

EHEC: Observance of general hygiene rules is particularly important for the protection against infections

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Following the suspicion that salad cultivated in the German state of Hessen could have come into contact with EHEC pathogens from a neighbouring stream of flowing waters, samples were taken from these flowing waters and analysed. The Hessian Ministry of Social Affairs and the Hessian Ministry of Environmental Affairs, Agriculture and Consumer Protection communicated that the EHEC pathogen O104:H4 was detected in this water sample. Furthermore, the ministries pointed out that an outbreak of EHEC infections had been attributable after a celebration to foods which were contaminated by humans. The National Reference Laboratory for *E. coli* at BfR has confirmed the detections of EHEC O104:H4.

Whether and to what extent the EHEC pathogen O104:H4 can be found in streams of flowing waters could not yet be clarified. A risk of disease by contact with water from surface waters which is influenced by the effluents of waste water treatment plants exists.

It is known that EHEC pathogens can be transmitted by smear infections but this can be avoided by the observance of hygiene rules. For the protection against infections BfR recommends, therefore, to comply with general hygiene measures during the preparation of foods and refers to the BfR leaflet "Protection against food infections in private households".

The Hessian Ministry of Social Affairs and the Hessian Ministry for Environmental Affairs, Agriculture and Consumer Protection have communicated that in the wake of intensified controls after the finding of an EHEC pathogen on a salad of a farm in Frankfurt, samples were also taken from a neighbouring stream of flowing waters, the Erlenbach. In one of these samples the EHEC pathogen O104:H4 was detected. However, in the examined salad sample a different type of EHEC was found. A link between the stream and public drinking water supply does not exist according to the Hessian Ministry for Environmental Affairs, Energy, Agriculture and Consumer Protection.

The EHEC pathogen can have reached the water from very different sources. Apart from a possible input from a pasture, the focus is in particular on effluents of a waste water treatment plant. This plant serves for the treatment of waste water from the city of Frankfurt. EHEC pathogens can have reached these waste waters through the excretions of infected persons. Although waste water treatment plants considerably reduce the number of pathogens from humans, they do not completely kill them. Part of the EHEC pathogens could, therefore, have found their way via the waste water treatment plant to the stream. For this reason it is currently examined with intensive sampling in the area of the waste water treatment plant whether it might be the source for the EHEC pathogen in the stream.

According to the Hessian ministries germs, including EHEC pathogens, had been detected from time to time in the stream already in previous samples during the past years. For surface waters this is not unusual. On Friday samples had again been taken from the water and sent to the laboratory for analysis. A result is to be expected in a few days.

In a further communication the Hessian Ministry of Social Affairs and the Hessian Ministry for Environmental Affairs, Energy, Agriculture and Consumer Protection inform about an outbreak of EHEC infections after a celebration in Lower Saxony attributable to foods which had been contaminated by humans. An employee of a party service from North Hessen was already infected by the aggressive EHEC germ O104 when she prepared the foods for the

party but did not yet have symptoms of illness. The woman then contracted a haemolytic-uremic syndrome. 20 of the 65 participants in the celebration in Lower Saxony fell ill with EHEC.

Infected humans can excrete and spread pathogens over a certain period of time without noticing it, because they do not feel ill. For this reason it is all the more important that the general hygiene rules are always observed at the preparation of foods. This includes careful hand hygiene and the avoidance of hand contact because insufficiently cleaned hands can transmit pathogens to foods. If possible, foods should not be touched directly with the hands. Nonetheless hands must be thoroughly washed and carefully dried several times a day, in particular

- after going to the toilet, changing nappies, contact with pets, work in the garden
- before the preparation of foods and before eating.

Careful hand washing should be done with soap under running water. Separate towels should be used for hands and dishes. Contaminated towels and cleaning utensils can also spread pathogens in the kitchen and should, therefore, be washed regularly at a minimum temperature of 60°C or changed. Bacteria can multiply very rapidly at ambient temperature in particular in moist washcloths and sponges.

If patients suffering from an EHEC infection live in a household, the risk of a human-to-human transmission by smear infection is particularly high. These persons must, therefore, permanently observe additional personal hygiene rules. Further information is provided by the competent local health authority.

BfR leaflet “Protection against food infections in private households” (in german)

http://www.bfr.bund.de/cm/350/verbrauchertips_schutz_vor_lebensmittelinfektionen_im_privathaushalt.pdf