

# 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. Although most strains of *E. coli* are harmless, others can cause serious illness. The most commonly known infection in humans is *E. coli* O157:H7.**

If a person eats or drinks something contaminated with strains of *E. coli*, the bacteria can survive in the stomach and pass to the intestines, where they can grow and produce shiga toxins or verotoxins. These toxins can cause illness. People of any age are at risk for *E. coli*, but those who are pregnant, children under the age of five, adults 60 years of age and older, and individuals with a weakened immune system are at greater risk.

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

Like other food-borne illnesses, the symptoms of *E. coli* infection mainly involve the gut. Symptoms may vary from person to person and may include:

- Nausea/vomiting
- Mild fever
- Severe stomach cramps
- Watery or bloody diarrhea

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 fewer than five 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 a decrease in the amount of urine produced, swelling in the face, hands, and feet, paleness of the skin, irritability, and fatigue. HUS typically develops seven days (and up to three weeks) after onset of diarrhea. It is important to watch for symptoms of HUS in children even after diarrhea starts to improve. Anyone with these symptoms should see their physician immediately.

### How do *E. coli* bacteria spread?

*E. coli* bacteria are found naturally in the intestines and in the feces of some animals such as cattle, goats and sheep. 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.

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*E. coli* bacteria can be passed from person to person by hand-to-mouth contact (fecal-oral route), and through direct contact with infected animals and their environment.

You can also be exposed to *E. coli* by consuming:

- Raw or undercooked beef, especially ground beef
- Unpasteurized milk products, such as raw milk cheese
- Contaminated raw fruits and vegetables, such as leafy greens, sprouts, coleslaw, and melons
- Contaminated drinking water or recreational water
- Unpasteurized juices, such as apple cider and orange Juice
- Unpasteurized (raw) milk

## How can *E. coli* infection be prevented?

### 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 raw fruits and vegetables before eating
- Avoid preparing or handling food if you are ill with diarrhea

### Watch what you drink and eat

- Only eat pasteurized cheese and drink pasteurized fruit juices and milk — never drink raw milk
- 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 from *E. coli* infection without treatment. However, severe vomiting and diarrhea can lead to dehydration (fluid loss). To protect against dehydration, drink plenty of fluids and see your physician if symptoms persist.

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