

wellcare® information for you about Bacteria & Well Water

What are Bacteria?

We are in contact with millions of bacteria every day and nearly all of them are harmless. Yet some of these small organisms are responsible for waterborne illnesses. Total coliforms are one group of mostly harmless bacteria that live in soil and water, as well as the intestines of animals. The presence of total coliforms in drinking water can indicate that more dangerous germs, particularly fecal coliforms, have contaminated the water.

The most common source of bacteria is the soil surrounding the well. Fecal bacteria in drinking water are usually the result of contamination by a nearby sewer, septic tank, feedlot or animal yard. Bacterial contaminants may also be introduced into a well during construction or repair.

Most bacterial problems happen right at the well or as water travels through the distribution system. Therefore, it is common to have contaminated and uncontaminated wells in close proximity to one another.

A sanitary survey can help determine if your well may be susceptible to bacterial contamination. Vulnerable wells are located too close to potential sources of bacteria, such as a septic field, may be poorly constructed or very old, or have poor flow and distribution systems. A water well professional can help you conduct a sanitary survey on your well.

What are the health effects of Bacteria?

Disease-causing bacteria, such as E. coli, can trigger gastrointestinal illnesses, diarrhea and vomiting. E. coli can be life-threatening for infants, children, the elderly and those with compromised immune systems. If you suspect contamination or experience illness, stop drinking or cooking with the water immediately, and do not resume use until testing has proven it to be safe. Always seek the advice of your medical doctor if you have any health concerns.

How do I test for Bacteria?

The U.S. Environmental Protection Agency's (EPA) legal limit for total coliforms is set at 5.0%. This means that, for a public water system, total coliforms should not be present in more than 5 percent of water samples. The EPA also set the maximum contaminant health goal for coliforms at zero. Some state or local health departments set limits for total coliforms in private wells, often at zero. Check with your state or local health department for more information.

You should test for bacteria annually, usually in the spring, or if you notice any change in your water. You should also test if:

- Anyone in the household suffers recurring bouts of gastrointestinal illness.
- An infant is living in the house, or someone in the house is pregnant.
- Flooding has occurred in your area, or the well has been inundated by surface runoff.
- You are buying a home and wish to assess the quality of the drinking water.
- You wish to monitor the performance of home water treatment devices.
- New well equipment has been installed or maintenance has been performed on the well, such as repairs to the pump.
- You have done landscaping near your well, where the well cap may have been disturbed.

Contact your state or local health department for a list of state-certified laboratories in your area. Initial testing is performed for total coliforms. If the sample is positive, it is analyzed further for fecal coliforms or E. coli. If fecal coliforms or E.coli are present, this requires immediate action.

What are the treatments for Bacteria in drinking water?

You can use a disinfection treatment to clean your well system to help eliminate harmful bacteria. It may be necessary to disinfect the well several times in order to remove the bacteria completely. If your well is 10 years old or more and/or you have metal casing, have your well inspected first by a well contractor. See the wellcare® information sheet “Disinfecting Your Well” for more information or contact your water well professional for assistance.

Chlorine, ultra-violet light or ozone treatments will kill or inactivate E. coli and other harmful germs in drinking water. A licensed water treatment professional in your area can suggest the appropriate treatment for your situation. Treatment systems must be properly maintained to ensure water quality. Test systems and the treated water regularly.

Boiling is one method for temporarily removing bacteria from water used for drinking, food preparation, dishwashing or tooth brushing. Water should be boiled vigorously for a minimum of one full minute. See the wellcare® information sheet “What You Need to Know if You Are Told to Boil Your Drinking Water” for more information.

FOR MORE INFORMATION to help you maintain your well and protect your water supply



wellcare® is a program of the **Water Systems Council (WSC)**. WSC is the only national organization solely focused on protecting the health and water supply of the 43 million people nationwide who depend on household wells for their water supply.

This publication is one in a series of wellcare® information sheets. There are more than 90 information sheets available FREE at www.watersystemscouncil.org.

Well owners and others with questions about wells or groundwater can also contact the FREE wellcare® Hotline at 1-888-395-1033 or visit www.wellcarehotline.org.

JOIN THE WELLCARE® WELL OWNERS NETWORK!

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