PURDUE UNIVERSITY COOPERATIVE EXTENSION SERVICE
Henry County

It's a Cold, It's the Flu...It's Foodborne Illness!

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Lesson Objectives

- To compare and contrast the common cold, the flu (influenza), and foodborne illness.
- To identify ways to protect yourself from a cold, the flu, and foodborne illness.

Getting Started

To set the stage for the lesson:

- First, ask your club members to name some of the symptoms of a cold, the flu, and foodborne illness.
    - Some possible responses may include nausea, vomiting, diarrhea, abdominal cramping or discomfort, chills, cough, and runny nose.
- Then ask if they have ever experienced at least one of these illnesses and how they felt.
    - It is likely that everyone has experienced all three of these illnesses at some point in their life and felt quite miserable!
- Explain that throughout the lesson, similarities and differences of these three illnesses will be highlighted, so that you can better understand, and most importantly, protect yourself from becoming ill.

A Cold vs. the Flu

- The common cold and the flu are both respiratory illnesses with many of the same signs and symptoms; however, they differ in the viruses that cause them (the cold can be caused by over 200 different viruses, with the rhinovirus being the most common and the flu is caused by Type A and B with many different sub-types) and in general, the flu is more severe than a cold.

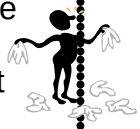
The Flu vs. Foodborne Illness

- As noted above, the flu is a respiratory illness and foodborne illness is a gastrointestinal illness; however, many of the signs and symptoms are similar. Both can also be quite severe and affect the same at-risk populations. Because of these similarities, foodborne illness is often referred to as the "stomach flu" or "24-hour flu".

Notes

A Closer Look at the Flu

- It is believed that the flu spreads from person-to-person via respiratory droplets that fly through the air (such as by coughing or sneezing) and then land on the mouth or nose of others nearby. Flu can also be spread when a person touches an object that contains the droplets and then touches his/her mouth or nose without properly washing their hands first.
- The flu is contagious—healthy adults can begin infecting others one day before symptoms are exhibited and up to five to seven days after becoming ill. Children and the immuno-compromised can spread the virus longer than seven days.
- The severity of the flu depends on several factors, including: which viruses are involved, the amount of vaccine available, the time frame and number of people vaccinated, and how well the vaccine matches the viruses causing illness.
- Data from 1976 to 2006 reveals that flu-related deaths were at a low of 3,000 to a high of 49,000. Most recently, the 2009 H1N1 pandemic resulted in more than 12,000 deaths. Typically flu-related deaths are greatest among those 65 years and older; this was the opposite with H1N1.
- Experts recommend getting an annual flu vaccine, which can come in either the flu shot or nasal spray form. As a result of the vaccine, antibodies develop in the body to protect against influenza virus infection. The seasonal vaccine protects against the three viruses that surveillance data determines will be most common for that given year.



- Vaccination typically begins in September and ends as late as May (typical peak for flu is January). The CDC's Advisory Committee on Immunization Practices advises everyone 6 months and older to receive the vaccine, especially those at greatest risk (the young, the elderly, pregnant women, and the immuno-compromised), those who live in nursing homes or extended care facilities, health care workers, and household contacts of high-risk populations. The nasal spray vaccine can be used for healthy individuals 2-49 years of age and not pregnant.
- Certain populations should avoid the vaccine, including those with severe egg allergy, those who react severely to vaccinations, those who previously developed Guillian-Barre Syndrome within 6 weeks of getting an influenza vaccine, children less than 6 months of age, and those with moderate to severe illness with fever (wait until symptoms lessen).

A Closer Look at Foodborne Illness

- As mentioned above, foodborne illness is more than the "stomach flu"—it is a serious health issue and results in billions of dollars in direct and indirect costs each year. The CDC estimates that 76 million cases occur annually, resulting in 325,000 hospitalizations and 5,000 deaths.

Notes

- Foodborne illnesses are caused by bacteria, viruses, parasites, toxins, and fungi. Of greatest concern, are infections caused by the bacteria *Campylobacter*, *Salmonella*, and *E. coli* O157:H7 as well as from the Norwalk and Norwalk-like viruses.
- Symptoms vary based on the causative agent, but most commonly include upset stomach, fever, diarrhea, and dehydration. Less common but more severe symptoms include paralysis, meningitis, sepsis, stillbirth/mis-carriage for pregnant women, and death.

