

Shiga Toxin-Producing *Escherichia coli* (STEC) Fact Sheet

What are Shiga toxin-producing *Escherichia coli* (STEC)?

Escherichia coli (*E. coli*) are bacteria that live in the intestines of people and animals. Most *E. coli* are harmless and do not cause illness. Shiga toxin-producing *E. coli* (STEC) make toxins that can cause severe illness. STEC is commonly heard about in the news in association with foodborne outbreaks. The most commonly recognized STEC strain is *E. coli* O157:H7. Other STEC strains are commonly referred to as non-O157 STEC and may also cause foodborne illnesses.

How common is STEC infection?

Between 300 and 500 laboratory-confirmed cases of STEC are reported per year in California. There may be many more unreported STEC cases from people who did not seek medical care or did not submit fecal specimens for testing.

How does a person get STEC infection?

A person can become ill with STEC after consuming food or water contaminated with the bacteria or by direct contact with infected persons or animals or their environments. Illnesses have been linked to:

- raw or undercooked beef products
- unpasteurized apple juice, cider, or raw milk
- raw produce, including lettuce, spinach, and sprouts
- contaminated water sources
- having direct contact with an infected person who hasn't properly washed their hands
- contact with contaminated surfaces or animals (e.g., at agricultural fairs, petting zoos, farm visits)

What are the symptoms of STEC infection?

Symptoms of STEC infection usually begin 3 to 4 days after being exposed, and include stomach cramps, diarrhea (sometimes bloody), and vomiting. If there is fever, it is usually not very high. Most infected people get better within a week; but some people may develop complications that require hospitalization.

Young children and the elderly are at highest risk for a potentially life-threatening complication known as hemolytic uremic syndrome (HUS), which includes kidney failure. People who develop symptoms of STEC infection should consult their health care provider.

How is STEC infection diagnosed?

Your health care provider will send a sample of your feces to a laboratory to test for STEC. Identifying the specific strain of STEC is important to public health to detect an outbreak. Many laboratories can determine if STEC are present, and most can identify *E. coli* O157:H7. Identification of non-O157 STEC strains is more complex and is usually done at a public health laboratory.

How is STEC infection treated?

There are no specific treatments for STEC infection. Most persons recover in 5 to 10 days. It is important to rest and drink plenty of fluids to help with dehydration and fatigue. Your doctor can recommend appropriate treatment and can monitor for the development of more serious complications such as HUS.

What can a person do to prevent STEC infection?

Things you can do to reduce the risk of STEC infection include:

Proper Cooking

- Do not eat undercooked meat. Cook ground beef to an internal temperature of at least 160 F. Check the temperature of the meat with a food thermometer.
- Do not drink unpasteurized (raw) milk, juice and cider.

Safe food handling and storage

- Prevent cross contamination in food preparation areas by thoroughly washing your hands, utensils, and food surfaces often with warm, soapy water, especially before preparing or eating food.
- Keep raw foods separate from ready-to-eat foods.
- Defrost raw meat in your microwave or refrigerator. Do not thaw on the counter.
- Wash raw fruits and vegetables thoroughly under running water before eating, even if they will be peeled.

Hand washing

- All family members should wash their hands with warm, soapy water after using the toilet, changing diapers, handling animals, and before preparing or handling food or drinks.

Avoid drinking untreated water

- Don't drink or swallow water from rivers, streams, lakes, or pools.
- Untreated water should be boiled before use.

What is public health doing about STEC?

California Department of Public Health (CDPH) and local health departments (LHDs) monitor STEC because it is a disease that can be easily spread to other people. CDPH and LHDs monitor for outbreaks and investigate these to identify a common source such as a contaminated food or ill food handler and take measures to prevent ongoing infections.

Health care providers are required to report suspected cases of STEC to the LHD. In addition, LHDs may restrict the activities of persons with STEC from certain work or activities (such as food handling or health care) until they have been examined and cleared by their LHD.

Where can I find more information on STEC?

- Your health care provider
- Your local health department
- [U.S. Centers for Disease Control and Prevention *E. coli* webpage](http://www.cdc.gov/ecoli/general/index.html)
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