

## ***Escherichia coli* O157:H7**

Updated 11/05

*E. coli* O157:H7 is one of hundreds of strains of the bacterium *Escherichia coli*. Although most strains are harmless and live in the intestines of healthy humans and animals, this strain produces a powerful toxin and can cause severe illness. *E. coli* O157:H7 was first recognized as a human pathogen in 1982 when it was responsible for an outbreak of hemorrhagic colitis in the United States.

### Transmission

- Most illness has been associated with eating undercooked, contaminated ground beef.
- Person-to-person contact in families and child care centers is also an important mode of transmission.
- Infection can occur after drinking raw milk and after swimming in or drinking sewage-contaminated water.
- Outbreaks have been associated with animal contact in petting zoos and other similar settings. Such an outbreak occurred in Florida in early 2005.

### Symptoms

- Abdominal cramps and diarrhea that can range from non-bloody to stools that are virtually all blood
- Low-grade fever, nausea, and fatigue
- Symptoms usually resolve in 5-10 days

### Treatment/Care

- Most persons recover without antibiotics or other specific treatment in 5-10 days
- Antidiarrheal agents, such as loperamide (Imodium), should also be avoided

### Complications

- Strains of *E. coli* O157:H7 can produce two types of Shiga toxin or verocytotoxin.
- These toxins can cause hemolytic uremic syndrome (HUS) in about 6% of patients. Currently this is the major cause of HUS in children in the US and Canada.
- About one-third of persons with hemolytic uremic syndrome later develop abnormal kidney function
- Other complications include high blood pressure, seizures, and blindness

### Prevention

- Cook meat, especially ground beef, thoroughly
- Avoid unpasteurized milk
- Wash hands carefully, including after contact with farm animals.
- Preventive measures on cattle farms and during meat processing are being investigated and may also be useful.

In 2003, there were 46 cases of *E. coli* infections in Florida and 74 cases in 2004. As of November, there were 71 cases in 2005.

More information

[http://www.cdc.gov/ncidod/diseases/submenus/sub\\_ecoli.htm](http://www.cdc.gov/ncidod/diseases/submenus/sub_ecoli.htm)

<http://www.niaid.nih.gov/factsheets/foodbornedis.htm>