wellcare® information for you about
Radon & Groundwater

What is Radon?

You may be familiar with concerns about radon in the air in your home. Radon is a naturally occurring radioactive gas that has no color, odor or taste. It comes from the natural breakdown of uranium and radium in the ground. Soil under the home releases radon, which escapes to the air, where it can dissolve in water and accumulate in your well. High levels of radon are commonly detected in certain kinds of bedrock, such as granite and dark shale.

What are the health effects of Radon?

Radon can be inhaled when it is released from water while showering, washing dishes or cooking. It also can be ingested directly through drinking water. Inhaled radon is of greatest concern as it increases the risk of lung cancer. Drinking water contaminated by radon may raise the risk of stomach cancer, though this risk is extremely small.

According to the U.S. Environmental Protection Agency (EPA), only about 1-2 percent of radon in indoor air comes from drinking water. In general, for every 10,000 pCi/L of radon in drinking water, 1 pCi/L is transferred to the indoor air.

How do I test for Radon?

The EPA and the U.S. Surgeon General recommend that homes first be tested for radon in indoor air. Radon is measured in "picocuries" per liter (abbreviated "pCi/L"). If the test on air results in a reading of 4 pCi/L or higher, the EPA recommends that radon also be tested in drinking water.

A state laboratory certification office or state radon office can direct you to laboratories equipped to test drinking water for radon. If your test results indicate radon is present, contact your state radon office or the wellcare® hotline to find out if any action is needed.

What is the treatment for Radon in drinking water?

Fortunately, radon can be eliminated through one of two types of water treatment. Aeration devices bubble air through the water, and then use an exhaust fan to vent the radon outdoors. GAC (granular activated carbon) filters use activated carbon to remove the gas. GAC filters tend to cost less than aeration devices. However, radioactivity collects on the GAC filter, which may cause a handling hazard and require special disposal methods. It should be noted that GAC filters have a short life span and need to be changed out on a regular basis. A licensed water treatment professional in your area can suggest and install the best treatment system for your situation.

For more information about Radon and Groundwater

Contact your state radon office. Visit www.epa.gov/iaq/contacts.html to learn how to contact the radon office in your state.

National Safety Council. (November 12, 2004). Frequently Asked Questions About Radon. Retrieved on April 5, 2007 from www.nsc.org/ehc/radon/rad_faqs.htm#water

U.S. Environmental Protection Agency (EPA). Proposed Radon in Drinking Water Rule. Retrieved on March 13, 2007 from www.epa.gov/safewater/radon/proposal.html

For more information on your drinking water

Contact your local water well professional or health department for information on ground water in your area. The following websites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner. In addition, you may contact the wellcare® hotline at 1-888-395-1033.

Underwriters Laboratories Inc. Drink Well™ Well Water Testing	www.uldrinkwell.com
U.S. Environmental Protection Agency	www.epa.gov
Water Quality Association	www.wqa.org

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. This publication is one in a series of wellcare® information sheets. There were more than 60 available at the time this document was published. They can be downloaded FREE from the WSC website at www.watersystemscouncil.org. Well owners and others with questions about wells or ground water can also contact the wellcare® hotline at 1-888-395-1033 or visit www.wellcarehotline.org

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