

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

What is pH in drinking water?

The pH level of your drinking water reflects how acidic it is. pH stands for “potential hydrogen,” referring to the amount of hydrogen mixed with the water. pH is measured on a scale that runs from 0-14. Seven is neutral, indicating there is no acid or alkalinity present. A measurement below 7 indicates acid is present and a measurement above 7 indicates alkalinity.

The normal range for pH in ground water lies between 6 and 8.5. By comparison, vinegar measures 3 pH, beer measures between 4 and 5, while milk measures around 6.4 pH.

Water with a low pH can be acidic, soft and corrosive. This water can leach metals from pipes and fixtures, such as copper, iron, lead, manganese and zinc. It can also cause damage to metal pipes and aesthetic problems, such as a metallic or sour taste, laundry staining or blue-green stains in sinks and drains.

Water that contains elevated levels of toxic metals could also show a low pH level.

Drinking water with a pH level above 8.5 could indicate that the water is hard. Hardness does not pose a health risk, but can cause aesthetic problems, such as an alkali taste to the water that makes coffee taste bitter; build-up of scale on pipes and fixtures than 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.

What are the health effects of pH?

The U.S. Environmental Protection Agency (EPA) does not regulate the pH level in drinking water. It is classified as a secondary drinking water contaminant whose impact is considered aesthetic. However, the EPA recommends that public water systems maintain pH levels of between 6.5 and 8.5, a good guide for individual well owners.

How do I test for pH?

Contact your local health department for a list of state-certified laboratories that can test the pH level of your water. If it is acidic, less than 7 pH, you may have problems with leaching of copper and lead from your plumbing. Consider testing for lead if the pH test shows your water is highly acidic.

What is the treatment for pH in drinking water?

Treat the problem of acidic, low pH drinking water with a neutralizer. The neutralizer feeds a solution, typically using soda ash, into the water to prevent the water from reacting with the house plumbing or contributing to corrosion, which can leach metals into the water.

Note: neutralizing with soda ash increases the sodium content of the water, which may pose additional health concerns for your household.

Treat hard water with a high pH with an ion-exchange system or the addition of a lime-soda ash mixture. These processes also can increase the sodium content of the water. Contact your water well professional or your local or state health department for guidance.

For more information about pH and other drinking water contaminants

U.S. EPA, *Secondary Drinking Water Standards*:

www.epa.gov/safewater/consumer/2ndstandards.html

NSF International, *Well Water*:

www.nsf.org/consumer/drinking_water/dw_well.asp?program=WaterTre

Wilkes University, Center for Environmental Quality, GeoEnvironmental Sciences and Engineering Department, *pH of the Water*: <http://wilkes1.wilkes.edu/~eqc/ph.htm>

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



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