



**COUNTY OF ORANGE
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**PUBLIC HEALTH
EPIDEMIOLOGY & ASSESSMENT**

***E. coli* O157:H7**

Also known as *Escherichia coli* O157:H7

What is *E. coli* O157:H7?

E. coli O157:H7 is one strain of *Escherichia coli* (*E. coli*) bacteria. In general, *E. coli* bacteria can be found in the intestines of healthy humans and animals worldwide and are usually harmless, although some people may get urinary tract infections, traveler's diarrhea, or rarely bloodstream or other infections from these bacteria. *E. coli* O157:H7, however, makes a toxin (called shiga toxin) that can cause severe illness, including bloody diarrhea and a complication called hemolytic uremic syndrome (see below).

What are signs and symptoms of *E. coli* O157:H7 infection?

Symptoms of *E. coli* O157:H7 usually start 3-4 days (range 1-8 days) after exposure to the bacteria. People with *E. coli* O157:H7 infection may have bloody diarrhea or sometimes non-bloody diarrhea, severe abdominal pain or cramps, fever, or no symptoms. Most cases resolve in 5 to 10 days. The most serious complication is hemolytic uremic syndrome (HUS), which occurs in less than 10% of infected persons, usually children under age 5 years and elderly persons. Patients with HUS may develop kidney failure and anemia (low blood count) because of destruction of the blood cells. Approximately 3-5% of patients with HUS die. The kidney failure can last for life; other lifelong complications of *E. coli* O157:H7 infection include high blood pressure and seizures.

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

E. coli O157:H7 lives in the intestines of some healthy cattle. People are usually infected with *E. coli* O157:H7 by eating a food item that is contaminated with this bacteria and not cooked enough to kill the bacteria. Food items implicated in previous human infections include ground beef (raw or undercooked), sprouts, unpasteurized milk or juice, and lettuce. This bacteria can also be passed from an infected person to another person if hands are not washed properly after bowel movements or changing diapers. Rarely, infection has been acquired from swimming in a pool or other body of water contaminated by the stool of an infected person.

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

This infection is diagnosed by sending a stool specimen for a special type of culture to detect this organism. Routine stool cultures will not pick up this bacteria. Additional testing of the stool is available to see if the shiga toxin is present.

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

Most infections subside without treatment in 5-10 days. Antibiotics may not improve the course of disease, and may possibly lead to more complications. Anti-diarrheal drugs, such as loperamide (Imodium®), which interfere with the motility of the intestines, should be avoided. People with HUS may need blood transfusions and/or dialysis for kidney failure.

How do I prevent *E. coli* O157:H7 infections?

Cook ground beef and hamburger thoroughly. Because ground beef can turn brown before disease-causing bacteria are killed, cook until a digital instant-read meat thermometer inserted into several parts of the patty, including the thickest part, reads at least 160°F. Persons who cook ground beef without using a thermometer can decrease their risk of illness by not eating ground beef patties that are still pink in the middle. All items that have come in contact with bloody juices from the beef should be washed immediately; other food items contaminated with these juices should be thoroughly cooked as well.

Wash fruits and vegetables, especially those that will be eaten raw, thoroughly under running water. Even if you plan to peel the produce before eating it, it is still wise to wash it first.

Wash hands thoroughly with soap and water after handling raw fruits and vegetables.

Drink milk, juice, or cider only if it has been pasteurized. Avoid well water or other untreated water sources.

Wash hands thoroughly with soap and water after bowel movements or changing diapers.

Avoid swallowing lake or pool water while swimming.

Avoid swimming in public pools or lakes or bathing with others if you have diarrhea.

Additional information

For additional information on *E. coli*, please see http://www.cdc.gov/ncidod/dbmd/diseaseinfo/escherichiacoli_g.htm