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 near one another.

A sanitary survey can help determine if your well may be susceptible to bacterial contamination. Vulnerable wells are those 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 licensed well contractor or your local health department 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. **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 five 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 landscaped near your well where the well cap may have been disturbed.

Contact your state or local health department or use our interactive map 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, immediate action is required.

What are the treatments for Bacteria in well water?

You can use 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 five years old or more, or has metal casing, have your well inspected first by a licensed well contractor to reduce the risk of damaging your well or well components during the treatment process. Refer to our wellcare® information sheet ***Disinfecting Your Well*** for more information or contact your licensed well contractor for assistance.

Chlorine, ultra-violet light or ozone treatments will kill or inactivate E. coli and other harmful germs in drinking water. Technologies may have a wide range of effectiveness. Look for treatment systems that are certified by **NSF** or **Water Quality Association (WQA)**. Certified water treatment professionals can help you select the right treatment. To locate a certified water treatment professional in your area, visit **WQA's website**.

It is imperative to maintain treatment devices and change filters as specified by the manufacturer or your water treatment professional. You should also retest your water after treatment is installed and after maintenance to confirm the effectiveness of the device.

Boiling is one method for temporarily removing bacteria from water used for drinking, food preparation, dishwashing, or brushing teeth. Boil the water vigorously (at or near 212° F (100° C)) for one full minute. At higher altitudes, water reaches its boiling point at a lower temperature. Therefore, you should increase the boiling time to three minutes if you live in an altitude greater than one mile above sea level. For more information on boiling your water, refer to our wellcare® information sheet ***What You Need to Know if You Are Told to Boil Your Drinking Water***.

NOTE: Boiling your water can be effective to kill microorganisms, but it can also concentrate certain contaminants like nitrate and heavy metals. You must test your water first to determine if these contaminants are present in your water.

For More Information on Bacteria & Well Water

Contact your licensed well contractor, local health department, state environmental agency, or the wellcare® Hotline for more information on bacteria and additional measures you can take to protect your well and well water.

Information to help maintain and protect your water well system:

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 an estimated 23 million households nationwide who depend on private wells (according to the U.S. EPA).

This publication is one of more than 100 wellcare® information sheets available FREE at www.watersystemscouncil.org.

Well owners and others with questions about wells and well water can contact the wellcare® Hotline at 1-888-395-1033 or visit www.wellcarehotline.org to fill out a contact form or chat with us live!

JOIN THE WELLCARE® WELL OWNERS NETWORK!

By joining the FREE wellcare® Well Owners Network, you will receive regular information on how to maintain your well and protect your well water.

Contact us at 1-888-395-1033 or visit www.wellcarehotline.org to join!