

Simple precautions for reducing the risk of *E.coli* O157 infection in rural families and visitors

Reducing the contact between people and sources of *E.coli* O157 infection such as animals, dung or slurry can reduce the likelihood of illness in rural communities. Although cattle and sheep are the main carriers of *E.coli* O157, it has also been found in wild animals living near to farmland, and infected animals are rarely sick.

It appears that a small number of *E.coli* O157 organisms can cause illness in humans. These numbers are so small they will not be visible as dirt. Compared to many other organisms, it is likely that *E.coli* O157 only developed the capacity to cause illness in humans relatively recently. Thus exposure to this infection would have been less common in previous farming generations and living or working in the countryside does not guarantee protection against illness. Rural families and visitors to the countryside should use simple hygiene to reduce contact with animal and human wastes, and to reduce the risk of infection.

Hand washing

Hand washing using warm water and soap is an important and effective control. Wash after working with or touching:

- Animals.
- Fences and gates in animal areas.
- Dung, manure, slurry, sewage, mud or soil, in which *E.coli* O157 can live for some months.
- Footwear or pushchairs.
- Cars, farm vehicles, buildings or machinery – which can all be splashed with dung or slurry.

Always wash before eating or handling food, drinks or snacks.

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

Children

Because their immune systems are not fully developed, children are particularly at risk of *E.coli* O157 infection, especially if under 10.

Children whose families live or work on farms are most at risk of infection, but children do not have to go onto farm steadings to be exposed to dung. Rural roads can also be contaminated with dung.

E.coli O157 has been found on children's shoes and pushchairs in an outbreak at a petting farm. Sucking their thumbs, dropped dummies or toys can increase risks to infants and toddlers, who also need supervised handwashing.

Family vehicles may need more frequent washing and cleaning to remove possible contamination.

Teaching children about the need to clean their hands, shoes, bikes and toys, will help them to protect themselves without fearing the countryside.

Whether you live in the countryside or in a town, you may be arranging a school, youth group or family trip to a farm, zoo or leisure facility with animals. See <http://www.hse.gov.uk/agriculture/articles/health-alert-ecoli.htm> for advice on safe farm visiting; and also <http://www.scotland.gov.uk/Publications/2003/06/17334/22401>

Clothing and footwear

Clothing and footwear, especially overalls or protective clothing and boots, can become contaminated by contact with farm animals or their dung. Dung or slurry is easily transferred onto clothes or footwear and contamination can occur without any visible signs of dirt. Whenever possible:

- Remove footwear or clothing that might have become soiled, and clean pushchair wheels etc.
- Everyone who has been on farms or in the countryside, or who has handled shoes, pushchairs etc, should then **wash their hands**.

Do the above, before doing any of the following:

- Getting into the family car.
- Going into the house, particularly the kitchen or children's areas.
- **Before eating or drinking anything, including snacks, or before smoking.**
- Clothing contaminated with dung, manure, slurry, or sewage should be kept away from children, and washed later at high temperature.

Working with dung, manure, slurry or sewage

Working with all these involves risk:

- Wear protective clothing eg wellingtons, overalls.
- Try to stay as clean as possible and prevent splashes around the mouth.
- Do not touch your face or smoke, eat or drink whilst working.
- Wash your face and hands with soap and water after working.
- Consult official guidance for detailed advice on working with slurry, manure and other waste (<http://www.scotland.gov.uk/Topics/Agriculture/Environment/PEPFAA/Overview>).

Smoking

Avoid smoking when you have been in contact with dung, manure, slurry or sewage, or with potentially soiled materials. Washing your hands before smoking will avoid transferring germs to your mouth.

Public access to grazing land

Because grazing animals can pass the organism in their dung without becoming ill, owners cannot identify which animals or environments pose a danger to health.

Since children are particularly at risk, precautions must be taken before public events or camping on land that has been used, even temporarily, by grazing animals. Animals should be cleared, dung removed and grass cut, at least three weeks before any recreational events. For detailed advice, see <http://www.scotland.gov.uk/Publications/2003/06/17334/22406>.

Water supplies for such events must be made safe, and animals fenced off from rivers, ponds or lochs that might be used for bathing. Discourage drinking from burns or other wild water sources. The risk from simply passing through the countryside is low, but walkers, climbers, cyclists and drivers should clean soil or dung from footwear and vehicles, and wash their hands before eating or drinking.

