

IDRS Infectious Disease Reporting System

Disease Reporting 24 Hours a Day

Columbus Public Health and Franklin County Public Health

HEMOLYTIC UREMIC SYNDROME (HUS)

For additional information, see Shiga-toxin producing E. coli (STEC)

Hemolytic uremic syndrome (HUS) is a disease that causes abnormal blood clotting. “Hemolytic” means that as red blood cells pass through tiny clogged blood vessels, they are sheared apart and broken. “Uremic” means waste products build up in the bloodstream because the kidneys fail and cannot filter and dispose of them.

Symptoms

- The first stage of HUS frequently lasts from 1 to 15 days and includes gastrointestinal symptoms such as:
 - abdominal pain
 - bloody diarrhea
 - vomiting
- The second stage begins as diarrhea begins to improve, or an average of 7 days later:
 - irritability
 - fatigue
 - small, unexplained bruises or small clot-sized hemorrhages visible in the lining of the mouth
 - paleness
- The person may produce little urine because damaged red blood cells and other factors may clog the tiny blood vessels in the kidneys, making the kidneys work harder to remove wastes and extra fluid from the blood.

Transmission

- In most cases, HUS is caused by infection with certain Shiga-toxin producing strains of *E. coli* bacteria (STEC). However, the majority of individuals infected with STEC bacteria do not develop HUS. The bacteria produce a toxin that can cause damage to the kidneys and blood clotting system. It is not clear why some people with *E. coli* develop HUS, while many others do not.
- Undercooked ground beef is the most common source of STEC infection. *E. coli* can also spread from person to person by hands or objects contaminated with stool (poop) from a sick person.

Treatment

- HUS cannot be diagnosed with a single laboratory test. Physicians use the symptoms and results of kidney function tests, blood clotting factors, and blood counts to determine if an individual has HUS.
- Antibiotic treatment for *E. coli* infections may actually increase the risk of developing HUS.
- People with HUS need hospital treatment and usually kidney dialysis. Some people have long term kidney problems afterward.

Prevention

- Prevention for HUS is the same as prevention for *E. coli* infections:
 - Ground beef should be cooked all the way through. Keep meat separate from raw foods.
 - Wash hands thoroughly using soap and warm water after going to the bathroom, changing a diaper, before preparing or eating food, and after contact with animals or areas where animals live.

All information is general in nature and is not intended to be used as a substitute for appropriate professional advice.



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