

## Sources of Contamination

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The quality of surface water is unpredictable, because the water continually moves and pollutants can be introduced at any time. In other words, an area of lake or stream that is fine one day may be contaminated the next.

Biological contaminants can come from sewers and failed septic systems, boat toilets, animals, and other sources.

Chemical contaminants, like gasoline, oil, pesticides, and heavy metals, can come from discharge pipes, chemical storage areas, gasoline tanks, oil drums, or anywhere chemicals have been used close to open water.

*E. coli* are **coliform bacteria** that normally live in the intestines of humans and animals. Although most strains are harmless, several are known to produce toxins that can cause diarrhea. One particular *E. coli* strain called O157:H7 can cause severe diarrhea and kidney damage.

## Who gets *E. coli* O157:H7 infection?

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Anyone of any age can become infected with *E. coli* O157:H7, but the very young and the elderly are more likely to develop serious complications.

## How is *E. coli* O157:H7 infection spread?

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The organism can live in the intestines of some healthy cattle, and contamination of the meat can occur during the slaughtering process. *E. coli* O157:H7 infection can be acquired by eating meat, especially ground beef, that is rare or undercooked. Drinking unpasteurized fruit juices, raw milk or sewage-contaminated water can also cause infection, as well as eating contaminated fruits or vegetables. Person-to-person transmission can also occur.

## What are the symptoms of *E. coli* O157:H7 infection?

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People infected with *E. coli* O157:H7 can develop a range of symptoms. Some infected people have only mild diarrhea or no symptoms at all. Most identified cases develop severe diarrhea and abdominal cramps. Blood is often seen in the stool. Usually little or no fever is present.

## How soon after the exposure do symptoms appear?

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The symptoms usually appear about three to four days after exposure, with a range of two to eight days.

## What is the treatment for *E. coli* O157:H7 infection?

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Most people recover without antibiotics or other specific treatment in five to 10 days. There is no evidence that antibiotics improve the course of disease; treatment with some antibiotics might actually contribute to kidney complications. Antidiarrheal agents, such as Imodium A-D, should also be avoided.

## What complications can result from infection with *E. coli* O157:H7?

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In some people, particularly children under 5 years of age, the infection can cause a complication called hemolytic uremic syndrome (HUS). This is a serious disease in which red blood cells are destroyed and the kidneys fail. Transfusions of blood or blood clotting factors, as well as kidney dialysis, might be necessary. Fortunately, most people with HUS recover completely, but it can be fatal. Parents and caregivers should be alert to symptoms of HUS, e.g., irritability, fatigue, pallor, decrease in urine production. If the child has diarrhea for longer than four to five days or if, after the diarrhea stops, the child does not appear to have fully recovered, the child's pediatrician should be notified in case further medical intervention is necessary.