

Coliform Bacteria and Drinking Water

What are coliform bacteria?

Coliform bacteria are gram negative, rod-shaped bacteria that utilize lactose (milk, sugar) as a sole source of food. These organisms include E.coli, Citrobacter, Klebsiella, Enterobacter, Serratia and Hafnia.

What is fecal coliform?

Fecal coliform is a group of total coliform that is considered to be present specifically in the gut and feces of warm-blooded animals.

What is Escherichia coli (E. coli)?

E. coli is a major species in the fecal coliform group. E. coli is considered to be the species of coliform bacteria that is the best indicator of fecal pollution and possible presence of pathogens.

Where is coliform bacteria found?

Coliform bacteria, is found everywhere. For example, surface water (lakes, streams etc.), soil, intestines, and feces of all warm-blooded animals and humans.

Are coliform bacteria harmful?

Most coliform bacteria do not cause disease. However, some rare strains of E. coli, particularly the strain 0157:H7, can cause serious illness.

What happens if coliform bacteria is found in my water?

When coliform bacteria is found, steps are taken to identify where the contamination may have entered the water system. More “repeat” samples are collected and an inspection is recommended. Taking repeat samples helps determine whether an actual problem exists in the system. Sometimes a sample shows the presence of coliform because of poor sampling techniques or because a contaminated faucet was used-not because an actual problem exists. If any of the repeat samples detect coliform bacteria, the initial finding are considered confirmed.

What should be done if coliform bacteria are detected in the well?

Use the chlorination procedure or boil water for five minutes until disinfection and retesting can confirm that contamination has been eliminated.

What do the results mean?

If coliform bacteria are present in your drinking water, your risk of contracting water-borne illness is increased. Although total coliforms can come from sources other than fecal matter, a positive total coliform sample should be considered an indication of pollution in your well. Positive fecal coliform results, especially positive E. coli results, should be considered an indication of fecal pollution in your well.

What are some ways that contamination reach water supply?

Broken or missing well cap, openings which could allow small animals to enter or fall in the well, breaks in underground pipes or well casing, malfunctioning septic systems or broken sewer lines, contamination of aquifer by sink holes, abandoned wells, or other geological factors such as poor well construction or inadequate grouting of the well.

When should I test?

Late spring or early summer is the best times to test your well, since coliform contamination is most likely to show up during wet weather.

What are long term options for dealing with bacterial contamination of a well?

- Connecting to the regional public water system, if possible
- Inspecting wells for defects and repairing them if possible
- Constructing a new well
- Installing continuous disinfection equipment
- Using bottled water for drinking and food preparation