- Food can become contaminated in a variety of ways throughout the flow of food and the best prevention measures include: practicing good personal hygiene, purchasing from an approved and reputable supplier, controlling time and temperature, and preventing cross-contamination.
- The *Partnership for Food Safety Education* developed the *Fight BAC!* campaign, consisting of the four steps Clean, Separate, Cook, and Chill to help protect consumers from foodborne illness.

CLEAN

- ✓ Be sure to wash your hands *often* with warm, soapy water for at least 20 seconds. Do this before handling any food, after using the restroom, after touching garbage, raw meats, pets, and after any other time when hands become soiled.
- ✓ Keep surface areas, utensils, cutting boards, and serving dishes clean; wash with hot, soapy water. Allow to air-dry on a clean towel.
- ✓ Rinse *all* produce with cool, running water before eating or slicing.

SEPARATE

- ✓ Keep raw meats, poultry, eggs, seafood and their juices separate from ready-to-eat and cooked foods.
- ✓ Designate one cutting board for raw meats, poultry, and seafood and another for produce.
- ✓ Use a different plate and utensil for raw meats and cooked meats.
- ✓ Discard leftover marinade used with the raw meats—do not use on the meat once cooked.

COOK

- ✓ Use a food thermometer to ensure foods have been cooked to the proper internal temperature:
  - ➢ Hot dogs & poultry: 165°F
  - ➢ Hamburgers: 160°F
  - ➢ Roasts, steak, chops, & fish: 145°F
  - ➢ Reheat leftovers to 165°F; stir and check for cold spots.
  - ➢ Keep hot foods hot (at or above 135°F).

- ✓ Insert thermometer into the thickest part of the meat (be sure to avoid contact with bones).
- ✓ Pre-heat coals for the grill for 20-30 minutes.

Notes

CHILL

- ✓ Keep cold foods cold (at or below 41°F); pack items in coolers full of ice or ice packs.
- ✓ Keep coolers and perishable items out of direct sunlight.
- ✓ Do not allow raw, perishable, or cooked foods to sit out for more than 2 hours (1 hour, if 90°F or above outside).
- ✓ Thaw foods in the refrigerator or under cold *running* water. Never thaw at room-temperature.
- ✓ Always marinate meats in the refrigerator.

Common Mis-understandings

- "If a food tastes okay, then it is safe to eat."
  - Do not rely on sight, taste, or smell; under the right conditions, as few as 10 microorganisms can cause illness. Quality indicators are *not* safety indicators.
- "If I am feeling sick, it had to be the last meal I ate."
  - The onset of foodborne illness depends on many factors; symptoms can appear within 30 minutes to 6 weeks after ingesting the food.
- "As a child, my mother left food out or thawed meat in the sink and we never got sick."
  - Many incidents of foodborne illness went undetected in the past and symptoms of nausea, vomiting, and diarrhea were (and still are) attributed to the flu.
- "I know I should have put the food in the refrigerator sooner, but it will be okay, since I am going to reheat it to a really hot temperature."
  - Once food becomes unsafe, it cannot be made safe again; bacteria grow exponentially and just one cell left at room temperature can multiply into the millions in a few hours time. Also, some bacteria produce toxins that are not destroyed by cooking to high temperatures.
- "My hamburger is done because it is no longer pink inside."
  - Do not rely on color to determine doneness; use a bi-metallic stem (meat) thermometer.
- "That potato salad at the picnic made me sick; I know it was the mayo."
  - Mayo contains vinegar (acetic acid), which slows the growth of microbes; under the right conditions, starchy and protein-rich foods, such as rice, potatoes, meat, poultry, eggs, and sliced melons and tomatoes are ideally suited to the growth of microbes.

Abide by the rule of thumb: "When in doubt, throw it out"

Notes

Resources
Centers for Disease Control and Prevention, http://www.cdc.gov/

Henneman, A. University of Nebraska-Lincoln (July 2010). "Food safety: What you don't know CAN hurt you." Retrieved September 3, 2010 from http://lancaster.unl.edu/food/myths.shtml

Partnership for Food Safety Education, http://www.fightbac.org/index.php