More Information on Well Water Testing

Refer to our Well Water Testing information sheet on our website wellcarehotline.org/water-well-care-wellcare-info-sheets. For additional well water testing information contact your local health department, well contractor, or the **wellcare®** Hotline.

Information to Help Maintain And Protect Your Water Well System

We offer more than 100 different information sheets pertaining to wells, well maintenance, and water quality.

Additional brochures, guides, and a Well Owner's Manual are available for free download on our website.

To learn the basics about your well system, go to: wellcarehotline.org/water-well-care-wellcare-info-sheets

WATER SYSTEMS COUNCIL

watersystemscouncil.org

wellcare® is a program of the Water Systems Council (WSC). WSC is the only national nonprofit organization with programs solely focused on private water wells and small, shared wells. WSC is committed to ensuring that Americans who depend on wells have safe, reliable drinking water and works to educate the public about water wells and the importance of protecting America's groundwater resources.

WELL WATER- NATURALLY BETTER®

Water Treatment

For a list of treatment options refer to our **wellcare®** information sheet, Water Treatment that can be found on our website wellcarehotline.org/water-well-care-wellcare-info-sheets. 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.org/find-providers.

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.

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.

Actions You Should Take

Private well owners are responsible for maintaining their wells to make sure their water supply is safe. We have provided a list of actions you should take below:

Inform yourself

- Know where your water comes from – a public water supplier, community water system, or a private well.
- Find out about contaminants in your area and any possible health risks.
- If you have any health concerns, contact your medical doctor for advice.

Complete well maintenance

- Have your water well inspected by a licensed well contractor every five years. Use our interactive map on our website wellcarehotline.org/well-water-testing-contractors to locate a well contractor in your area.
- Test your water annually. Compare your results with our **wellcare®** information sheet, Understanding Your Well Water Test Results wellcarehotline.org/water-well-care-wellcare-info-sheets.
- If you suspect contamination or experience illness, stop drinking or cooking with the water immediately and have your water tested. Do not resume use until testing has proven it to be safe.
- Treat your water if necessary. Have water treatment systems maintained regularly.

Learn more

- Review our **wellcare®** information sheet on Well Maintenance wellcarehotline.org/water-well-care-wellcare-info-sheets.
- Join the **wellcare®** Well Owners Network to learn more about your well and well water. For more information and to join visit our website wellcarehotline.org/well-owners-network.

Share with your neighbors

- Share this information with other well owners in your area.

wellcare®

information for you about

WELL WATER & CHILDREN'S HEALTH

Groundwater

Groundwater is stored in aquifers – layers of soil, sand, and rocks – but can come to the surface naturally through a spring or brought to the surface through a well. More than 13 million U.S. households depend on individual wells for their drinking water. Groundwater is naturally filtered on its way from the surface to the water table, so it is relatively free of particulate organic material and bacteria. However, it will only remain so if it is protected on its way from the aquifer to the tap. This brochure provides recommendations to well owners and their families to help ensure safe drinking water for children.

Well Water Testing

As a well owner, you are responsible for testing your water to ensure the safety of your drinking water. At a minimum, your water should be tested every year for bacteria, anything of local concern, or any contaminants that you are monitoring from previous test results. Testing more than once a year may be warranted in special circumstances:

- Someone in your household is pregnant or nursing
- There are unexplained illnesses in the family
- Your neighbors find a dangerous contaminant in their water
- You note a change in water taste, odor, color, or clarity
- There is a spill of chemicals or fuels near your well

We have water testing resources for each U.S. state and Canadian province to assist well owners in obtaining certified water testing laboratories. These lists can be found by using our interactive map on our website wellcarehotline.org/well-water-testing-contractors or calling the **well**care® Hotline at 888-395-1033.

Potential Contaminants of Concern

The following section provides information on contaminants that may be of special concern to households, especially with young children.

