



Shiga Toxin-Producing *Escherichia coli*

What is Shiga toxin-producing *Escherichia coli*?

Hundreds of types (or strains) of bacteria called *Escherichia coli* live normally in the intestines of healthy people and animals to help the body break down and digest food. Unfortunately, some types of *E. coli* produce special toxins or poisonous substances which can get from the intestines into the blood and cause illness.

Shiga toxin-producing *E. coli* (STEC) is one type of *Escherichia coli* bacteria. Other types of the bacteria, including *E. coli* O157:H7, have been identified in past outbreaks and food recalls in the United States. Although anyone can get infected with *E. coli*, those at most risk of severe illness and complications are children under age 5 and the elderly.

What are the symptoms?

The period from exposure to symptoms ranges from 1 to 8 days (average 3-5). Symptoms may include severe abdominal cramping, sudden onset of watery diarrhea which may be bloody, vomiting, and low-grade fever. Usually, symptoms are very mild, require only rest and fluids, and last only a few days. However, the toxin may trigger life-threatening complications such as kidney failure and/or bleeding disorders.

How is Shiga toxin-producing *Escherichia coli* spread?

Individual cases and outbreaks of Shiga toxin-producing *Escherichia coli* have been associated with eating undercooked beef (especially ground beef) and drinking unpasteurized milk. Unpasteurized apple juice, contaminated water, red leaf lettuce, alfalfa sprouts, and venison jerky have also been related to reported cases. The bacteria have been isolated from poultry, pork and lamb.

Person-to-person spread, via fecal-oral transmission, may occur in high-risk settings like day care centers and nursing homes. Animal-to-person transmission at petting zoos or farms is also common.

How is it treated?

For mild illness, antibiotics do not appear to shorten the duration of symptoms and may result in more severe symptoms. Severe illness may require intensive care and hospitalization.

How can it be prevented?

The local health department gathers information about reported cases, provides education, and offers guidance on prevention and control of illness. Persons working in “sensitive occupations”, such as food handlers, health care workers, child care providers, and children who attend day care centers, are at greater risk of spreading infectious illness. ***All infected persons involved in these activities should not work until diarrhea has stopped AND approval to return is given by the local health department.***

TIPS FOR PREVENTION:

There are several ways to reduce the risk of exposure to Shiga toxin-producing *Escherichia coli*. Prevention measures may include:

- Avoid eating raw, rare, or undercooked ground beef or hamburger. Cook ground beef or hamburger until the pink is gone, the juices run clear, and it is hot on the inside. The bacteria in meat are killed by heat when thoroughly cooked.
- Thoroughly cook poultry before eating.
- Do not drink unpasteurized milk, juice and cider. Avoid dairy products made with unpasteurized milk, such as cheese or ice cream. Pasteurization kills the bacteria.
- Avoid drinking from untreated water supplies. Chlorine or other disinfectants will kill the bacteria.
- Peel and/or wash raw fruits and vegetables. Careful rinsing can remove dirt and reduce the amount of bacteria that may be clinging to the produce.
- Avoid cross-contamination of raw foods and surfaces.
 - Use hot soapy water on knives, countertops and cutting boards before and after they come into contact with fresh produce or raw meat.
 - Never put cooked hamburgers on the same plate you used for raw patties.
- Wash your hands frequently with soap and water for at least 20 seconds-
 - after using the bathroom
 - after changing diapers
 - before preparing or eating food.
 - after contact with pets, and other animals

FOR MORE INFORMATION:

SCHD Communicable Disease Unit 330-375-2662
Centers for Disease Control and Prevention www.cdc.gov
Mayo Clinic www.mayoclinic.com
Minnesota Department of Health www.health.state.mn.us