

Total and Fecal Coliform Bacteria

Answers to Frequently Asked Health Questions



What is coliform?

Total coliform bacteria are a collection of relatively harmless microorganisms that live in large numbers in soils, plants and in intestines of warm-blooded (humans) and cold-blooded animals. Coliform aid in the digestion of food.

Where do you find coliform?

There are 16 species of total coliform found in soils, plants and in animal and human waste. A subgroup of coliform, called fecal coliform bacteria, is different from the total coliform group because they can grow at higher temperatures and are found only in the fecal waste of warm-blooded animals. There are six species of fecal coliform bacteria found in animal and human waste. *E. coli* is one type of the six species of fecal coliform bacteria. A rare strain of *E. coli* that you may have seen in the news can cause potentially dangerous outbreaks and illness. This strain is called *E. coli* 0157.

Can coliform harm your health?

Finding coliform or other bacteria in water does not necessarily always mean you will become ill. However, if these organisms are present, other disease-causing organisms may also be present. The presence of fecal contamination is a sign that a possible health risk exists for individuals exposed to this water. Health symptoms related to drinking or swallowing water contaminated with fecal coliform bacteria generally range from no ill effects to cramps and diarrhea (gastrointestinal distress). Sanitarians and those who test water look for total and fecal coliform bacteria to alert people to the possible dangers and suggest proper treatments to remove potentially harmful bacteria from the water. The presence of any fecal coliform in drinking water is of immediate concern as many diseases can be spread through fecal transmission.

How do you come in contact with coliform?

Coliform are a family of bacteria common in soils, plants and animals. You can come in contact with these bacteria by eating or drinking (ingesting) soils on plants and in water sources such as ponds, lakes and rivers. Fecal coliform bacteria can be found in water contaminated by domestic sewage or other sources of human and animal waste.

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How can you reduce coliform contamination?

Groundwater (underground drinking water) in a properly constructed well should have minimal-to-no coliform bacteria. If coliform are found in a well it generally means bacterial and mineral slimes have built up and your well needs to be professionally cleaned by a registered private water system contractor.

Homeowners who use cisterns, springs or ponds as a drinking water source should use treatment devices to disinfect and filter the water to remove coliform bacteria. The presence of total coliform in a water sample means the disinfection system is not working properly.

Improperly maintained treatment devices can be sources of contamination. Home water filters and other water-treatment devices should be changed and maintained in accordance with manufacturer's recommendations.

References:

Ohio Department of Health, Bureau of Environmental Health, Private Water Program, 2004.

Vermont Department of Health, Safe Water Resource Guide, A Fact Sheet on Coliform Bacteria in Water (electronic).

Kentucky Water Watch, Fecal Coliform Bacteria (electronic).

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