

***E. coli* O157 and other STEC infections – Patient Information Leaflet**

Essential Information – a summary

STEC can cause diarrhoea (which may contain blood), and stomach cramps for up to 14 days.

It is important to drink lots of fluids.

There may be serious complications of this infection such as kidney failure.

It is important that you return for the tests and check ups we have told you about.

If any of the following signs or symptoms develop, then you should return for further prompt medical assessment:

- Bloody diarrhoea, if this was not present before.
- Severe tummy pain/cramps.
- Passing urine less often or in smaller amounts.
- Increasingly weak and tired.
- Cold hands and feet.
- Looking very pale.
- Pink or purple spots appearing on the skin.
- Swelling (oedema), especially around the eyes or legs and feet.
- Headache.

STEC is infectious to other people so follow strict hygiene measures.

At home, you must be very careful about hand washing with liquid soap and running warm water. Do not share towels and clean the bathroom regularly.

Stay off nursery/school/work until you have had no diarrhoea or other symptoms for at least 48 hours. Some people such as food handlers, nursery school children and those who work with vulnerable people will be required to stay away from nursery/school/work and some community activities for longer than this. Public health/environmental health will advise.

What are *E. coli* O157 and STEC?

Escherichia coli (*E. coli*) is a bacterium commonly found in the gut (intestines) of humans and animals. It makes up part of the normal gut flora - the bacteria living in the intestine.

Shiga toxin-producing *E. coli* (STEC) are a particular type of *E. coli*, one of which is known as 'O157'. These are **not** usually found in the intestines of healthy humans and can cause serious illness in humans.

Why is it important?

STEC causes diarrhoea (around half of people infected will have bloody diarrhoea), stomach cramps and occasionally fever. Symptoms may last up to 14 days. However, the bacteria can still be present in the faeces for longer than this.

Some people who are infected may not show any symptoms. Others may go on to develop very serious complications such as haemolytic uraemic syndrome (HUS) which causes kidney failure.

Young children are at higher risk of STEC infection and along with older adults, are at greater risk of serious complications. Almost half of STEC cases in Scotland are in children under 16 years of age.

Can STEC be treated?

Specific treatment is not usually needed for STEC infection. It is important to drink plenty of fluids to replace the water lost through diarrhoea.

The following medications are **not** recommended for STEC infection:

- antibiotics.
- medicines to stop diarrhoea.
- non-steroidal anti-inflammatory medicines, such as ibuprofen.
- opiate-based medication, such as co-codamol or codeine phosphate.

If you are taking any of these medications, please discuss this with your GP.

When should I get help?

All people with clinically suspected or confirmed STEC infection should get prompt medical assessment.

People with STEC, particularly young children and older adults, will require blood and urine test monitoring to check for the development of complications.

Hospital admission may not be required, but you should be given a plan of how and when to seek further medical advice.

You may be given an appointment within 1-3 days for review, with or without further tests.

You may be shown how to test urine at home.

If any of the following signs or symptoms develop, then you should return for further prompt medical assessment:

- Bloody diarrhoea, if this was not present before.
- Severe tummy pain/cramps.
- Passing urine (weeing) less often or in smaller amounts.
- Increasingly weak and tired.
- Cold hands and feet.
- Looking very pale.
- Pink or purple spots appearing on the skin.
- Swelling (oedema), especially around the eyes or legs and feet.
- Headache.

The complications of STEC infection can develop up to two weeks after symptoms first started, even if the diarrhoea has stopped.

How might I have picked up STEC infection?

STEC are found in the intestines of animals, mainly in farmed cattle, sheep and goats including calves, lambs and kids, but also potentially in wild animals such as deer and rabbits. Although they carry the bacterium, most animals carrying STEC will show **no** signs of illness.

As well as in these animals' intestines, STEC can be found in their faeces, including anywhere their faeces may come into contact with.

STEC bacteria need to be taken in by mouth for someone to become infected.

This can happen by:

- Swallowing bacteria which are on hands after contact with animals or places/ objects/clothing, where their faeces is or may have been. Hands **do not** need to look dirty to have bacteria on them.
- Drinking untreated water from lochs, rivers and streams, or from private water supplies that have not been adequately treated.
- Eating high risk foods such as undercooked meat, unpasteurised milk including dairy products made from unpasteurised milk or raw vegetables and salad.
- Eating other food items that have become 'cross-contaminated' by poor hand hygiene after handling raw meat or other contaminated foods, or by an infected person who has handled food.
- Spread from another person infected with STEC. An infected person can pass the infection on to others fairly easily when hand hygiene is poor. This can either occur through direct contact from person to person with inadequately washed hands or through the environment, such as the bathroom, if this becomes contaminated with

their faeces (e.g. through touching toilet flushes, taps, door handles etc.) and is not cleaned regularly and adequately.