Rural water supplies

E.coli O157 has been found in private drinking water supplies in Scotland, where many springs and boreholes are on farmland. Precautions to protect supplies include the following:

- Check the water supply is not contaminated by run-off from septic tanks or surface water from grazing land. No livestock waste or sewage should be put on ground within a 50 metre radius of a water supply source.
- Springs, wells and boreholes should be fenced to exclude both livestock and dung.
- Ensure pipes and tanks do not have cracks or holes, through which animal dung or run-off water from farmland may contaminate drinking water.
- Prevent dung or soil getting into water tanks or systems during repairs.
- Where there is any doubt about water quality, a suitable treatment system should be installed, regularly checked and maintained.
- Contact your local authority for official regulations and for advice and information, such as treatment systems and grants for improving water safety.
- Scottish Water also provide detailed advice at http://www.privatewatersupplies.gov.uk/private_water/CCC_FirstPage.jsp.

Scottish Agricultural College (SAC) can assist farms of all sizes with water safety and waste management plans to prevent pollution of water supplies (see <http://www.sac.ac.uk>).

Sale and movement of animals

There are no legal restrictions on the sale or movement of animals that may be carrying *E.coli* O157, but the following will help to reduce risk:

- Animals intended for slaughter should be cleaned before leaving the farm, and should have clean hides when actually presented for slaughter.
- *E.coli* O157 may be present in livestock without causing any illness and all purchasers/receivers should consider the potential carriage of the organism to be a hazard.
- If animals are moving from your working farm to visitor facilities, please tell the new owners about official guidance on reducing risks of infection <http://www.scotland.gov.uk/Publications/2003/06/17334/22401>.

Visits to farms, petting areas and the countryside

Official guidance advises farmers, teachers, other group organisers, and the general public on how to prepare for and enjoy farm and country visits as safely as possible, see:

<http://www.hse.gov.uk/agriculture/articles/health-alert-ecoli.htm>. Additional guidance can be found at: <http://www.scotland.gov.uk/Publications/2003/06/17334/22401>

- Visitor farms, country parks, or similar leisure facilities - should particularly read and apply the above guidance, when first arranging human/animal contact – and then re-read it regularly.
- Control contact between visitors and animals whenever possible; avoid accidental contact.
- Livestock known to have diarrhoea or other illness should always be kept away from visitors.
- Where people are likely to touch animals, keep livestock and their housing as clean as possible.
- Use staff advisors and signs to get visitors to wash their hands, not only after touching animals, but also after going into barns or fields, and especially before eating; and to explain why.
- Provide sufficient clean toilets and hand washing facilities, positioned between animal and eating areas. Provide washbasins that are reachable by children and people with disabilities. Signpost the facilities clearly, explain why washing is important.
- Exclude animals from food service, eating and picnic areas. Food for visiting parties should also be provided hygienically and safely.
- Except where private water supplies have passed local authority testing, visitors to campsites or to cottages with private water supplies should be advised to boil the water before drinking or brushing their teeth.
- Whether children are with group organisers or their families, ensure there are enough adults to supervise them carefully, especially the under 5s.
- Discourage children from kissing or sharing food with animals, or from putting their hands in their mouths until they can wash them.
- Fences, gates and climbing equipment may be sources of contamination, as well as animals.
- Visitors to private or public facilities should not be allowed to go into or onto any lorry, tractor or other vehicle that is contaminated by animal dung, bedding etc.
- Proprietors and group organisers should contact the local council for detailed advice, as there are specific legal requirements.

For more general information on *E.coli* O157, and links to various sources of guidance and advice, go to <http://www.hps.scot.nhs.uk/giz/e.coli0157.aspx>.

Families who have been affected by *E.coli* O157 infection can obtain more information at <http://www.ecoli-uk.com/home.php>.

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Further copies of this leaflet can be downloaded from <http://www.hps.scot.nhs.uk/giz/wrdetail.aspx?id=40991&subjectid=18&wrtyp=e=2>. Sites to which this document links are outwith HPS/SAC control, and so no warranties are made for them; but we do endeavour to link only to high quality information sources.
Revised June 2010