

# PUBLIC HEALTH FACT SHEET

## *E. coli* O157:H7

Massachusetts Department of Public Health, 305 South Street, Jamaica Plain, MA 02130

### What is *E. coli* O157:H7?

*E. coli* are germs that normally live in the bowel of people and animals. Most strains of this germ are harmless, but the strain called *E. coli* O157:H7 can make people sick.

### What are the symptoms?

The most common symptoms are severe stomach cramps and diarrhea. Some people vomit or run a fever, but these are less common. Sometimes the diarrhea turns bloody after 2 or 3 days. These symptoms usually go away by themselves after 6 to 8 days. In a small number of people, this strain of *E. coli* can cause a rare but serious problem called hemolytic uremic syndrome (HUS).

### What is HUS?

HUS is a disease that affects the kidneys and the blood clotting system. It starts about a week after the diarrhea begins and affects more children than adults. In bad cases, dialysis is used for a while to do the kidney's work. Some people also develop a bleeding problem or low blood count (anemia). Most people who get HUS will regain their health with no remaining blood or kidney problems.

### Where is *E. coli* O157:H7 found?

It lives in the gut of healthy cattle and can get into the meat when cattle are slaughtered. The germs are killed when the meat is thoroughly cooked. The most common food source is ground beef (hamburg), because the grinding spreads the germs throughout the meat. These germs have also been found in raw milk, roast beef, apple cider, salami, and sometimes on vegetables fertilized with contaminated cow manure.

### How is it spread?

*E. coli* O157:H7 must be swallowed to cause infection. This can happen if you eat or drink something that contains these germs and is not properly cooked or pasteurized. The germs can be spread from person to person if someone who is infected does not thoroughly wash his or her hands with soap or water before preparing food for others. Spreading *E. coli* germs this way is more common in families and day care centers than in schools and restaurants.

### How is *E. coli* O157:H7 diagnosed?

Infection with this germ can only be diagnosed by testing a stool sample. It is not a routine test, so if your doctor or nurse thinks you may have *E. coli* O157:H7, she or he must ask the lab to test for it.

### How is the disease treated?

There is no treatment for *E. coli* O157:H7. Antibiotics do not help and may even be harmful. Do not try to stop the diarrhea, which should go away by itself after a few days. Just drink plenty of liquids to replace the fluids being lost. For severe cases of HUS, dialysis or transfusions are sometimes used until the patient's kidneys and blood return to normal.

## How can you prevent it?

The most important things to remember are that the germs can only make you sick if you swallow them, and that the germs are killed by thoroughly washing your hands with soap and water and by thorough cooking. Follow the tips below; if you make them your habits, you can prevent *E. coli* O157:H7—as well as other diseases:

- Do not eat unpasteurized dairy products (such as cheese) or undercooked or rare ground beef. Do not drink raw milk or cider made from unwashed apples.
- Always cook meat until the center is brown, not pink. Cook hamburgers until the center is 160 ° F.
- Do not put cooked meat or other prepared food on a dish or cutting board that held raw meat.
- Always wash your hands with soap and water after going to the bathroom or changing a diaper. Wash them again before touching or eating food.

## Are there any restrictions for people with *E. coli* O157:H7?

Yes. Because *E. coli* O157:H7 is a disease that can easily be spread to other people, health care providers are required by law to report cases of *E. coli* O157:H7 to the local board of health.

In order to protect the public, workers at food-related businesses who have *E. coli* O157:H7 must stay out of work until they don't have diarrhea and **lab tests on two different stool samples** show that there are no *E. coli* O157:H7 germs. Workers in food-related businesses who have diarrhea and live with someone who has *E. coli* O157:H7 must also show that they have none of the germs in their stool. Food-related businesses include restaurants, sandwich shops, hospital kitchens, supermarkets, dairy or food-processing plants. This regulation also includes workers in schools, residential programs, day-care and health care facilities who feed, give mouth care or dispense medications to clients.

## Where can you get more information?

- Your doctor, nurse or health care clinic
- The Centers for Disease Control and Prevention (CDC) website at: <http://www.bt.cdc.gov/>
- Your local board of health (listed in the telephone directory under “government”)
- The Massachusetts Department of Public Health (MDPH), Division of Epidemiology and Immunization at (617) 983-6800 or toll-free at (888) 658-2850 or on the MDPH website at <http://www.mass.gov/dph>