



## Questions & Answers

# Arsenic in drinking water

### **What is arsenic and where does it come from?**

Arsenic is a naturally occurring element in the earth's crust. Most arsenic in drinking water comes from natural rock formations. As water flows through these formations, it can dissolve arsenic and carry it into underground aquifers, streams or rivers that may be used as drinking water supplies. Arsenic also can come from human activities, such as mining or smelting ores that contain arsenic. It is also known to be in some commercial wood preservatives and agricultural chemicals.

### **How can I find out if there's arsenic in my drinking water supply?**

Arsenic is tasteless and odorless. It can only be detected by laboratory testing, or in some instances, with a field analysis kit. If you get your water from a public water system with at least 25 customers, your water utility should already be testing for arsenic. Your utility issues an annual Consumer Confidence Report that will tell you how much arsenic is in your drinking water. Smaller water systems and private well owners should have their water tested for arsenic by a state-certified laboratory. We recommend testing twice a year to account for seasonal fluctuations. Your local health department or the Office of Drinking Water can give you a list of labs equipped to test for arsenic.

### **Does arsenic affect human health?**

Yes. Low levels of arsenic in drinking water, soil, air and food pose a slight health risk. As with most contaminants, the more you are exposed over time, the greater the risk of experiencing health effects. Arsenic health effects include diseases that can affect the cardiovascular system, kidneys, skin, nervous system, or lead to various forms of cancer. If you are worried about long-term consumption of water with high levels of arsenic, consult your physician. There are tests that can help your doctor determine how much arsenic is in your body.

Getting arsenic on the skin when bathing or washing is not considered a major health risk, unless the water has arsenic concentrations exceeding 500 parts per billion (ppb). DOH strongly recommends having no contact with water that contains more than 500 ppb of arsenic.

### **What is the maximum contaminant level for arsenic in drinking water?**

The drinking water standard for arsenic is 10 ppb. The former standard of 50 ppb was lowered because of the known health risks of long-term exposure to arsenic in drinking water. Because arsenic is a health hazard, DOH recommends that you do not drink water containing more than 50 ppb of arsenic.



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

## **Do some parts of Washington have more arsenic than others?**

Yes. Elevated levels of naturally occurring arsenic have been found in parts of Western and Central Washington. Scientists attribute these higher arsenic levels to the geologic composition of these locations.

## **Should I boil my water if it has high levels of arsenic?**

No. Boiling water does not remove arsenic.

## **Can I remove arsenic from my drinking water?**

Yes. Several treatment methods will effectively remove arsenic from drinking water. Public water systems rely on consulting engineers to determine the best treatment method to use.

If your water comes from a privately owned well, the treatment method you select should be certified by a recognized third-party testing organization. These third-party organizations list only treatment methods that meet strict testing protocols established by the American National Standards Institute (ANSI) and NSF International, a not-for-profit public health and safety organization that tests and certifies home water treatment products. Keep in mind that even these products may not be effective in all cases. We recommend that you continue to have your water tested after installing this equipment and that you keep the equipment well maintained.

For organizations that can provide lists of certified treatment units, visit the DOH Web site at [http://www.doh.wa.gov/ehp/dw/our\\_main\\_pages/dwlinks.htm](http://www.doh.wa.gov/ehp/dw/our_main_pages/dwlinks.htm)

## **Does bottled water contain contaminants such as arsenic?**

The contaminants in bottled water must be below the maximum level set by the U.S. Food and Drug Administration or the state. Consumers can call the bottler directly to find out what contaminants are present in a specific brand. Information about bottled water contaminants also is available from NSF International at:

[http://www.nsf.org/consumer/bottled\\_water/bw\\_faq.asp?program+BottledWat](http://www.nsf.org/consumer/bottled_water/bw_faq.asp?program+BottledWat)

## **For more information:**

**Call the Office of Drinking Water at (800) 521-0323 or the:**

- Southwest Region, Tumwater (360) 236-3030
- Northwest Region, Kent (253) 395-6750
- Eastern Region, Spokane (509) 456-3115

## **Visit the following Web sites:**

Department of Health Office of Drinking Water: <http://www.doh.wa.gov/ehp/dw>

U.S. Environmental Protection Agency: <http://www.epa.gov/OGWDW/arsenic.html>

Agency for Toxic Substances and Disease Registry: <http://www.atsdr.cdc.gov/tfacts2.html>

American National Standards Institute: <http://www.ansi.org>

NSF International: <http://www.nsf.org/>



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