
EHEC - Information for end-users

What is EHEC?

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EHEC are enterohaemorrhagic *Escherichia coli* bacteria, i.e. bacteria that can cause diarrhoea and bleeding in the gastrointestinal tract. Unlike other *Escherichia coli* bacteria, EHEC produces strong cytotoxins. In humans, these toxins may trigger severe diseases, from bloody diarrhoea to life-threatening kidney failure.

Where does EHEC come from?

EHEC bacteria live in the intestine of ruminants, particularly in cattle, sheep and goats, but also in deer. These animals colonised by EHEC do not fall ill but excrete the pathogen with the faeces. EHEC bacteria can survive in soil and water for several weeks.

How is EHEC transmitted?

EHEC is transmitted by the faecal-oral route, i.e. the intestinal germs are ingested via direct or indirect contacts and enter the body via the mouth

- by eating contaminated food (main cause for adult patients). In the meantime, epidemiological tests of the Robert Koch-Institute could identify raw sprouts from a farm in Lower Saxony as source behind the EHEC infections.
- via human-to-human transmission (smear infection through direct contact with infected persons or contaminated objects).
- via contaminated (by animal excrement) water (e.g. when bathing).
- through cross contamination when preparing food, i.e. transmission from contaminated (mostly raw) food to other (mostly ready-to-eat) food.
- via contaminated devices, work surfaces, knives, or other kitchen utensils.

What needs to be considered when preparing food?

- Peel or at least thoroughly wash vegetables and fruit before eating them.
- Cook/fry food at a temperature of 70 °C (core temperature) for at least 2 minutes.
- Thoroughly wash your hands with water and soap before preparing food and after having touched raw meat.
- Store and prepare raw meat separately from other food; use different chopping boards, plates, knives, etc.

- Immediately and thoroughly clean and dry surfaces and objects after contact with meat, packaging, or condensate.
- After the preparation of meat, preferably exchange all used kitchen textiles and wash them at a minimum of 60 °C.

When is disinfection necessary?

Infected family members pose a risk of infection. In case there is an EHEC patient in the common household, all other healthy household members should protect themselves by targeted disinfection measures:

- in case of contact with an infected person
- in case of contact with objects likely to be contaminated with pathogens (e.g. toilet seats in case of diarrhoea)

Which disinfectants are recommended?

The most important transmission paths are the hands of infected persons and the surfaces which are colonised by pathogens and touched by healthy persons. Through an unintentional hand-to-face contact, pathogens then reach the mucous membranes and are able to enter the body.

Situations for the targeted disinfection to protect healthy persons:

Hand disinfection

- **Infected persons** should disinfect their hands **BEFORE** any contact with healthy persons.
- **Infected persons** should disinfect their hands **AFTER** using the toilet.
- **Healthy persons** should disinfect their hands **AFTER** any contact with infected persons.

Surface disinfection

- All surfaces that have come into contact with the infected person's secretion, vomit, or stool.
- Surfaces in the infected persons' immediate proximity that are often touched by healthy persons.
- Bathroom (toilet seat) after the using the toilet.

Single-use gloves offer additional protection, when surfaces have come into contact with the infected person's body fluids or excrement. Disinfect your hands again after glove removal.

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Which disinfectants are effective against EHEC?

Disinfection during EHEC outbreaks requires disinfectants with proven efficacy against bacteria, tested in accordance with the European standard methods EN or certified by the Association for Applied Hygiene (VAH) or listed by the Robert Koch-Institute (RKI) for the activity area A/bacteria.

The correspondingly proven bactericidal activity belongs to the basic efficacy requirements alcohol-based hand disinfectants approved for the German market have to fulfil – products such as Sterillium® or Sterillium® Gel (available in pharmacies) feature this bactericidal activity.

Also EN-tested surface disinfectants, such as the aldehyde-free, alcohol-based rapid disinfectant BacilloI® AF, are active against bacteria, including EHEC.

How is disinfection carried out properly?

- Hand disinfection
Apply the hand disinfectant to the dry, cupped hand. The amount should suffice to thoroughly wet all areas of the hand. Carefully rub the hand disinfectant into the hands for 30 seconds, wet all areas. Pay particular attention to fingertips and thumbs as they harbour the highest concentration of germs.
- Surface disinfection
Apply enough product to the surface to be disinfected. Spread the product with a clean disposable cloth and keep the surface wet for the complete exposure time (see manufacturer's instructions) – for example 30 seconds when using BacilloI® AF.

Please note: After the clinical symptoms have subsided, patients may excrete EHEC in the stool for several days to approx. 4 weeks. Therefore, please continue to follow the hygiene rules for this time period even though the disease has been overcome.

Sources:

Detailed information on the RKI website in the "RKI guide for physicians" (German) at <http://www.rki.de>

Federal Institute for Risk Assessment (BfR): [Consumer tips: Protection against infections by enterohaemorrhagic E. coli \(EHEC\)](#), January 2011 (German)

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