also come from a plant or animal.
Some bacteria produce poisons or toxins that cause:

FOODBORNE ILLNESS
(sometimes intentional)
Staphylococcus aureus

Commonly associated with food service.
• If toxin - onset of illness is as quickly as 30 minutes
• If infectious - onset can take 6 hours or longer to appear.
Staphylococcus Aureus produces a toxin that causes serious vomiting and stomach cramps.
Clostridium Botulinum

- Toxin producing bacteria
- Causes botulism
- Symptoms are nerve related and can cause muscle paralysis
- Symptoms typically occur:
  - 8 to 36 hours after
  - or as late as 10 days
- Lasts several days to 1 year
Norovirus

- The cause of **HALF** of all foodborne illness.
- Spread by
  - hand contact with food
  - food placed on a surface that is contaminated by the virus
  - or when virus is airborne.

Cold foods such as sandwiches & salads are often associated with Norovirus.
Norovirus

- Starts suddenly.
- Causes diarrhea, vomiting, abdominal cramps, headache, low-grade fever, chills & muscle aches.
- Often called the flu.
- Symptoms begin 12 to 48 hours after ingestion of the virus.
- Recovery in 2-3 days but may remain ill for up to 2 weeks.
Another Foodborne Illness Virus

Hepatitis A

- Possible sources include by shellfish, salads, deli meats, fruits, milk, and milk products.
- Symptoms include sudden onset of fever, general discomfort, fatigue, headache, nausea, loss of appetite, vomiting, abdominal pain & jaundice after several days.
- Lasts 1 to 2 weeks (severe cases up to several months).
CHEMICAL POISONING
CHEMICAL POISONING

- Careless or improper storage of chemicals
- Improper use of chemicals
- Improper labeling
- Sometimes intentional addition of poison
Always store cleaners and chemicals below your food or food surfaces.

Choose pesticides that are approved for use in the kitchen.
Protecting Yourself!
What Can I Do?

• Follow these simple guidelines:
  – CLEAN
  – COOK
  – CHILL
  – LEFTOVERS
WASH YOUR HANDS
WASH YOUR HANDS

OFTEN

Especially:

- When preparing food.
- After using the bathroom.
- Avoid direct contact with public restroom doorknobs. (use paper towel to open door)
WHEN WASHING YOUR HANDS

- Use warm, soapy running water.
- Rub your hands thoroughly, scrubbing between fingers, and nails for:

  10–15 SECONDS.
Safe Preparation of Fruits & Vegetables

Clean any items that come into contact with fresh foods:

- knives
- cutting boards
- hands
# Fruits & Vegetables

### Do’s & Don’ts

<table>
<thead>
<tr>
<th>Do's</th>
<th>Don'ts</th>
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<tbody>
<tr>
<td>Do <strong>wash your hands</strong> with soap and water before preparing food.</td>
<td>Do not prepare food for others if you yourself have <strong>diarrhea</strong>.</td>
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<tr>
<td>Do <strong>rinse</strong> fresh fruits &amp; vegetables <strong>with cold water</strong>.</td>
<td>Do not use <strong>bleach or soap</strong> on fruits &amp; vegetables.</td>
</tr>
<tr>
<td>Do <strong>refrigerate</strong> at a temperature of 40° F or less.</td>
<td>Do NOT eat fresh cut items left <strong>un-refrigerated</strong> for &gt; 2 hours.</td>
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<tr>
<td>Do <strong>throw away</strong> items that have come into contact with <strong>raw meat or chemicals</strong>.</td>
<td>Do not eat <strong>bruised or damaged</strong> fruits &amp; vegetables.</td>
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Safe Preparation of Raw Meats

A few simple precautions can reduce the risk of foodborne diseases:

- **COOK**
- **SEPARATE**
- **CHILL**
- **REPORT**
It’s Getting Hot in here….

**COOK:**

- Meat, poultry, and eggs thoroughly.
- Use a thermometer to measure the internal temperature of meat to be sure that it is cooked sufficiently to kill bacteria.

For example:

Ground beef should be cooked to an internal temperature of 160° F.

Eggs should be cooked until the yolk is firm.
SEPARATE:

Don't cross-contaminate one food with another.

Avoid cross-contaminating foods by washing hands, utensils, and cutting boards after they have been in contact with raw meat or poultry.

Put cooked meat on a clean platter rather than back on one that held the raw meat.
CHILL OUT………..
Refrigerate leftovers promptly:

Bacteria grows quickly at room temperature, so refrigerate leftover foods **within 2 hours**.

Food will cool more quickly if divided into several shallow containers for refrigeration.
If in doubt as to the safety of your food, THROW IT OUT!!
I’m Telling....

REPORT:

Foodborne illnesses to your LOCAL HEALTH DEPARTMENT.

Your local health department works hard to track down the causes of the foodborne illness.
Prevent Food Poisoning

The Bottom Line

• Keep Hot Food Hot
• Cold Food Cold
• Keep Everything Clean
• Especially: *Wash Your Hands*
• Don’t go to work sick.

What you can't see can harm you
Assemble a Team
Everyone Has a Role in the Safety of Food
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