

Food Safety Fact Sheet

Foodborne Illness: E. Coli

What is E. coli?

There are hundreds of strains of the bacteria *Escherichia coli*. These strains are commonly found in the intestines of healthy persons and animals. A particular strain, E. coli 0157:H7, also known as 0157, can cause severe illness and even death. First identified as a cause of human illness in 1982, this bacterium is increasingly being detected throughout the developed world.

What are the symptoms?

Persons infected with this type of E. coli can develop severe diarrhea and painful abdominal cramps. The diarrhea is often bloody. For most, the illness subsides in 5 to 10 days. However, for some, the infection can lead to a condition known as hemolytic uremic syndrome, in which the kidneys fail, and other complications including seizure and stroke can occur.

E. coli 0157 is the principal cause of hemolytic uremic syndrome, and hemolytic uremic syndrome is the primary cause of acute kidney failure in children. Less than 10 percent of the infections lead to hemolytic uremic syndrome, but persons with this illness often require intensive care, blood transfusions and kidney dialysis to survive. Most do survive this condition, but some may have high blood pressure and kidney problems later in life.

Where does E. coli 0157:H7 come from?

Primary sources are undercooked ground beef and raw milk. The 0157 bacterium is present in the intestines of cattle, which can contaminate meat during slaughter. The bacteria are killed when meat is thoroughly cooked, but can survive in meat that is rare or inadequately cooked. The lesson for prevention is to cook ground beef to an internal temperature of at least 155°F. Bacteria present in the cow's udders or in milking equipment can be passed into raw milk, but pasteurization kills the bacteria.

How else can the bacteria be passed on?

Since waterborne transmission of 0157 has been documented, only chlorinated or carbonated water should be considered safe. Also, the organism is easily passed from person to person and, for this reason, it is a concern in daycare settings. Frequent hand washing with soap will prevent transmission.

Who is at the greatest risk?

People at risk of severe consequences of infection are children under 5 and the elderly.

How widespread is the bacterium?

Preliminary estimates indicate that as many as 20,000 cases of infection from E. coli 0157:H7 occur in the United States each year. The infection is common in Canada, and is increasingly reported in Europe and Japan.