

E. coli

Escherichia coli



What is *E. coli*?

E. coli are bacteria that normally live in the intestines of humans and animals. Although most strains are harmless, several are known to produce toxins that can cause diarrhea. These Shiga toxin-producing *E. coli* (STEC) can cause severe diarrhea and kidney damage. *E. coli* can also cause urinary tract infections, respiratory illness and pneumonia, and other illnesses.

Who gets *E. coli*?

Anyone can become infected with STEC, but the very young and the elderly are more likely to develop serious complications. Even healthy older children and young adults can become seriously ill.

How is *E. coli* spread?

Shiga toxin-producing *E. coli* can be acquired by eating contaminated food. These bacteria live in the intestines of some healthy cattle and contamination of their meat may occur during the slaughtering process. Sheep, deer, and other hoofed animals may also be infected with the organism. Improper handling of these meats or eating meat that is rare or inadequately cooked is a common way of becoming infected. Contaminated fresh vegetables, unpasteurized fruit juices, and raw milk have also caused STEC infections.

Person-to-person transmission, especially in childcare settings, can occur if infected people do not wash their hands thoroughly after using the toilet or after diapering children ill with diarrhea.

In addition, drinking contaminated water and swimming in contaminated lakes may cause infection. Infections have also resulted from direct contact with farm animals and/or their living areas.

What are the symptoms of *E. coli*?

Some infected people have mild diarrhea or no symptoms at all. Most identified cases develop severe diarrhea (which can be bloody), abdominal cramps, and vomiting. Usually little or no fever is present. Persons who experience these symptoms should contact a healthcare provider.

How soon after an *E. coli* infection do the symptoms appear?

The time between ingesting STEC bacteria and feeling sick is usually two to six days after an exposure but may be as short as one day or as long as eight days.

What are the complications associated with *E. coli*?

In some people, particularly children under five years of age, the infection can cause a complication called hemolytic uremic syndrome (HUS), which affects the kidneys. Transfusions of blood or blood clotting factors, as well as kidney dialysis, may be necessary to treat this syndrome. HUS, if it occurs, develops an average of seven days after the first symptoms, when the diarrhea is improving. A prolonged hospital stay is often required. Most people with HUS recover completely, but it can be fatal.

What can be done to prevent *E. coli* infection?

- **Cook meats thoroughly.** Ground beef and meats that have been needle-tenderized, e.g. pound steak, should be cooked to a temperature of at least 155°F/68°C. It is best to use a thermometer as color is not a reliable indicator of doneness.
- **Prevent cross contamination** in food preparation areas by thoroughly washing hands, counters, cutting boards, and utensils after they touch raw meat or their juices.
- **Avoid raw milk**, other unpasteurized dairy products, and unpasteurized juices, like fresh apple cider.
- **Wash your hands thoroughly after using the bathroom** or changing diapers and before preparing or eating food.
- **Wash your hands after contact with animals** or their environments – at farms, petting zoos, fairs, and at home.
- **AVOID swallowing water when swimming** or playing in lakes, ponds, streams, swimming pools, and “kiddie” pools.

For more information:

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