

## Fact sheet

# Escherichia coli (E. coli)

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### What are *E. coli*?

*E. coli* are bacteria found in the environment, foods, and intestines of people and animals. Some kinds of *E. coli* cause disease by making a toxin called Shiga toxin. The bacteria that make these toxins are called "Shiga toxin-producing" *E. coli*, or STEC. The most commonly identified STEC in North America is *E. coli* O157:H7.

### How is STEC infection spread?

The infection is acquired by eating food containing the bacteria. Eating meat, especially ground beef that is rare or not fully cooked is a common way of getting the infection. Other possible sources of infection include unpasteurized milk and food products, fresh produce that has been contaminated, drinking or swimming in water that has not been disinfected. Infection can spread from person-to-person when a person eats food prepared by people who did not wash their hands well after using the toilet or after changing diapers.

### What are the signs and symptoms of STEC infection?

Some infected people may have mild diarrhea or no symptoms at all. Most people develop severe diarrhea and abdominal cramps. Blood is often seen in the stool. Usually little or no fever is present. Most people get better within 5–7 days. Some infections are very mild, but others are severe and can be fatal.

### How long after infection do symptoms appear?

Symptoms usually occur 3–4 days after the exposure, but may be as short as 1 day or as long as 10 days. The symptoms often begin slowly with mild belly pain or non-bloody diarrhea that worsens over several days.

### Who is most at risk?

People of any age can become infected. Very young children and the elderly are more likely to develop severe illness and problems than others, but even healthy older children and young adults can become seriously ill.

### What type of health problems are caused by STEC infection?

Around 5–10% of people diagnosed with STEC infection may develop a life-threatening illness known as hemolytic uremic syndrome (HUS). This is a serious illness in which red blood cells are destroyed and the kidneys fail. Transfusions of blood or blood clotting factors as well as kidney dialysis may be needed. Signs that a person is developing HUS include:

- decreased frequency of urination
- feeling very tired
- losing pink color in cheeks and inside the lower eyelids

Most people with HUS recover within a few weeks, but some suffer permanent damage or die.

## How is STEC infection diagnosed?

STEC infections are usually diagnosed through laboratory testing of stool specimens (feces). Identifying the specific strain of STEC is essential for public health purposes, such as finding outbreaks.

## How is STEC infection treated?

Most persons recover without antibiotics or other specific treatment in five to ten days. The usefulness of antibiotic treatment is unproven, and anti-diarrheal medication should be avoided. As with all types of diarrhea, it is important to avoid dehydration by drinking plenty of fluids, and keep your healthcare provider informed of your symptoms.

## How can STEC infection be prevented?

Practice proper hygiene, especially good handwashing.

- Wash your hands thoroughly after using the bathroom and changing diapers;
- Before and after preparing or eating food;
- After contact with animals or their environments (at farms, petting zoos, fairs, even your own backyard);
- Before preparing and feeding bottles or foods to an infant or toddler;
- Before touching an infant or toddler's mouth, and before touching pacifiers or other things that go into an infant or toddler's mouth.
- If soap and water aren't available, use an alcohol-based hand sanitizer with at least 60% alcohol (check the product

label to be sure). These alcohol-based products can quickly reduce the number of germs on hands in some situations, but they are not a substitute for washing with soap and running water.

- Follow the four steps to food safety when preparing food: clean, separate, cook, and chill.
- Cook meats thoroughly.
- Prevent cross-contamination in food preparation areas by thoroughly washing hands, counters, cutting boards, and utensils after they touch raw meat.
- Avoid raw milk, unpasteurized dairy products, and unpasteurized juices.
- Avoid swallowing water when swimming and when playing in lakes, ponds, streams, swimming pools, and backyard "kiddie" pools.

## Where can I get more information?

- Your personal healthcare provider
- [Utah Department of Health and Human Services](#)
- [Centers for Disease Control and Prevention \(CDC\)](#)