CONSUMER
Fact Sheet

Live safer.®

Did you know . . .

If radon is present in your home's water supply, it could be getting released into the air every time you turn on the tap. It's estimated that every 10,000 pCi/L of radon that's present in water could introduce up to 1 pCi/L into the air (4 pCi/L is the maximum).

What You Should Know About Radon in Drinking Water

While many individuals have heard of radon, few are aware of how widespread its presence can be inside our homes. The US Environmental Protection Agency (EPA) estimates that radon in homes contributes to more than 20,000 lung cancer deaths each year, making it the second leading cause of lung cancer in the United States.

What is Radon?

Radon is a naturally occurring radioactive gas that comes from the natural breakdown of uranium in the ground. It has no color, odor or taste and can enter homes either via the air or through the household water supply. The majority of radon found in indoor air originates from soil underneath the home. As uranium breaks down, radon gas forms and seeps into homes and other buildings through the foundation. Unless properly sealed or vented, radon from soil can build up to high levels inside buildings.

Typically, radon in soil is the bigger source of radon in indoor air and thus presents a greater risk of lung cancer than radon in drinking water. However, radon gas can also dissolve and accumulate in ground water sources, such as springs and wells. When using the water for bathing, washing dishes or cooking, some radon gas can escape from the water into the surrounding air. Out of the 20,000 deaths attributed each year to radon exposure, the EPA estimates that about one percent or 200 deaths result from exposure to radon in the household water supply.

While there is no current U.S. regulation for radon in drinking water, federal regulators are looking at requiring public utilities to provide water with radon levels no higher than 4000 pCi/L. At this concentration, the EPA estimates the water would be expected to contribute about 0.4 pCi/L of radon to the indoor air.

If radon is suspected of being present in your region, you may wish to have your water supply tested. If test results show the water contains radon and you are concerned about it, there are a couple of potential treatment options at the point where the water supply first enters the home:

- Granular activated carbon (GAC) filters, which adsorb radon gas
- Aeration devices, which bubble air through the water and carry radon gas out into the atmosphere through an exhaust fan

While GAC filters tend to cost less initially than aeration devices, radioactivity can collect on the filter, which may cause a handling hazard and require special disposal methods for the filter. Also, because it can be difficult to know at what point the filter media needs to be replaced, it's usually necessary to have the water re-testing every few months to ensure the filtering capacity of the system has not been used up.

For further information about radon, including radon in the indoor air, visit the EPA website on radon. For additional information about home water treatment, you can contact the NSF Consumer Affairs Office at info@nsf.org or visit the NSF consumer website.