Bacteria and Other Microorganisms

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. Bacteria, protozoa, algae, and fungi are all microorganisms. Microorganisms can only be seen through a microscope. Since we cannot see them without one, it is necessary to test your water for them. Waterborne microorganisms can trigger gastrointestinal illnesses, diarrhea, and vomiting and be life-threatening for infants, children, the elderly, and those with compromised immune systems.

Copper

Copper is a reddish metal that occurs naturally in rock, soil, water, sediment, and air. Copper occurs in drinking water primarily due to its use in plumbing materials and the subsequent corrosion of copper pipes. A major indication of high copper contamination is a bitter metallic taste in the water, as well as the presence of blue-green stains on plumbing fixtures. While copper is an essential nutrient, too much copper can cause adverse health effects, including nausea, vomiting, diarrhea, liver damage, kidney damage, and alteration in behavior.

Fluoride

Fluoride is a natural substance that comes from the element fluorine, which is found naturally in rocks and soil. As water passes through the earth, it absorbs fluoride. At low concentrations, fluoride is believed to prevent tooth decay and strengthen teeth. However, excessive amounts of fluoride consumed over time can accumulate in the bones and lead to skeletal fluorosis.

Questions?
888-395-1033

Lead

Lead is a highly toxic dull gray metal that is soft enough to be easily scratched with a house key. Lead can get into your water as it flows through your plumbing system. Corrosion can cause lead to leach from lead pipes, lead-based solder pipe joints, and brass alloy faucets. Lead exposure at even minimal amounts can create serious behavior and brain developmental problems for children. Low-level exposure can cause irritability, hyperactivity, and inattentiveness. Children exposed to higher levels of lead may have delays in physical or mental development.

Manganese

Manganese is an abundant metal on Earth. It can be found in air, consumer products, food, and water. In water, manganese can look yellow, brown, or black and cause water to taste unpleasant and stain fixtures and water appliances throughout your home. Manganese is essential for human health. However, studies show too much manganese may cause neurological effects in children.

Mercury

Mercury is a silvery metal and a chemical element. Mercury is found in the earth and in manufactured devices such as thermometers, batteries, and fluorescent light bulbs. Mercury can seep into groundwater supplies if it is mishandled and not properly stored at industrial and hazardous waste sites, or from natural deposits. Overexposure to mercury can lead to serious damage to the brain, nervous system, and kidneys. Children and fetuses are at a higher risk for developing these health effects.

Nitrate and Nitrite

Nitrate and Nitrite are nitrogen-based chemicals which occur naturally in water, soil, plants, and food. Principle sources of nitrate or nitrite contamination are fertilizers, septic tank waste, livestock manure, and erosion of natural deposits. Ingestion of water containing high nitrate or nitrite concentrations can be fatal to infants. Water containing nitrate or nitrite should not be used to prepare food or formula for infants less than 6 months of age. Some individuals are more susceptible to health problems from nitrate or nitrite due to certain health conditions. Long term exposure to nitrate and nitrite can lead to diuresis, starchy deposits, hemorrhaging of the spleen, and cancer.

Perchlorate

Perchlorate is a toxic chemical that dissolves easily in water. It is typically found in weapons, explosives and rocket fuel. It is also used to make matches, fireworks, roadside flares, and airbag inflators. Perchlorate disrupts the thyroid gland. It is linked to child development problems and thyroid cancer. It poses the greatest threat in drinking water of nursing and expectant mothers, children, and persons with improperly functioning thyroids.

PFAS

Per- and polyfluoroalkyl substances (PFAS) are a group of manmade organic chemicals. PFOA and PFOS are the most common of these chemicals found in drinking water. PFAS have been used to make water, grease, or stain resistant products including carpets, clothing, furniture fabrics (e.g. Scotchgard™), cookware (e.g. Teflon®), food packaging, and for other industrial processes. PFAS break down very slowly in the environment and can enter groundwater through landfills, septic systems, or from a nearby industrial facility where these chemicals were produced or used during manufacturing. Other include oil refineries, airfields, and locations where the chemicals were used for firefighting purposes.

Please note that this is a limited list of potential contaminants of concern. Not all of these contaminants will pertain to your area or water system. 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.

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