

Georgia Department of Human Resources

***E. COLI* O157:H7 INFECTION**

What is *E. coli* O157:H7 infection?

E. coli O157:H7 is one of hundreds of strains of the bacterium *Escherichia coli*. The combination of letters and numbers in the name of the bacterium refers to the specific markers found on its surface which distinguish it from other types of *E. coli*. Although most strains of *E. coli* are harmless and live in the intestines of healthy humans and animals, the O157:H7 strain produces a powerful toxin and can cause severe illness. *E. coli* O157:H7 was first recognized as a cause of illness in 1982 during an outbreak of severe bloody diarrhea; the outbreak was traced to contaminated hamburger. Since then, most infections have come from eating undercooked ground beef. An estimated 73,000 cases of infection occur in the United States each year.

Who gets *E. coli* infection?

Anyone of any age can become infected with *E. coli* O157:H7, but it appears that children under the age of 5 and the elderly are more likely to develop serious complications.

How does one get infected with *E. coli*?

The infection is usually acquired by eating food or drinking liquids containing the bacteria. The bacteria live in the intestine of some healthy cattle, and contamination of meat may occur in the slaughtering process. Eating undercooked beef, especially undercooked ground beef, is the most common way of getting the infection. Person-to-person transmission can occur if infected persons do not wash their hands after using the toilet. Drinking unpasteurized milk or fruit juice, swimming in or drinking sewage-contaminated water, and eating contaminated fruits or vegetables such as alfalfa sprouts can also cause infection.

What are the symptoms of *E. coli* infection?

People infected by *E. coli* O157:H7 can develop a range of symptoms. Some infected people may have mild diarrhea or no symptoms at all. Most identified cases develop severe diarrhea and abdominal cramps. Blood is often seen in the stool. Usually little or no fever is present.

How soon after the exposure do symptoms appear?

Symptoms appear about three days after exposure, with a range of one to nine days.

What is the treatment for infection with *E. coli* O157:H7?

Most people recover without antibiotics or other specific treatment within five to ten days. There is no evidence that antibiotics improve the course of disease, and it is thought that treatment with some antibiotics may precipitate kidney complications. Antidiarrheal agents, such as loperamide (Imodium), should also be avoided. Hemolytic uremic syndrome is a life-threatening complication usually treated in an intensive care unit. Blood transfusions and kidney dialysis are often required. With intensive care, the death rate for hemolytic uremic syndrome is three to five percent.

How can *E. coli* and other food-borne illnesses be prevented?

- Do not eat undercooked hamburger or other ground beef products.
- Cook all ground beef and hamburger thoroughly, to 160 degrees Fahrenheit. Make sure the cooked meat is brown throughout (not pink), and juices run clear.
- Keep raw meat separate from ready-to-eat foods in the kitchen.
- Don't let cooked food touch surfaces (plates, knives, forks, and counters) that have been in contact with raw meat or poultry unless these surfaces have been washed with hot water and soap.
- Wash all cooking utensils that touched raw or undercooked meat with hot water and soap before using them again.
- Wash all fruits and vegetables with running water before eating.
- Use only pasteurized milk, milk products, and juices.
- Discard any food that looks or smells spoiled. If in doubt, throw it out!
- Food should not stand at room temperature for more than two hours, or one hour on a hot day.
- Make sure infected persons, especially children, wash their hands carefully with soap after using the toilet to reduce the risk of spreading the disease.
- Always wash hands before, during, and after food preparation.
- Always wash hands after changing diapers.
- Avoid swallowing lake or pool water while swimming.
- On picnics, always pack food in plenty of ice in a well-insulated cooler. Leftovers should be returned to the cooler immediately and refrigerated immediately when you return home.
- If you grill, be sure that meats and poultry are thoroughly cooked. Meat should be cooked before poultry to prevent cross-contamination and because poultry must be cooked to a higher temperature.
- At temporary food stalls and restaurants, look to see that food and trash are kept covered, cooking areas are clean, cold food is kept cold and cooked food is kept hot. Meat, fish, eggs, and poultry should be thoroughly cooked. Ground meat should no longer look pink and juices should be clear. Records of inspections by the health department should be posted where you can read them.

Where can I get more information about *E. coli* O157:H7?

Contact the Division of Public Health at (404) 657-2700.