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## FREQUENTLY ASKED QUESTIONS on SHIGA-TOXIN PRODUCING E. COLI

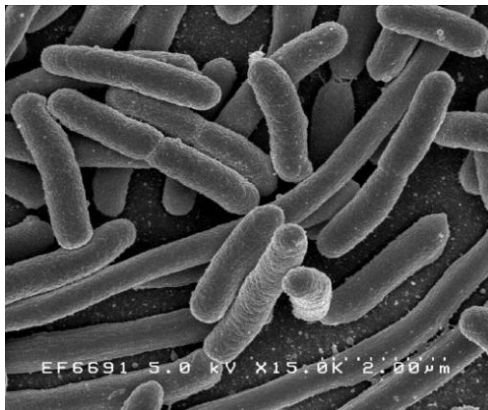
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### Current situation

A large food outbreak of E. coli infection has been reported in Germany with 18 fatalities reported since late May 2011. More than 1000 people have fallen ill from various regions in the European Union, including people from Spain, Sweden, Britain, Denmark, France and the Netherlands. To date, the epidemiological risk has affected individuals who travel to Germany. The source has been identified to be from contaminated fresh vegetables with the source likely within Germany. The German authorities have recommended precautions regarding consuming all fresh vegetables (cucumbers, lettuces and tomatoes).



Reports from different laboratories indicate that this is a new hybrid super-toxic strain.



### What is STEC?

Escherichia coli is a type of bacteria found commonly in the gut of humans and animals. Some of them are capable of producing a toxin (Shiga-toxin) and they are then called STEC, which stands for Shiga-toxin producing E. coli. The strain most commonly identified causing STEC is usually O157:H7, which leads to high morbidity and mortality. As for the outbreak in Germany, May 2011, the strain was O104. Other common identified strains include O26, O103, O111.

### Who is at risk for getting STEC 2011?

Reports have indicated that consumption of contaminated fresh vegetables in Germany is the main risk factor so far. Those at risk are the very young and very old.

## How is the infection acquired?

It occurs when contaminated food is consumed. This bacteria is killed at temperatures higher than 70 degrees Celsius. Proper cooking will annihilate any risk. Contamination may occur in the kitchen where poor kitchen hygiene is practiced. It can also be passed on from person-to-person through faecal-oral transmission or within the household, when an infected person does not wash hands after using the toilet.

## What symptoms develop after acquiring STEC?

A wide clinical spectrum of disease occurs, from being asymptomatic (not having any symptoms) to a rare condition of haemolytic uraemic syndrome – HUS (where the kidneys stop functioning and the platelets in the body fall precipitously low). People who are affected mostly develop non-bloody watery diarrhoea with severe abdominal cramps, which occurs about three to four days after ingesting the offending bacteria with bloody diarrhoea developing another three to four days later. Vomiting may occur but fever is usually not experienced. HUS is a rare event that may take place a further five to six days later, when the affected individual develops decreased urine output, pallor and confusion; bruising may occur because of low platelets.

## What are the treatment options for individuals with STEC infection?

The majority of individuals (especially those who acquire the non-O157 strain) recover within five to ten days. Key to a good outcome is good supportive management and adequate fluid hydration. This may include parenteral hydration.

Current scientific evidence and expert opinions recommend avoidance of antibiotics, especially ciprofloxacin and bactrim as these increases Shiga toxin (Stx) production despite suppression of the bacteria's growth. Avoid using proton-pump inhibitors (eg. nexium and omeprazole) as acid helps to kill the bacteria. Avoid anti-diarrhoea medications like loperamide and NSAIDs (eg. voltaren, ponstan, arcoxia) as this may affect renal perfusion.



In HUS, a renal consult is mandatory and haemodialysis may be offered. The use of plasmapheresis is still controversial in the management of HUS.

**What should I do if I suspect I have STEC?**

See a doctor immediately. Drink adequate fluids, avoid NSAIDs. Practice good hand hygiene and wash your hands thoroughly after using the toilet and flush the toilet adequately.

Please contact the Raffles Medical Group hotline 6311 1111 for an appointment with our Specialist, or visit our 24-hr clinics at Raffles Hospital, Level 1, and Changi Airport Terminal 3, should you need to consult a GP doctor.