The time between swallowing the bacteria and symptoms starting (the incubation time) is mostly between 1 and 14 days but commonly around 3 to 4 days. Not everyone who is infected with STEC will have symptoms.

How can I avoid passing STEC onto others?

It is very important to follow strict hygiene measures if you or your child has STEC infection to help prevent others from becoming infected. STEC spreads easily within the household by accidentally passing from the faeces of an affected person to others via unwashed hands or touching contaminated surfaces such as towels, toilet flush handles, taps etc.

Measures that can be taken to reduce the risk of spreading the infection include:

- Washing and drying hands thoroughly using running warm water and liquid soap and separate towels is the **most important** way to reduce the risk of becoming infected with STEC. **Always** wash hands after toileting (including if assisting a child to the toilet or changing nappies) and before eating or handling food and drinks or smoking. Small children should be **supervised** to wash their hands.

For detailed advice on hand washing, see <http://www.washyourhandsofthem.com>.

- If possible, try not to prepare food for the rest of your family until your symptoms have finished and you have not had any symptoms for a further 48 hours. If this is unavoidable then washing your hands thoroughly with warm running water and liquid soap before preparing the food is essential. People who prepare food as a job will be required to stay away from work until they are clear of infection – please see section below.
- Affected people should use their own towels which should be changed and washed daily or when visibly soiled.
- If the household has two toilets, the affected person should have their own toilet for their use.
- Bathrooms should be cleaned after use by the affected person using hot water and detergent including toilets, flush handles, taps, sinks and door handles. Cleaning with general purpose detergent should be followed by disinfection using a freshly prepared sodium hypochlorite (e.g. bleach) solution diluted following the manufacturer's instructions.
- Soiled clothing and bed linen should be washed separately to other items in a washing machine on the hottest temperature possible for the fabric. Always wash your hands after handling soiled items.

People with STEC infection should avoid swimming pools until they have been completely free of symptoms for 48 hours.

Can I still go to work, school, nursery?

All people with diarrhoea or vomiting should stay away from work/school/nursery until they have been completely free of symptoms for 48 hours.

Some people with STEC infection who are more likely to pass on the infection, such as food handlers, young children or those who work with vulnerable people, will be required to stay away from school/nursery/work and some community activities as advised by the public health team. This usually means having two consecutive negative stool samples, with a minimum of 24 hours between the samples, before being allowed to return to normal daily routines. This also usually applies to people in high risk groups living in the same household as those infected. Public health will provide guidance in these circumstances.

The Food Standards Agency provides detailed advice for food handlers on fitness to work: <https://www.food.gov.uk/sites/default/files/media/document/fitesstoworkguide.pdf>

Public health or environmental health involvement

All samples which test positive for STEC infection are reported to public health and environmental health. An Environmental Health Officer or member of the public health team will contact you to ask some questions in order to try and identify where you might have picked up the infection. Questions will be about where you live, your activities, places you have visited including work/school/nursery/community activities and foods you have eaten at home or from restaurants or takeaways in the two weeks before you became ill.

The information you provide will be used locally to help understand where you have picked up STEC and the control measures needed to minimise the risk of others becoming infected. Nationally the information is used to gain a better understanding of the causes and risk factors for STEC which will inform measures to reduce the risk of these infections. The public health team can also provide information and advice on how you may have contracted the illness, how to prevent further spread and returning to work/school/ nursery.

How can I reduce my risk of contracting STEC again in the future?

Having STEC infection once does not mean you are immune from getting the infection again in the future.

Ways to reduce the risk include:

- Washing and drying hands thoroughly using running warm water and liquid soap:
 - before eating or handling food and drinks or smoking.
 - after toileting (including if assisting a child to the toilet or changing nappies).
 - after contact with animals and areas / clothing / objects that may be contaminated with animal faeces.

- Do not drink water from sources such as rivers, streams and lochs without treating it first.
- If you have a private water supply, make sure it is adequately managed and maintained. The Scottish Government provides advice and information for owners and users of private water supplies in Scotland through their information site **mygov.scot**
- Follow good food hygiene practices when handling and cooking food to prevent illness.

For further information on how you can reduce the risk, see: <https://www.publichealthscotland.scot/publications/public-health-management-of-shiga-toxin-producing-escherichia-coli-stec-infection/public-health-management-of-shiga-toxin-producing-escherichia-coli-stec-infection-version-2/information-for-cases-and-contacts/>

For more information on STEC infection, see: <https://www.nhsinform.scot/illnesses-and-conditions/infections-and-poisoning/escherichia-coli-e-coli-o157>