

Hemolytic Uremic Syndrome

FACTSHEET

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What is hemolytic uremic syndrome?

Hemolytic uremic syndrome (HUS) is a complication of the Shiga toxin-producing *Escherichia coli* (STEC) infection and a major cause of acute kidney failure. Persons who develop HUS often require dialysis and transfusions. Some develop chronic kidney failure or neurologic impairment (e.g., seizures or stroke). Some have surgery to remove part of the bowel. Approximately 5% to 10% of *E. coli* O157:H7 infections, the most common STEC infection, lead to HUS complication. Long-term kidney dysfunction is 10% to 30% of survivors.

Who gets hemolytic uremic syndrome?

Anyone can get HUS, but children under 5 years and the elderly are at high risk. The incidence of HUS in North America is three cases per 100,000 children under 5 years of age per year; the rate among older children is lower, and the rate among adults is unknown.

What are the most common vehicles of transmission of STEC infections?

STEC infections and HUS have been linked to the consumption of undercooked beef, raw milk, or other products contaminated by the intestinal contents of cattle. New vehicles of *E. coli* O157:H7, the most common STEC infection associated with HUS, include dry salami, fermented sausage, and unpasteurized apple juice.

What are the symptoms of hemolytic uremic syndrome?

Diarrhea-associated HUS is the most serious complication of STEC infection. Manifestations

of STEC infection range from mild diarrhea to severe hemorrhagic colitis, thrombotic thrombocytopenic purpura, and death.

What is the treatment for hemolytic uremic syndrome?

Except for supportive care and hemodialysis, no treatment has been shown to decrease the severity of illness or to prevent complications of HUS. However, patients who develop HUS often require prolonged hospitalization, dialysis, and long-term follow-up. The lack of specific therapy makes prevention critical.

What can be done to prevent hemolytic uremic syndrome?

- Decrease the incidence of STEC infections.
- Implement better infection control practices in day-care centers.
- Develop farm and slaughterhouse-based methods to decrease contamination of meat.
- Identify ways to prevent contamination of foods eaten raw (e.g., produce).
- Educate the public to cook ground beef thoroughly, using a thermometer.
- Encourage the use of irradiation to increase the safety of ground beef.
- Encourage the screening for *E. coli* O157:H7 in stools from persons with bloody diarrhea.

