

Escherichia coli (*E. coli*) O157



Public Health
Agency

What is *E. coli* O157?

E. coli O157 is a bacteria that causes symptoms that can range from mild diarrhoea to severe abdominal pain and bloody diarrhoea. In some people there are no symptoms at all.

A small number of patients can develop haemolytic uraemic syndrome (HUS), which is a serious life-threatening condition leading to kidney failure.

Who gets *E. coli* O157 infections?

Anyone can get an *E. coli* O157 infection, but certain groups are more likely to get the infection:

- young children under five years of age;
- people who work with farm animals or in the meat industry;
- travellers to developing countries.

How do you get infected with *E. coli* O157?

People can become infected by:

- eating contaminated food, especially minced meat products (ie burgers, meatballs, meatloaf);
- contact with infected animals (eg at farms, petting farms and campsites);
- contact with other people who have the illness;
- drinking water from inadequately treated water supplies eg wells or springs;
- swimming or playing in contaminated water such as ponds or streams.

How can you avoid getting infected with *E. coli* O157?

Wash your hands thoroughly with soap and warm water:

- before preparing and eating food;
- after handling raw food;
- after going to the toilet or changing a baby's nappy;
- after contact with pets and other animals;
- after working in the garden.

Pay extra attention to hygiene during farm visits (including open farms). During any visit:

- avoid touching faces or putting fingers in mouths;
- do not kiss farm animals or allow children to put their faces close to animals;
- wash hands thoroughly with soap and water after touching animals, fences or other surfaces in animal areas;
- do not eat or drink while touching animals or walking round the farm and only eat and drink in designated eating areas;
- wash hands thoroughly with soap and water before eating or drinking;
- remove and clean boots or shoes that might have become soiled and clean pushchair wheels; then wash hands thoroughly with soap and water.

Maintain high standards of hygiene when storing, handling or preparing food.

How can you maintain high standards of hygiene when storing, handling or preparing food?

Take chilled and frozen foods home quickly – then put into the refrigerator or freezer at once.

Keep cooked food away from raw food. Store raw foods below cooked or ready-to-eat foods in the fridge to prevent contamination.

Cook food thoroughly, especially meat, so that it is piping hot. Follow cooking instructions on the pack.

If you reheat food, make sure it is piping hot all the way through. Only reheat food once.

Keep hot foods hot and cold foods cold. Don't just leave these foods sitting at room temperature.

Keep your refrigerator at 0–5° centigrade. Get a thermometer to check temperatures inside the refrigerator.

Check 'use by' dates on food, and use foods within the recommended date on the pack.

Keep pets away from food, dishes and worktops.

Wash hands thoroughly before preparing and eating food and after handling raw food.

Keep all kitchen surfaces and equipment, including knives, chopping boards and dish cloths clean. Wash worktops and utensils between handling raw and cooked foods.

How can you prevent others in your household becoming infected with *E. coli* O157?

E. coli O157 is very infectious and spreads easily within households. The chance of others becoming infected can be reduced through some simple measures.

Everyone in the house should wash their hands thoroughly with soap and warm water after going to the toilet and after handling soiled clothing or bedding and before preparing/eating food.

Wash all the infected person's laundry separately and on the hottest cycle of the washing machine for that particular fabric.

Clean toilet seats, toilet bowls, flush handles, taps and wash hand basins after use with detergent and hot water, followed by a household disinfectant.

Everyone in the house should have their own towel and they should not use anyone else's.

The infected person should not prepare or serve food for others.

What are the symptoms of *E. coli* O157 infection and how long do they last?

Symptoms usually include diarrhoea, stomach cramps and fever. About half of cases have bloody diarrhoea. Some people may have mild diarrhoea or even no symptoms at all.

Symptoms usually develop between 2–4 days after exposure to the infection, but it can take as long as 10 days.

Most cases resolve in around a week however some cases, especially children, can carry *E. coli* O157 in their gut for several months even after they are well.

How are *E. coli* O157 infections treated?

There is no specific treatment for *E. coli* O157 infection. Most people will recover fully without treatment.

During this time it is important to drink plenty of fluids as diarrhoea or vomiting can lead to dehydration and you can lose important sugars and minerals from your body.

If you feel sick and have difficulty keeping fluids down try taking small sips of fluid frequently. Avoid tea, coffee, carbonated drinks or alcohol. Always dilute sugary drinks even if you would not normally dilute them.

A small number of patients may develop haemolytic uraemic syndrome (HUS) which can cause anaemia, kidney failure and bleeding. Children under five years old are the group most likely to be affected.

Symptoms of HUS can include weakness, lethargy, sleepiness, pallor, irritability and small unexplained bruises. If you develop any of these symptoms consult your GP **urgently**.

Do you need to see your GP?

If you need advice on the treatment of your *E. coli* infection you should discuss this with your GP.

Always contact your GP if any of the following apply:

- your symptoms are severe or do not improve after a few days;

- you have bloody diarrhoea;
- you develop weakness, lethargy, sleepiness, paleness or irritability;
- you develop small unexplained bruises on your body;
- you have a high temperature (fever) of 38°C (100.4°F) or over;
- you have symptoms of severe dehydration, such as sunken eyes and passing small quantities of dark, strong smelling urine;
- you have a baby with symptoms.

Do you need to stay off work or school?

Yes. While you are ill and have symptoms you are infectious to other people.

Most people can return to work or school once they have been free from diarrhoea for 48 hours, however certain groups require further testing of their stools before returning to work/school. These include:

- children aged five years old and under;
- food handlers. This refers to people who directly touch open food as part of their work or anyone who may touch food contact surfaces or other surfaces in rooms where open food is handled;
- clinical, social care or nursery staff who work with young children, the elderly, or other particularly vulnerable persons;
- those that cannot ensure personal hygiene at home, work or school.

People in these groups require two normal stool samples before returning to work/school. These two samples must be taken at least 24 hours apart and the first sample should not be taken until 24 hours after symptoms have ceased.

In addition, household members who belong to one of these groups will also be tested for *E. coli* O157. They must stay off work until testing results are available (even if they are well).

The Environmental Health Officer will advise on who needs to be tested and the arrangements for testing.



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