

Escherichia coli O157:H7



Photo: Eric Erbe, digital colorization by Christopher Pooley, ARS Image Gallery.

CAUSE: *Escherichia coli*, or *E. coli*, is a common bacteria that lives in the intestinal tracts of all humans and animals. Most strains are harmless commensals, but some like O157:H7 cause severe disease.

EFFECT: Shiga-toxin producing *E. Coli*, like O157:H7, produce powerful toxins that may cause severe bloody diarrhea and abdominal cramps (hemorrhagic colitis) and a complication where red blood cells are destroyed and cause kidney failure (hemolytic uremic syndrome).

How is E. coli spread? Some cattle carry *E. coli* O157:H7 even though they don't appear to be ill. Improper hygiene during meat preparation or improper cooking of meat can lead to human infection and disease. Food-borne outbreaks have also been linked to unpasteurized fruit juice and vegetables.

How can E. coli be prevented? Ways to limit shedding of the organism from cattle going to slaughter are under investigation. By consuming pasteurized products, washing vegetables thoroughly, and cooking meats completely, people can minimize their risk of food-borne enteric disease like coliform diarrhea.

Can E. coli affect people? Yes, *E. coli* infections in humans range from mild to severe. Usually the disease is self-limiting, but in the case of hemolytic uremic syndrome intensive care is needed.

What if there is an outbreak? Cows are rarely ill even if they carry the pathogenic forms of *E. coli*. *E. coli* O157:H7 is primarily important in terms of public health.

For more information on E. coli, see:

[CDC: *Escherichia coli* O157:H7](#)

[FDA: Bad Bug Book – *Escherichia coli* O157:H7](#)

[Public health concerns with *E. coli* and *Salmonella*](#)