York Region

E. coli Infection

(Shiga Toxin-producing *Escherichia coli* (STEC) and Verotoxin-producing *Escherichia coli* (VTEC))

What is *E. coli*?

E. coli are bacteria commonly found in the intestines of humans and animals. There are different strains of *E. coli* bacteria. Some strains are harmful to people, and some are not. The most commonly known infection is *E. coli* 0157:H7.

Certain strains of E. coli can cause serious illness. If a person eats or drinks something contaminated with those strains of *E. coli*, the bacteria can survive the gastric juices in the stomach and pass to the intestines, where they can grow and produce toxins called shiga toxins or verotoxins. These toxins can cause illness.

What are the symptoms of *E. coli* infection?

Although some individuals can become infected without developing symptoms, infections usually cause diarrhea that may range from mild and non-bloody to stools that are almost all blood as well as severe abdominal cramps. There is generally little or no fever.

Symptoms can appear within two to 10 days after ingesting the bacteria, and typically start three to four days after ingestion. The illness usually lasts seven to 10 days.

Once symptoms are no longer present, adults can continue to shed the bacteria in their stool for up to one week and children for up to three weeks.

What are the complications of *E. coli* infection?

This infection is strongly associated with Hemolytic Uremic Syndrome (HUS), a leading cause of kidney failure in young children and the elderly. Symptoms of HUS may include irritability, fatigue, paleness of the skin, puffiness around the eyes and ankles and a decrease in the amount of urine produced. It is important to watch for symptoms of HUS in a child even after a child's diarrhea starts to clear up.

How do *E. coli* bacteria spread?

E. coli bacteria can spread through many food sources, such as undercooked ground beef, ham, turkey, roast beef, processed sandwich meats, through unpasteurized milk, apple cider and cheese and through grocery produce like melons, spinach and raw vegetables. Bacteria can also spread through contaminated drinking water or recreational waters. Once someone has eaten the contaminated food, this infection can be passed from person to person, by hand-to-mouth contact (fecal-oral route).

How do *E. coli* infections happen?

E.coli bacteria are found in the intestines of cattle. When animals are slaughtered, the bacteria contaminate the outer surface of the meat. The bacteria are further mixed into the meat during the grinding process.

How can *E. coli* infection be prevented?

E. coli infection can be prevented through the following measures:

Wash your hands thoroughly

- After using the washroom
- After changing diapers
- Before preparing or eating food
- After contact with animals or their environments, such as at farms, petting zoos, fairs or your own backyard

Prepare food carefully

- Clean and sanitize counter tops, cutting boards and utensils after contact with raw meats and poultry
- If possible, separate work areas and utensils for preparing raw and cooked foods
- Cook ground beef thoroughly to an internal temperature of 70°C (155°F), or until the juices run clear and the meat is no longer pink
- Keep cold foods at 4°C or lower and hot foods at 60°C or higher
- Wash all fruits and vegetables before eating
- Avoid preparing or handling food if you are ill with diarrhea

Be careful of what you drink and eat

- Only eat pasteurized cheese and drink pasteurized apple cider and milk — never drink milk directly from an animal
- Drink water from a safe supply — test your well water at least three times a year or after a heavy rainfall
- Avoid swallowing water when swimming or playing in recreational waters. These include lakes, ponds, streams, jacuzzis, swimming pools and backyard “kiddie” pools.

What is the treatment for *E. coli*?

Most people recover without treatment. Drinking plenty of fluids is important for recovery.

Antibiotics and antidiarrheal/antimotility medicines are **not** recommended and may increase the risk of complications, such as HUS.

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