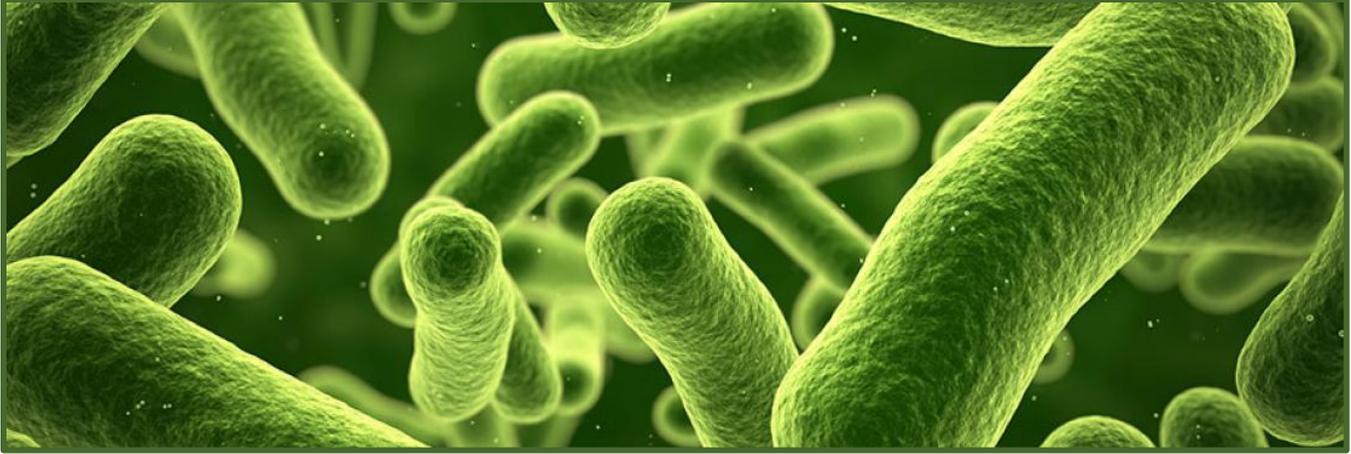


Food Safety Hazard: E. Coli



Characteristics/description

E. coli consists of a diverse group of bacteria. Normally living in the intestines of people and animals, most E. coli are harmless and an important part of a healthy human intestinal tract. However, some E. coli are pathogenic, may produce toxins and are associated with diarrhea. Pathotypes most commonly associated with foodborne outbreaks are STEC, VTEC or EHEC.

Source

Infections occur after ingesting human or animal feces via contaminated food or water, unpasteurized (raw) milk or contact with cattle; and fecal-oral contact with cattle or infected people. E. coli infections have occurred after swallowing lake water while swimming, contact with the environment in petting zoos and other animal exhibits, and by eating food prepared by people infected with E. coli who do not wash their hands hygienically.

Effects on humans

Most cases of infection resolve within 5-7 days. Some infections are very mild, but others are severe or even life-threatening. Symptoms may include mild to severe abdominal pain, non-bloody diarrhea that worsens over several days and vomiting. Some patients may develop the life-threatening hemolytic uremic syndrome (HUS) after some days of infection.

Incubation

The time between ingesting the STEC bacteria and feeling sick is usually 3-4 days after the exposure, but it may be as short as 1 day or as long as 10 days.

Treatment for patients

Non-specific supportive therapy, including hydration, is important. Antibiotics should not be used to treat this infection as taking antibiotics may increase the risk of HUS. Antidiarrheal agents like Imodium® may also increase that risk.

Key links

Centers for Disease Control and Prevention E. coli homepage, <http://www.cdc.gov/ecoli/index.html>

Food and Agriculture Organization: "Preventing E. coli in Food," http://www.fao.org/fileadmin/user_upload/agns/pdf/FAO_E.Coli_FCC_2011.06.231.pdf

Global Incidence of Human Shiga Toxin–Producing Escherichia coli Infections and Deaths: A Systematic Review and Knowledge Synthesis: <http://online.liebertpub.com/doi/full/10.1089/fpd.2013.1704>

Risk reduction strategies

- Thorough hygiene and equipment sanitation in food preparation to limit cross-contamination, handwashing after diaper changing or use of the toilet and contact with animals and their environments. Cook meats thoroughly, avoid raw milk, unpasteurized dairy products, and unpasteurized juices.