

Haemolytic Uraemic Syndrome (HUS) and Shiga Toxin Producing *Escherichia coli* (STEC)

Escherichia coli (*E. coli*) is a bacterium commonly found in the faeces of people and many animals. Most *E. coli* found in the gut are harmless but some may produce toxins such as Shiga toxin, which can cause disease.

Infection with Shiga Toxin Producing *Escherichia coli* (STEC) may produce no symptoms, or people may have:

- > simple diarrhoea
- > bloody diarrhoea
- > abdominal cramps
- > often there is little or no fever or vomiting.

A small percentage of patients with STEC may develop haemolytic uraemic syndrome (HUS) in which there is kidney disease and damage to other organs, including the pancreas and brain. Children and the elderly are especially susceptible.

Diagnosis is made by growing the bacteria in a stool specimen, or by a PCR test on the stool specimen. Blood tests may provide additional clues to the diagnosis.

Usually *E. coli* that carry Shiga toxin genes cause isolated infections, but occasionally outbreaks occur. The common sources of STEC infections include:

- > eating raw or undercooked beef mince
- > eating uncooked fermented meat products (for example mettwurst and salami)
- > eating vegetables and fruit juices contaminated with animal faeces
- > contact with farm animals
- > swallowing contaminated water.

Incubation period

(time between becoming infected and developing symptoms)

Usually ranges from 3 – 8 days but may be longer.

Infectious period

(time during which an infected person can infect others)

This may be as long as 3 weeks.

Treatment

Treatment for complications such as dehydration and kidney failure may require hospitalisation, sometimes in intensive care. As a rule, antibiotics should not be used.

Control of spread

- > All animal products, particularly from cattle and sheep, which are not thoroughly cooked or pasteurised may harbour STEC or other harmful bacteria.
- > Avoid cross contamination in the kitchen. Keep raw meats including pet meat away from items that won't be cooked, and use hot water and detergent to thoroughly wash knives, trays, chopping boards, and any other surfaces or items that might be contaminated.
- > All fruits and vegetables including lettuce and sprouts, especially if consumed raw, should be protected from contamination from raw meat or its juices and should be washed before consumption.
- > Meat should be cooked thoroughly, until the juices run clear.
- > Don't drink unpasteurised milk or juices.
- > Hand washing will prevent most person-to-person transmission. Hands should be washed after contact with animals (especially farm animals), after visiting petting zoos, before preparing or eating food and after using the toilet.
- > Toddlers who are not toilet trained should not use swimming pools and when faecal accidents occur, swimming pools should be properly disinfected.
- > Exclude from child care, preschool, school and work until there has been no diarrhoea for 24 hours. If working in a child care, health care or commercial food setting, the exclusion period should be 48 hours



HUS and STEC are notifiable diseases

- > PCR
- > Hand Hygiene
- > Keeping Areas Clean
- > Collecting a Faecal Sample