First Nations Environmental Health Innovation Network

INFORMATION ON E-COLI

Fact Sheet

Visit Our Virtual Network WWW.fnehin.ca

FNEHIN

E-COLI FOUND IN OUR DRINKING WATER

- *E. coli* are naturally found in the intestines of humans and warm-blooded animals.
- *E. coli* does not usually occur naturally on plants or in soil and water, unlike other bacteria in this family.
- *E. coli* are present in human and animal feces.
- *E. coli* cannot grow in water and survives only for a short time in water environments.
- *E. coli* found in a water system is a good indicator of recent faecal contamination.

Of all the contaminants that can be found in drinking water, contaminants like *E-coli* from human and animal feces are the most dangerous for public health.

SYMPTOMS

Even though *E. coli* are found in our gastrointestinal tracts, some strains of this bacterium can cause gastrointestinal illness along with other, more serious health problems. The ability to detect faecal contamination in drinking water is important for ensuring public safety.

MOST COMMON

Gastrointestinal upset (nausea, vomiting, and diarrhoea), that last for a short duration.

RARE

In susceptible individuals such as infants, the elderly, and individuals with weak immune systems, effects may be more severe, chronic (e.g., kidney damage), or even fatal.

EXPOSURE

RARE

Outbreaks caused by contaminated drinking water. **Explanation:** During rainfalls, snowmelts, or other types of precipitation, *E.Coli* from sewage or animal waste may be washed into creeks, rivers, streams, lakes, or ground water.

From there, if these water sources are used as drinking water and that the water is not treated properly, then *E. Coli* could end up in your drinking water.

MOST COMMON

Outbreaks caused by contaminated food (refer to the Canadian Food Inspection E-Coli fact-sheet referenced below).

OTHER SIGNIFICANT ROUTES OF EXPOSURE INCLUDE

- Contact with contaminated recreational waters (e.g., bathing beaches and swimming pools).
- Contact with contaminated objects (e.g., doorknobs).
- Direct contact with infected humans or domestic animals (pets or livestock).

WATER TREATMENT

Surface waters and groundwater may contain *E-Coli* but effective drinking water treatment including disinfection kills nearly all bacteria. If *E.Coli or other bacteria* are still present in the drinking water, the reasons are:

- Water treatment and disinfection was not well done.
- Regrowth of the bacteria.
- Infiltration in a distribution system.

Reference:

Health Canada- E. Coli

US EPA- Basic information about E.Coli in drinking water

Canadian Food Inspection Agency- E. coli Food Safety Facts

Call us Toll-Free at 1-866-960-5223 for more environmental health resources.

Prepared by: Guylaine Charbonneau, M.Sc., P.Dt

Production of this document has been made possible through a financial contribution from the National Collaborating Centre for Environmental Health. The views expressed herein do not necessarily represent the views of the National Collaborating Centre for Environmental Health. These factsheets are not intended to provide medical advice, nor do they constitute alerts on potential contamination in specific water, food, or air systems. For up to date information on public health emergencies across Canada please go to: http://www.phac-aspc.gc.ca/ (Public Health Agency of Canada).