



E coli 0157:H7

What is *E coli* 0157:H7 (*Escherichia coli* 0157:H7)?

E coli 0157:H7 is one of the hundreds of strains of the bacterium *Escherichia coli*. Most of the strains are harmless and live in the intestines of healthy humans and animals; however *E coli* 0157:H7 produces a powerful toxin and can cause severe illness.

How is it spread?

The bacteria can be found on cattle farms and lives in the intestines of healthy cattle. Meat can become contaminated during slaughter and the bacteria can be mixed into the beef when it is ground. Bacteria present on a cow's udders or on equipment can also get into raw milk. At the petting zoo, bacteria can be present on the ground, railings, feed bins and fur of the animals.

Sources of infection:

- Failing to properly cook meat, especially ground beef.
- Eating sprouts, lettuce or other vegetables that grow on the ground, or fruit that falls on the ground without proper washing.
- Drinking unpasteurized milk or juices.
- Drinking or swimming in sewage-contaminated water.
- Improper handwashing after contact with animals.

What are the symptoms?

E. coli 0157:H7 often causes severe bloody diarrhea, severe stomach cramps and vomiting; however, the infection can cause non-bloody diarrhea or no symptoms. Usually no fever is present and most people get better within five to seven days.

About five to ten percent of people with *E coli* 0157:H7 develop a life threatening complication called hemolytic uremic syndrome (HUS). HUS can cause the kidneys to stop working and other serious problems. Some people with HUS recover in a few weeks, some have permanent damage or may die. While anyone with *E coli* may develop HUS, it is more often seen in young children and the elderly.

How is it diagnosed?

Infection is diagnosed by detecting the bacteria in the stool. Most laboratories do not routinely test for *E. coli* 0157:H7 unless specifically requested. Any person who suddenly has bloody diarrhea should have their stool tested for *E. coli* 0157:H7.

How is it treated?

Most people recover without antibiotics within five to ten days. Antibiotics should be avoided as they may lead to the bacteria releasing more toxins. Antidiarrheal agents, such as loperamide (Imodium®) should also be avoided.

Hemolytic uremic syndrome can be a life-threatening condition that requires hospital care. Blood transfusions and kidney dialysis are often needed.

How is it prevented?

Cook all meats thoroughly. Always use a thermometer to ensure proper cooking. Ground beef should be cooked until a thermometer inserted in the meat reads at least 160° F. People who cook ground beef without using a thermometer can decrease their risk by not eating ground beef that is still pink in the middle.

If eating in a restaurant and served an undercooked meat product, send it back for further cooking. Ask for a new bun and clean plate as well. Juices from the meat can contaminate other food on the plate and cause illness.

To keep from spreading harmful bacteria in your own kitchen, keep raw meat separate from any other ready-to-eat food. Clean and sanitize hands, counters and utensils after touching raw ground meat. Never place cooked ground meat on the same unwashed plate that held raw ground meat. Always wash meat thermometers in between uses.

Drink only pasteurized milk, juices or ciders. Commercial juice products have been pasteurized prior to sale. Juice concentrates are also heated sufficiently to kill bacteria.

Wash all fruits and vegetables thoroughly, especially if they will not be cooked. Children under the age of five, immunocompromised people and the elderly should avoid eating alfalfa sprouts unless the product safety can be assured. Methods to decontaminate alfalfa sprouts are being investigated.

Drink municipal water that has been treated, well water that has been tested and approved or bottled water.

Avoid swallowing lake or pool water during swimming.

Make sure that persons with diarrhea, especially children, wash their hands carefully with soap and water after bowel movements. Persons changing diapers of children with diarrhea also need to carefully wash their hands to reduce the risk of spreading infection. Anyone with diarrheal illness should avoid swimming in public pools or lakes, sharing baths with others or preparing food for others.

Make sure all children wash their hands properly after contact with animals in public settings such as fairs, farm tours and petting zoos. Children can easily contract *E. coli* O157:H7 through petting the animals or having contact with soiled animal bedding. Shoes can be contaminated with feces on the ground which later can be a contact source at home.

How does it affect my family?

Family members should use caution when ordering, handling or preparing meat products. Care should always be taken to thoroughly cook ground beef and properly clean hands and work surfaces. Proper handwashing and hygiene should always be practiced.

For more information, call the Guilford County Department of Health and Human Services, Division of Public Health at 336-641-7777 or visit our website at www.guilfordcountync.gov or the Centers for Disease Control and Prevention at www.cdc.gov. For more information on cooking ground beef, visit the US Department of Agriculture web site at www.fsis.usda.gov

Free language assistance is available upon request.