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, stomach pain, and 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 injury. Early signs of HUS include decreased urine output, a pale appearance, and a lack of energy. 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.

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 or by direct person-to-person transmission. 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 like leafy greens and alfalfa sprouts as well as 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.
**Shiga Toxin-Producing E. coli (STEC)**

**How is STEC treated?**
Diarrhea usually goes away in 5 -10 days without treatment. Studies suggest antibiotics are harmful in the treatment of *E. coli* 0157:H7 infection and are associated with an increased likelihood of developing of hemolytic uremic syndrome (HUS), which can be life-threatening. **It is recommended to avoid antibiotics and anti-diarrhea medicines, such as loperamide (Imodium), because they can actually make this illness worse.** It is important to drink plenty of fluids to prevent dehydration.

**How can I prevent STEC?**
1. Wash hands for 20 seconds with soap and 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. Persons with diarrhea should not prepare food for others.
3. Wash hands thoroughly after touching animals, especially farm 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 there is no red or pink meat and that 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. Peel when possible.
8. Keep infected children away from other children and the elderly.
9. Do not drink untreated water or swallow water when swimming. Untreated water should be boiled or disinfected before consuming.
10. Persons ill with diarrhea should not swim in shared water spaces like pools or lakes until 2 weeks after symptoms resolve.

STEC is a Washington State notifiable condition and must be reported to your local health department. In Snohomish County, contact Communicable Disease Surveillance and Response at 425.339.3503 Monday through Friday, 8AM - 5PM.