

wellcare[®] information for you about

FLUORIDE & WELL WATER

What is 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. As a result, most water contains some amount of fluoride.

Fluoride content varies by region. Dry regions generally have higher fluoride levels in their water than regions that have higher average rainfall amounts. Groundwater typically contains more fluoride than surface water.

Does well water contain Fluoride?

Fluoride occurs naturally in most groundwater, at levels ranging from 0.1 to more than 12 parts per million (ppm). The fluoride level in your water will depend on the nature of the rock near your well and the presence of fluoride-bearing minerals.

What are the health effects of excess Fluoride?

At low concentrations, fluoride is believed to prevent tooth decay and strengthen teeth. According to the American Dental Association (ADA), the optimal level of fluoride in water is 0.7 ppm.

However, excessive amounts of fluoride consumed over time can accumulate in the bones and lead to skeletal fluorosis. Skeletal fluorosis involves pain or stiffness of the joints. In severe cases, it can cause damage to bone structure, calcification of ligaments, and crippling effects. The U.S. Environmental Protection Agency (EPA) has set an enforceable drinking water standard for fluoride of 4 mg/L, as it believes this is the maximum safe level to prevent individuals from acquiring skeletal fluorosis.

Even at lower levels, dental fluorosis (discoloration or weakening of teeth) may occur. Therefore, the EPA has also set a secondary standard of 2 mg/L for fluoride to protect against dental fluorosis. A secondary standard is one which the EPA recommends for public water systems to follow but does not enforce. Dental fluorosis only affects the teeth before they erupt from the gums, so the EPA suggests that children under age 9 not drink water containing more than 2 milligrams per liter (mg/L) of fluoride.

If you suspect contamination or experience illness, stop drinking and cooking with the water immediately and do not resume until testing has proven it to be safe to use. Always seek advice from your medical doctor if you have any health concerns.

How do I test for Fluoride?

You should have your well water tested to determine how much fluoride is in your drinking water. Contact your state or local health department for a list of state-certified laboratories in your area or use [our interactive map](#) or contact the wellcare® Hotline at 888-395-1033 for assistance.

Knowing the fluoride levels of your well water will aid your child's dentist or physician in determining the best course of care for your child's dental health. For example, if fluoride levels in your water are below 0.6 ppm, your child's dentist or pediatrician may advise daily fluoride supplements, depending on your child's risk of developing tooth decay and their exposure to other sources of fluoride such as in toothpaste or from the drinking water at their school or daycare.

What are the treatments for excess Fluoride in well water?

If the natural fluoride level of your well exceeds 2 ppm, and you have children under age 9, you may choose to reduce or remove fluoride from your drinking water. The most common treatment option to reduce fluoride in drinking water is reverse osmosis. The use of activated alumina, bone charcoal, and distillation have also been shown to be effective.

It should be noted that the effectiveness of the above mentioned treatment methods is somewhat dependent on the pH level of the water. For example, activated alumina is most effective at removing fluoride when the pH range is between 5.5 and 6.5. Boiling water will not remove fluoride and will actually concentrate the amount of fluoride in the water.

Treatment systems should be certified by NSF or Water Quality Association (WQA) when available. To find treatment systems that are certified visit [NSF](#) or [WQA](#) websites. It is necessary to maintain treatment devices 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. Contact a certified water treatment professional for guidance. To locate a certified water treatment professional in your area, visit [WQA's](#) website.

For More Information on Fluoride & Well Water

Contact your licensed well contractor, local health department, state environmental agency, or the [wellcare®](#) Hotline.



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!