

wellcare[®] information for you about **Hardness in Drinking Water**

What is HARDNESS in drinking water?

Hard water is high in dissolved minerals, both calcium and magnesium. As water moves through soil and rock, it dissolves small amounts of these naturally-occurring minerals and carries them into the ground water supply. Water is a great solvent for calcium and magnesium, so if the minerals are present in the soil around your well and its water supply, you can end up with hard water.

Hard water interferes with almost every cleaning task, from doing the laundry to washing dishes to taking a shower. Clothes can look dingy and feel rough and scratchy. Dishes and glasses get spotted and a film may build up on shower doors, bathtubs, sinks and faucets. Washing your hair in hard water may leave it feeling sticky and dull. Finally, hard water can cause a residue to build-up in pipes that can lower water pressure throughout the house.

What are the health effects of Hardness?

Hardness does not pose a health risk and is not regulated by state or federal agencies. In fact, calcium and magnesium in your drinking water can help ensure you get the average daily requirements for these minerals in your diet.

But hard water can be a nuisance due to the mineral buildup on plumbing fixtures and poor soap and detergent performance. It often causes aesthetic problems, such as an alkali taste to the water that makes coffee taste bitter; build-up of scale on pipes and fixtures that can lead to lower water pressure; build-up of deposits on dishes, utensils and laundry basins; difficulty in getting soap and detergent to foam; and lowered efficiency of electric water heaters.

How do I test for Hardness?

Contact your local health department for a list of state-certified laboratories that can test the hardness level of your water. Less expensive home tests also are available from local hardware or home supply stores.

The following classifications are used to measure hardness in water: soft 0 - 17.1 parts per million (ppm); slightly hard 17.1 – 60 ppm; moderately hard 60 - 120 ppm; hard 120 - 180 ppm; and very hard 180 or more ppm.

What is the treatment for Hardness in drinking water?

Treat hard water by adding a water softener to laundry and the dishwasher or by installing an ion-exchange system to treat all of your household water. Ion exchange can increase the sodium content of the water, which may pose health concerns for your household. Contact your water well professional or your local or state health department for guidance.

For more information about Hardness and other drinking water contaminants

University of Nebraska, Lincoln, *Drinking Water: Hard Water*:
<http://ianrpubs.unl.edu/water/g1274.htm>

NSF International, *Well Water: Contaminant Guide*:
www.nsf.org/consumer/drinking_water/contaminant_hardness.asp?program=WaterTre

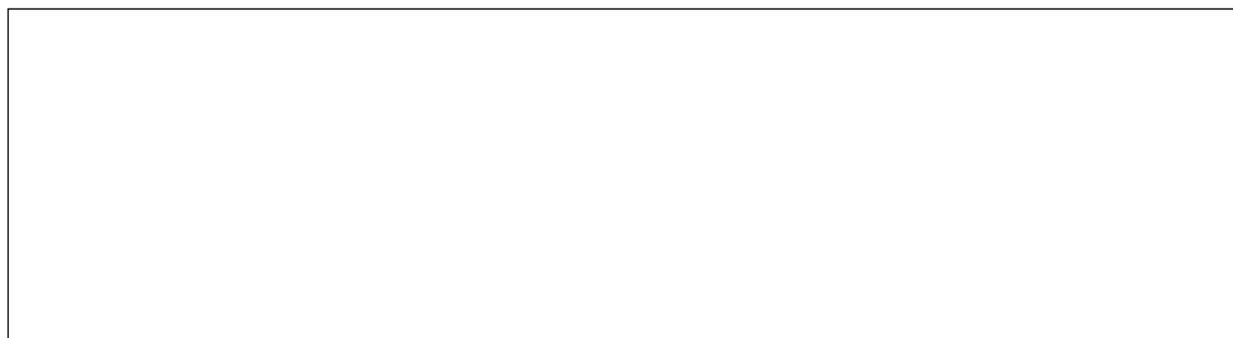
For more information on your drinking water

The following sites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner:

Water Quality Association	www.wqa.org
NSF International	www.nsf.org
Home*A*Syst Program	www.uwex.edu/homeasyst
The Groundwater Foundation	www.groundwater.org
American Water Works Association	www.awwa.org
wellcare® hotline for well owners	888-395-1033

For more information about wells and other wellcare® publications

wellcare® is a program of the **Water Systems Council (WSC)**. WSC is a national nonprofit organization dedicated to promoting the wider use of wells as modern and affordable safe drinking water systems and to protecting ground water resources nationwide. Well owners and others with questions about wells or well water can now call the new wellcare® hotline at **888-395-1033** or visit www.watersystemscouncil.org



This publication was developed in part under Assistance Agreement No. X-82849101-4 awarded by the U.S. Environmental Protection Agency. It has not been formally reviewed by EPA. The views expressed in this document are solely those of WSC. EPA does not endorse any products or commercial services mentioned in this publication.