Arsenic in tap water: know your risk

By Keith Mulvihill

NEW YORK, Oct 20 (Reuters Health) - Millions of Americans may be drinking water that contains cancer-causing levels of arsenic, according to the Environmental Protection Agency (EPA), but efforts by the agency to lower levels of the toxic metal have been delayed in Congress. Meanwhile, groups around the country are offering Americans ways to test, and purify, their own water.

Long-term exposure to low concentrations of arsenic in drinking water can lead to skin, bladder, lung and prostate cancer, according to EPA. Other effects include cardiovascular disease, diabetes and anemia, as well as reproductive effects.

Scientists say that most water sources in the United States contain levels less than 5 parts per billion (ppb), but the EPA cautions that "there may be hot spots with...higher than the predicted occurrence." The agency estimates that its recommendation to lower the current standard of 50 ppb to 5 ppb "will provide additional protection for 22.5 million Americans from cancer" and other health problems.

But until Congress allows EPA to take action, many Americans might not be aware that there is a problem with their water, according to Joseph Harrison, of the Water Quality Association in Lisle, Illinois, a nonprofit organization that represents the makers of water-treatment equipment.

"So far, we haven't seen a lot of public awareness, but as soon as the standard gets lowered and water utility companies are notifying consumers about levels, I think consumer interest is going to mount," Harrison told Reuters Health. "There are going to be a lot of well-water systems, especially shallow water wells, that are going to have levels of arsenic above the EPA recommended level of 5 ppb."

TESTING YOUR WATER FOR ARSENIC

Finding out if you have an arsenic problem is going to depend on where your drinking water comes from, Harrison said.

If, like most people, you get your water from a city municipal or privately owned drinking water supply, you have access to annual Consumer Confidence Reports. These reports list the average arsenic value for the year, as well as the highest level and the lowest level.

If you rely on one of the 14 million private well-water systems in the country, you can get your water tested by a certified laboratory. Erik Olsen, a lawyer with the Natural Resources Defense Council, a nonprofit environmental and public health advocacy group based in New York City, recommends that people call their local health department for the name of state-certified laboratories, or they can call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

The Environmental Quality Institute (EQI) at the University of North Carolina at Asheville also offers a service to all people in the United States who want their drinking water tested for arsenic.

For $12, EQI will send you a water sample bottle and instructions. "Then you mail the sample back to the lab," said Dr. Richard Maas, research director at EQI. "In a few weeks you get the result." The analysis will explain the risks, if any, that your drinking water poses.

"Our goal in this project is to both...help define the problem of arsenic in the United States, and also to provide the US public with a cheap and convenient way to test their water," Maas said in an interview with Reuters Health.

"We know that tens of millions of Americans are consuming water with harmful levels of arsenic," according to information coming from the EPA, Maas said. "What we don't know is where the worst problems are and we know almost nothing about the exposure of people on private wells."

For more information on how to test your water, go to the EQI Web site, www.unca.edu/eqi.

FILTERING WATER CAN REMOVE TOXIN

Once you have identified a problem, filtration of drinking water can solve it. Many experts agree that arsenic in water used for bathing or washing dishes is not a significant health risk. This means that most people who discover that they have arsenic in their water need not install an expensive whole-house filtration system. Instead, experts advise buying a system that filters the water directly at your tap.

While the thought of figuring out which type of home-filtration system will work for you can be a dizzying prospect, experts have a few common sense rules that will help make the decision easier.

"If the filtration system doesn't say specifically that it removes arsenic, it most certainly does not do that," Maas noted. "Also, stay clear of products that simply say that they remove trace metals." Even though arsenic is a metal, it doesn't behave like other metals, and requires a different mode of filtration, Maas explained. Filtration systems such as reverse osmosis, distillation and anion exchange filters do remove arsenic.

One group that certifies filtration systems can help people figure out which filter is best for them, Olsen added. He recommends contacting NSF International, a nonprofit testing and certification organization. You can reach them at www.nsf.org or 1-800-NSF-MARK. But be sure the product says 'NSF certified.' Some manufacturers claim that their product is "tested to NSF standards." NSF has not tested these products; the companies are merely claiming that they follow NSF standards.

Also be sure to follow the manufacturers' instructions, Olsen warns. "If you don't change the filter as often as they say, you may be adding contaminants back into your water," he said. "And always let the water run for several seconds before filling your glass."