

Food Safety Scoop



Brought to you by the Yavapai County Food Safety Industry Council

Volume 3, Issue 1

May 2017

Special Points of Interest

- What is E. coli?
- How Do People Get E. coli?
- How can E. coli be Prevented?
- What Should I do if I am Diagnosed with E. coli?
- Test your E. coli Knowledge and take our Quiz



This newsletter is brought to you by the Yavapai County Food Safety Industry Council, which is a joint collaboration between Yavapai County Community Health Services and the University of Arizona Cooperative Extension.

The FSIC meets bimonthly to discuss issues in the food service industry and ways to bring food safety information to the public.

For more information, please call 928-445-6590 ext. 227 or visit our website at: extension.arizona.edu/yavapai/

What is E. coli?

Escherichia coli (E. coli) is a group of bacteria that are commonly found in the intestines of many animals. Most forms of E. coli are harmless but some cause serious illness if they contaminate foods and are eaten. The type of E. coli most often heard about in the news for causing foodborne illness outbreaks is E. coli 0157:H7, commonly referred to as STEC or Shiga-toxin producing E. coli.

Symptoms of E. coli poisoning are: watery, often bloody diarrhea; severe stomach cramps;

vomiting and sometimes a low grade fever. Cases can range from mild to severe and can sometimes result in death. Some cases lead to a disorder called hemolytic uremic syndrome (HUS), which is a type of kidney failure and can result in death of the individual.

The incubation period is usually 3-4 days but can be as early as 1 day after ingesting the bacteria to as far as 10 days after ingestion. This can make it more difficult to track



the initial food causing the outbreak. It usually isn't from something you ate today or yesterday, but more often something you ate a few days ago that made you sick.

Persons of all ages are at risk for infection, but young children, pregnant woman, older adults and persons with weakened immune systems are more likely to experience severe reactions including HUS.

How Do People Get E. coli?

When two or more people get the same illness from the same contaminated food or drink, the event is called a foodborne disease outbreak. According to the CDC, from 2010-2015, there have been 195 E. coli outbreaks in the U.S., 9 in Arizona alone.

Outbreaks have been connected to a variety of foods, including undercooked ground beef, raw clover sprouts, ready to eat salads, organic spinach, unpasteurized raw

milk, unpasteurized fruit juice, hazelnuts, bologna and prepackaged cookie dough. Eating the contaminated food without cooking it to proper temperatures can lead to infection. E. coli can also be spread by using contaminated cutting boards and utensils without properly washing and sanitizing them first.

One of the largest outbreaks from E. coli occurred in Nov, 1992 - Feb 1993, involving a fast



food chain. More than 500 laboratory-confirmed infections with STEC and four deaths occurred in four states -- Washington, Idaho, California, and Nevada during this time. The source was undercooked hamburger patties. This outbreak could have been prevented if proper food safety procedures would have been followed, thus spurring food safety regulation in the U.S.

How Can E. Coli Be Prevented?

Fortunately, there are things food workers can do to significantly decrease the chance of E. Coli poisoning at a food establishment. Cooking foods to the proper internal temperatures will kill the bacteria. Ground beef should be cooked to an internal temperature of 155° for a minimum of 15 seconds. Use a calibrated food thermometer to ensure the reading is accurate.

Because E. coli outbreaks have also been linked to spinach and salad greens, washing raw fruits and vegetables under clean, running water

BEFORE cutting them is also very important. For hard skinned fruits and vegetables such as cantaloupe or potatoes; using a clean scrub brush will help eliminate any bacteria lurking in the grooves of the skin.

You are increasing your chances of contracting E. coli if you drink unpasteurized raw milk or eat certain cheeses made with it. It is the pasteurizing of the milk that kills any bacteria, such as E. coli, that could be found in it, so it is advised that people do not consume unpasteur-

ized raw milk, juices or cheese.

Cross contamination is another route E. coli can take to enter and infect your body. It is important to **clean and sanitize** your knives, cutting boards, and counter tops after working with raw meats. As an extra precaution, using color coded boards for each type of food you prepare can also help prevent infection.



What Should I Do If I am Diagnosed With E. coli?

Because it is so highly contagious, food workers should stay home from work if they have E. coli symptoms. E. coli is considered a “Big5” illness along with Salmonella, Shigella, Norovirus and Hepatitis A. If a worker has been diagnosed with any of these diseases, they are

“It is of utmost importance to notify your employer if you or someone in your household has been diagnosed with E. Coli.”

considered to be “excluded” from the food establishment in which they work. Only after they receive written medical clearance from a doctor will they be allowed to return to work. It is of utmost importance to notify your employer if you or someone in your house

hold has been diagnosed with E. Coli or any other Big 5 illness. Your employer will then notify the local Health Department. Once you are cleared to return to work, it is still extremely important to follow good personal hygiene practices as well as continuing to be diligent on hand washing. You can prevent the spread of this debilitating and potentially deadly bacteria by following these simple procedures.

Quiz

1. Which of the following have been identified in outbreaks of E. coli?
 - A. Undercooked Ground Beef
 - B. Ready to Eat Salads
 - C. Spinach
 - D. Prepackaged cookie dough
 - E. All of the above
2. Which is a disorder associated with E. coli ?
 - A. Jaundice
 - B. Kidney Failure
 - C. Migraine headaches
 - D. Nerve Damage
3. To what internal temperature should you cook ground meat?
 - A. 135°F for 15 seconds
 - B. 145° F for 15 seconds
 - C. 155° F for 15 seconds
 - D. 165° F for 15 seconds
4. True or False? Most cases of E. coli poisoning could have been prevented by following food safety procedures.

Resources: 1. FDA. Bad Bug Book, Foodborne Pathogenic Microorganisms and Natural Toxins. 2nd edition. "Noroviruses." 2012
2. CDC.gov
3. FDA 2013 Food Code
5. Which of the following have not been associated with E. coli outbreaks?
 - A. Undercooked food
 - B. Cockroaches in the restaurant.
 - C. Cross contamination
 - D. Unwashed fruits and vegetables

Answers: 1. E 2. B 3. C 4. T 5. B

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Economic Development & Extension, College of Agriculture and Life Sciences, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University prohibits discrimination in its programs and activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information and is committed to maintaining an environment free from sexual harassment and retaliation.