

E.coli O157 and other STEC infections.

Public
information
leaflet.

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 and can sometimes be fatal.

Young children are at higher risk of STEC infection and along with older adults are at greater risk of serious complications. Almost half of O157 cases in Scotland are in children under 16 years of age.

What should I do if I think I have *E. coli* O157/STEC?

If you think you or your child may have STEC infection, then you should contact your GP or call NHS 111 as soon as possible.

Where is STEC found?

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, such as:

- The animals themselves even if they look clean and well.
- Land where these animals have been grazing.
- Fences, gates and surfaces around the farm or grazing land.
- Petting farms where these animals are kept.
- Anywhere where the animal faeces may have spread through contact with vehicles, footwear, clothing worn on farms, pushchair wheels etc.
- Rivers, streams, lochs and inadequately treated private water supplies where the faeces may have washed into the water from the land.
- Raw and undercooked animal products and unpasteurised milk.
- Other food stuffs which may have become contaminated, by animal faeces or contaminated irrigation water, such as raw vegetables and salad.

How do people become infected?

STEC needs 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/items 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 contaminated food 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, 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 infection?

Depending on the source, there are a number of ways to reduce the risk of contracting STEC infection:

Wash your hands

Washing and drying hands thoroughly using running warm water and liquid soap is the most important way to reduce the risk of contracting STEC infection.

Always wash hands with warm, soapy water:

- 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 that may be contaminated with animal faeces.

Remember: hands do not need to look dirty to have bacteria on them. Small children should be **supervised** to wash their hands. Sucking their thumbs, dropped dummies or toys can increase risks to infants and toddlers.

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

When out and about, hand wipes may be used to clean your hands **if there is no running water available**. Hand sanitisers can be used if hands are visibly clean. As wipes and hand sanitisers aren't 100% effective against all germs, **remember to wash your hands with soap and water at the first opportunity**.

Visits to farms, animal attractions (including petting farms and agricultural shows) and the countryside

Animals are a known source of STEC and outbreaks of STEC infection have occurred at petting farms.

Official guidance advises farmers, teachers, other group organisers and the public on how to prepare for and enjoy farm and country visits as safely as possible: <http://www.visitmyfarm.org/component/k2/339-industry-code-of-practice/339-industry-code-of-practice>.

Care when working with animals

Consult official guidance for advice on working with animals and the risk of infections: <http://www.hse.gov.uk/agriculture/topics/zoonoses.htm>.

Care with clothing and footwear

Clothing and footwear can easily become contaminated by contact with farm animals or their faeces, even without any visible signs of dirt.

Whenever possible, remove footwear or clothing that might have become soiled and remember to clean pushchair wheels, then, **wash your hands**.

Eating and drinking

Do not drink water from sources such as rivers, streams and lochs without first treating it. If you don't have enough drinking water with you, untreated water can be made safe to drink by boiling or using chemical treatments: <http://www.fitfortravel.nhs.uk/advice/general-travel-health-advice/water-purification.aspx>.

Private water supplies can be a risk if not well managed and maintained. The Scottish Government provides advice and information for owners and users of private water supplies in Scotland through their information site: <https://www.mygov.scot/housing-local-services/water-supplies-sewerage/private-water-supplies/>.

It is very important that good food hygiene practices are followed when handling and cooking food to prevent illness. More information is available at: <http://www.foodstandards.gov.scot/food-safety-standards/food-safety-hygiene>.

In relation to STEC infection in particular, it is essential to wash any vegetable and salad ingredients prior to eating and to thoroughly cook minced meat products, such as sausages and burgers. Minced meat products are higher risk due to the fact that any bacteria present on the surface of the meat will have been mixed throughout the product after mincing.

If my child or I have STEC, how can I avoid passing it 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.

All people with diarrhoea or vomiting should stay away from work/school/nursery and not go swimming 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 until they are tested to be clear of infection. This also applies to people in these high risk groups living in the same household as those infected. **Public/Environmental 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/fitnesstoworkguide.pdf>.

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