

West Virginia Department of Health and Human Resources Information for the Public Regarding *E. coli* O157:H7

What is *E. coli* O157:H7?

E. coli is a bacterium that lives in the gut (intestines) of most warm-blooded animals, including humans. Most strains of *E. coli* are harmless; however, *E. coli* O157:H7 is one of several strains of *E. coli* that produce a powerful toxin that can cause severe illness in humans.

What are the symptoms of *E. coli* O157:H7?

E. coli O157:H7 often causes severe bloody diarrhea and stomach cramping with little or no fever. Symptoms begin 2 to 8 days after exposure and last for approximately 5 to 10 days. Some people may have only mild diarrhea without blood or no symptoms at all.

In some persons, especially children under 5 years of age and the elderly, infection with *E. coli* O157:H7 can result in hemolytic uremic syndrome, or "HUS." This complication is very serious and can lead to kidney failure and death.

How is *E. coli* O157:H7 spread?

E. coli O157:H7 is found in the gut (intestines) of healthy cattle. *E. coli* O157:H7 can be found on the surface of raw beef or in the middle of ground beef patties. It may also be found on fruits or vegetables contaminated with cattle manure.

People can be infected with *E. coli* O157:H7 by:

- eating undercooked beef products, particularly ground beef; or
- consumption of sprouts, lettuce, salami, unpasteurized milk, cider, or fruit juices; or
- eating unwashed raw fruits and vegetables; or
- swimming in or drinking water that is contaminated with animal or human waste.

Bacteria in diarrheal stools of infected persons can be passed from one person to another if hygiene or handwashing habits are inadequate. This is particularly likely among toddlers who are not toilet trained. Family members and playmates of these children are at high risk of becoming infected. Young children typically shed the organism in their feces for a week or two after their illness resolves. Older children rarely carry the organism without symptoms.

How is *E. coli* O157:H7 infection treated?

Most people recover without medical treatment in 5 to 10 days. Anyone with bloody diarrhea (especially young children) should contact their doctor. The use of antibiotics or over-the-counter anti-diarrheal agents is not recommended.

HUS is a life-threatening complication and requires hospitalization and extensive medical care. Blood transfusions and kidney dialysis are often required. HUS occurs in about 2% to 7% of persons with *E. coli* O157:H7.

How can *E. coli* O157:H7 infection be prevented?

- Always wash hands with soap and water:
 - after using the bathroom,
 - after changing diapers,
 - after cleaning the toilet,
 - after handling soiled towels or linens,
 - before eating, and
 - after petting or handling animals.
- Drink only pasteurized milk products, fruit juices, and cider.
- Eat only fruits and vegetables that have been washed well.
- Follow these simple food preparation tips:
 - Use a separate cutting board to prepare raw meats.
 - Cook all ground beef and hamburger thoroughly. Ground beef should be cooked to at least 160°F. If the temperature cannot be checked, cook ground beef until the juices run clear, and the inside is gray or brown throughout (not pink).
 - Avoid spreading harmful bacteria in your kitchen. Use a clean plate for cooked meat. Never return cooked meat back to the same plate used for raw meat. Keep raw meat separate from ready-to-eat foods. Wash hands, counters, and utensils with hot soapy water after they touch raw meat. Never place cooked hamburgers or ground beef on the unwashed plate that held raw patties. Wash meat thermometers in between tests of patties that require further cooking.
 - If you are served an undercooked hamburger in a restaurant, send it back for further cooking.
 - Marinade or BBQ sauce used on raw meat should not be used on cooked meat.
 - Persons who have diarrhea from any cause should not prepare food that will be eaten by others, attend day care, or bathe or swim with others.