



Diseases Fact Sheet – E. Coli

South Dakota Department of Health

Office of Disease Prevention Services - 605-773-3737 -(1-800-592-1861 in South Dakota only)

This material is provided for informational purposes only and is not a substitute for medical care. We are not able to answer personal medical questions. Please see your health care provider concerning appropriate care, treatment or other medical advice.

What is it?

Shiga toxin-producing *E. coli* is one strain of the *Escherichia coli* bacteria. There are hundreds of strains of *Escherichia coli* that live in the intestines of healthy people and animals. Shiga toxin-producing *E. coli* is a strain that can cause severe illness and even death.

Who gets shiga toxin-producing E. coli?

Anyone can get Shiga toxin-producing *E. coli* infection.

How is it spread?

Shiga toxin-producing *E. coli* can be spread through under cooked ground beef, unpasteurized milk, from person to person and untreated water supplies

What are the symptoms of shiga toxin-producing E. coli?

People infected with shiga toxin-producing *E. coli* can develop severe, bloody diarrhea and painful abdominal cramps. In some people, the infection can cause a condition known as hemolytic uremic syndrome (HUS) which results in acute kidney failure, and other complications such as seizures and stroke can occur. Less than 10% of shiga toxin-producing *E. coli* infections lead to HUS, but persons with this illness often require intensive care, blood transfusions, and kidney dialysis to survive. Most at risk are children under 5 and the elderly. Survivors of HUS may have high blood pressure and kidney problems later in life.

How soon do symptoms appear?

Symptoms can appear from three to eight days after infection with an average of three to four days.

Where are the shiga toxin-producing E. coli bacteria found?

Shiga toxin-producing *E. coli* can be present in the intestines of cattle and man. The bacteria can be present in cow's udders or in milking equipment and can be passed into raw milk. Shiga

toxin-producing *E. coli* can be found in untreated water. The bacteria is easily passed from person to person.

Should an infected person be excluded from work or school?

People with active diarrhea who are unable to control their bowel habits (infants, young children, certain handicapped individuals) should stay home. Most infected people may return to work or school when their stools become formed provided that they carefully wash their hands after toilet visits. Food handlers, staff and children in day care, and health care workers should obtain the approval of the state health department before returning to their routine activities. These persons should be excluded from their duties until two fecal specimens collected at least 24 hours apart are negative on culture. If antibiotics have been given, the initial culture should be obtained 48 hours after the last dose.

What is the treatment for shiga toxin-producing *E. coli*?

Most people will recover on their own. Primary treatment includes giving adequate fluids to prevent dehydration.

What can be done to prevent the spread of shiga toxin-producing *E. coli*?

- Avoid eating raw, rare, or under cooked ground beef or hamburger. The bacteria in meat are killed by heat when thoroughly cooked. Cook ground beef or hamburger until the pink is gone, the juices run clear, and it is hot on the inside.
- Avoid raw, unpasteurized milk or products made from such milk. Pasteurization kills the bacteria.
- Avoid drinking from untreated water supplies. Chlorine or other effective disinfectants will kill the bacteria.
- Careful hand-washing with soap will reduce the risk of spreading the bacteria by food handlers, in day care settings and by health care workers.

Additional information about diarrheal illness

- If you or your child have a diarrheal illness, remember a stool sample is needed to determine what is causing the diarrhea and who might be at risk for spread of the disease from the ill individual.
- Kits for collecting the stool sample are available from the South Dakota Department of Health's local [Disease Intervention Offices](#) or from the [State Public Health Laboratory](#). (There is a charge for the testing.)



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- If *salmonella*, *E. coli*, rotavirus, *shigella* or campylobacteriosis is diagnosed, department disease intervention staff may contact you about potential exposures such as food, farm animals or other ill individuals.
- [FoodSafety.gov — E. coli information](#)