Shiga Toxin-Producing E. coli (STEC)

What is Shiga toxin-producing E. coli (STEC)?
E. coli are bacteria (germs) that normally live in the intestines of humans and animals. There are many types of E. coli and most of them are harmless. However, certain types known as STEC, may cause serious illness in people. In the United States, the most common strain within the STEC family is E. coli 0157:H7.

What are symptoms of STEC?
Symptoms include diarrhea, which often becomes bloody, and stomach cramps. A slight fever may be present. In some people, particularly children under five years of age, the infection can cause a complication called hemolytic uremic syndrome (HUS). HUS is a serious disease in which red blood cells are destroyed causing anemia and kidney failure. Transfusions of blood or blood clotting factors, as well as kidney dialysis, may be necessary. A prolonged hospital stay is often required. Fortunately, most people with HUS recover completely, but it can be fatal.

How soon do symptoms appear?
Symptoms begin 1-8 days after exposure, usually within 2-6 days.

How is STEC spread?
It is spread by consuming food or water that is contaminated with STEC bacteria. It can spread from animals to people through raw or undercooked meat, unpasteurized milk, or foods which were contaminated by raw meat products or by animal feces (e.g. apples dropped in the orchard). Beef is the most common meat to be contaminated with STEC, but deer meat (venison) may also be infected with the bacteria. Contaminated fresh produce and unpasteurized fruit juices have caused outbreaks of STEC. People have also become ill after coming into direct contact with livestock or visiting petting zoos. Infected persons, especially young children, may spread the illness to others by failure to wash their hands well after having a bowel movement (stool).

How long is a person infectious (contagious)?
It varies from person to person, but usually ranges between 1-3 weeks. Some individuals may continue to have the bacteria in their stools even after symptoms are gone. They are able to pass the bacteria to others as long as it remains in their stool.

It is important that infected food handlers, health care workers, child care workers, or children attending a child care be excluded from their work or child care until released by Snohomish Health District to return to work.

How is STEC diagnosed?
The illness is diagnosed by stool culture.
How is STEC treated?
Diarrhea usually goes away in five to 10 days without treatment. Studies suggest antibiotics are harmful in the treatment of *E. coli* 0157:H7 infection. **It is recommended that antibiotics and anti-diarrhea medicines, such as loperamide (Imodium), not be given.** It is important to drink plenty of fluids to prevent dehydration. Anti-diarrhea medications are not advised since they can actually make this illness worse.

How can I prevent STEC?
1. Wash hands for 20 seconds with soap and warm water after using the bathroom or changing diapers. Make sure children also wash their hands well.
2. Wash hands well before and after preparing food, especially after handling raw meat.
3. Wash hands thoroughly after touching farm animals, handling animals or pets and their waste.
4. Cook all meat, especially ground beef, thoroughly. Cook ground beef to 160 degrees. Venison should be cooked to 165 degrees. Make certain that cooked meat is gray or brown (not pink) and juices run clear.
5. Clean all utensils and surfaces after contact with raw meat.
6. Use only pasteurized milk, milk products, and fruit juices.
7. Wash fruits and vegetables thoroughly before eating.
8. Keep infected children away from other children and the elderly.
9. Do not drink untreated water or swallow water when swimming.
10. Persons ill with diarrhea should not swim in pools or lakes.

STEC is a Washington State reportable disease and must be reported to your local health department. In Snohomish County, contact Communicable Disease Surveillance and Response at 425.339.5278 Monday through Friday, 8AM - 5 PM.