

E. coli O157:H7 is one of hundreds of strains of the bacterium *Escherichia coli*. The combination of letters and numbers in the name of the bacterium refers to the specific markers found on its surface and distinguishes it from other types of *E. coli*.



during an outbreak of severe bloody diarrhea; the outbreak was traced to contaminated hamburgers. Since then, most infections have come from eating undercooked ground beef. However, person-to-person contact in families and child care centers is also an important mode of transmission. Infection can also occur after drinking raw milk and after swimming in or drinking sewage-contaminated water.

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.

According to the CDC, an estimated 73,000 cases of infection and 61 deaths occur in the United States each year from this particular strain of *E. coli*.

E. coli O157:H7 was first recognized as a cause of illness in 1982

FACTS

IMPLICATIONS

Eating meat, especially ground beef, that has not been cooked sufficiently to kill *E. coli* O157:H7 can cause infection. Contaminated meat looks and smells normal

Cook all ground beef and hamburger thoroughly. Because ground beef can turn brown before disease-causing bacteria are killed, use a meat thermometer to ensure thorough cooking. Ground beef should be cooked until a thermometer inserted into several parts of the patty, including the thickest part, reads at least 160° F.; no pink will remain

It is believed that a very small amount of *E. coli* O157:H7 can cause infection

Avoid spreading harmful bacteria in your kitchen. Keep raw meat separate from ready-to-eat foods. Wash hands, counters, and utensils with hot soapy water after they touch raw meat. Never place cooked hamburgers or ground beef on the unwashed plate that held raw patties. Wash meat thermometers in between tests of patties that require further cooking

The organism can be found on a small number of cattle farms and can live in the intestines of healthy cattle. Meat can become contaminated during slaughter, and organisms can be thoroughly mixed into beef when it is ground

Ranchers and processors are investigating various techniques to prevent contamination prior to slaughter, including more stringent microbiological testing, and washing of carcasses before processing

Bacteria in diarrheal stools of infected persons can be passed from one person to another if hygiene or handwashing habits are inadequate

Wash hands thoroughly and frequently; do not allow infected individuals to work, even in non-food-handling positions

Bacteria present on the cow's udders or on equipment may get into raw milk

Do not use unpasteurized milk or milk products

Unpasteurized juice and cider have also been implicated in outbreaks

Drink only pasteurized juice, or cider. Commercial juice with an extended shelf life that is sold at room temperature (e.g., juice in cardboard boxes, vacuum-sealed juice in glass containers) has been pasteurized, although this is generally not indicated on the label. Juice concentrates are also heated sufficiently to kill pathogens

Among other known sources of infection include consumption of sprouts, lettuce, and other produce that has come in contact with sewage-contaminated water

Wash fruits and vegetables thoroughly, especially those that will not be cooked. Methods to decontaminate alfalfa seeds and sprouts are being investigated