
Haemolytic uraemic syndrome

Summary

- Children under five years are most vulnerable to HUS.
 - HUS can lead to permanent kidney damage or death.
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Haemolytic uraemic syndrome (HUS) is a rare condition, which can be caused by infection with a bacteria that releases toxins into the body. Toxic strains of *E. coli* bacteria, such as *E. coli* 0157, belong to a group of enterohaemorrhagic *E. coli* (EHEC), which cause haemorrhagic colitis (bloody diarrhoea). About 10 per cent of patients with EHEC develop HUS. Children under five years of age are at greatest risk of developing HUS.

Contaminated foods can cause the infection

E. coli bacteria are common bacteria, normally found in the gut of warm-blooded animals. There are many types of *E. coli* bacteria, most of which are harmless. However, the enterohaemorrhagic *E. coli* (EHEC) produce toxins (poisons), which can cause gastroenteritis with blood in the faeces. EHEC are also sometimes called STEC (Shigatoxin producing *E. coli*) or VTEC (Verotoxin producing *E. coli*).

STEC are found in the gut of cattle and can also be found in the gut of humans without causing illness. The bacteria can be passed on to humans by:

- Eating undercooked beef, in particular ground or minced beef
- Drinking raw (unpasteurised) milk
- Close contact with a person who has the bacteria in their faeces
- Drinking contaminated water
- Swimming or playing in contaminated water
- Contact with farm animals.

Other known sources of the bacteria have included lettuce, spinach, sprouts, salami and fruit juices.

Symptoms of HUS

Children under five years of age are at greatest risk of developing HUS. The onset of illness usually starts with abdominal pains and bloody diarrhoea, which generally lasts about a week. After this time, the child becomes lethargic and passes decreasing amounts of urine. It usually takes between two and eight days after the bacteria are taken in by mouth for the first symptoms to appear. Small numbers of bacteria can cause illness.

Other features of HUS

Other characteristic features of HUS include:

- Hypertension (high blood pressure)
- Oliguria (less urine production), lasting for about one week. Some children actually stop producing urine for a short time
- Jaundice
- Seizures – these affect about 20 per cent of children who develop HUS
- Bleeding into the skin.

Long-term effects on kidney function

HUS can lead to:

- **Mild, chronic kidney damage** occurs in about 50 per cent of cases.
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- **Kidney failure** occurs in five per cent of cases.
- **Stroke** HUS is a significant cause of stroke in infants and young children.

HUS can be fatal

About five per cent of children who develop HUS will die. Children under one year or older than five years are at the greatest risk of death. The elderly, if affected, are also at serious risk of death.

How HUS is treated

Management of HUS is largely supportive, but may also include:

- Fluid and electrolyte replacement
- Treatment of anaemia, hypertension and seizures
- Early use of dialysis
- Blood transfusions.

Preventing the spread of E.coli

To help prevent infection with STEC and the development of HUS:

- Ensure proper hand washing, especially after handling raw meat.
- Do not handle raw and cooked foods with the same implements (such as tongs, knives and cutting boards), unless they have been washed thoroughly between uses.
- Do not drink unpasteurised milk.
- Thoroughly cook raw meat. Minced meat should not be eaten if any part of the meat is still pink.
- Children should avoid eating meat products, such as salami, which have not been pasteurised or cooked.
- Untreated water that comes directly from lakes or rivers may be contaminated and should not be used as drinking water.
- Thoroughly wash hands after handling animals.
- Thoroughly wash all fruit, vegetables and salad ingredients intended to be eaten raw.

Where to get help

- Your doctor
- The health department of your local council
- **Department of Health and Human Services, Communicable Disease Prevention and Control** Tel. **1300 651 160**

This page has been produced in consultation with and approved by:

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