

## ESCHERICHIA COLI (E. coli)

### What is Escherichia coli (E. coli)?

E. coli infection is caused by a group of bacteria called *Escherichia coli*. These bacteria are found worldwide thus including New Brunswick. They live in the intestines of infected people and animals and are passed in the feces. The bacteria can be found in soil or water and on surfaces that have been contaminated by people or animal feces. There are many strains of E. coli. Some strains of E. coli can cause gastrointestinal infections and other illness in humans – thus are termed “pathogenic.”

### What are the symptoms?

Symptoms usually appear within three to four days after a person is infected. Most persons, who become ill, have frequent diarrhea and stomach cramps. The diarrhea is often bloody. Symptoms usually last five to 10 days. In some persons serious illness can develop.

### How is E. coli spread?

E. coli bacteria are passed in the feces from infected persons and animals. The bacteria can be found in soil, food, water or on surfaces contaminated with feces. The bacteria are spread by person-to-person contact, animal-to-person contact, by eating contaminated food or by drinking contaminated water. Most cases are associated with improperly handling raw meat or eating undercooked meat or poultry. Usually, meat becomes contaminated during the slaughtering and butchering of cattle. Other foods such as raw fruits, vegetables, nuts, unpasteurized milk and milk products, and unpasteurized apple juice/cider can become contaminated.

Some examples of how the bacteria can be spread:

- Eating undercooked meat or poultry;
- Not washing hands after direct contact with animals in their environment;
- Drinking contaminated water.

### How is E. coli infection diagnosed?

Diagnosis of infection is based on assessment of clinical symptoms by a health care provider and laboratory testing of a stool sample.

### Who is at risk of E. coli infection?

Anyone exposed to pathogenic E. coli can become infected. Young children, the elderly, pregnant women and persons with weakened immune systems are at greatest risk of developing infection and experiencing serious disease. Occasionally, E. coli can cause a serious, sometimes fatal illness called Hemolytic Uremic Syndrome (HUS).

## How can E. coli infection be prevented?

**Use good environmental management.** Flush or discard any stool in the toilet and clean surrounding area using hot water and detergent. A chlorine-based disinfectant is recommended.

**Practice good personal hygiene.** Wash hands thoroughly with soap and water after using the toilet or changing a diaper, after handling animals or contact with animal feces, after handling raw poultry and meats; and before preparing or eating food.

**Take food safety precautions.** Wash and/or peel all raw vegetables and fruits before eating. Thoroughly cook all meats (meat, poultry and seafood). Prevent contact of cooked foods with raw poultry and other meat. Drink and eat only pasteurized dairy products (milk, cheese, yogurt and ice cream).

**Drink properly treated water.** Avoid swallowing recreational waters from swimming pools and hot tubs. Do not drink untreated surface water from lakes or streams. Boiling your water for 1 minute will kill all known pathogens like cryptosporidium or E. coli. Test your private well drinking water twice per year for presence of bacteria. An E. coli bacteria test is used as an indicator for fecal contamination in drinking water.

## How is E. coli infection treated?

Persons with diarrhea should drink plenty of liquids to avoid dehydration, stay home when ill; and practice good personal hygiene like hand washing. Consult your health-care provider for advice and treatment especially if you have bloody or severe diarrhea.

## What is the Public Health response?

Health-care providers and laboratories must notify cases of pathogenic strains of E. coli to Public Health. Public Health staff then interview the patient (or caregivers) to find out how the infection occurred, identify other people who may be at risk of infection from the same source, implement control measures and provide other advice as necessary; including exclusion of infected workers in high risk occupations like persons involved in food handling, direct patient care, and care of the young such as child daycare or the elderly.

## Further Information

Please contact your health care provider, local [Public Health office](#), or Telecare 811.

### Useful websites:

Public Health Agency of Canada

<http://www.phac-aspc.gc.ca>

Health Canada

<http://www.hc-sc.gc.ca>