

Many citizens don't know what the words "public health" really mean. Most people think public health is only for the poor. While we do attend to the health needs of low-income families, we also provide many other services to citizens living in our six-county area. Below are a few of the programs offered at Southwest District Health:

**Public Water Supply:** Monitor and provide guidance to small public drinking water systems to maintain safe drinking water for their customers. Contact: 455-5400

**Private Drinking Water Supply:** Provides guidance and technical assistance to private well owners. Contact: 455-5400

**Vector and Rodent Control:** Provide guidance in controlling vectors (mosquitoes, ticks) and rodent infestations that could prevent the spread of disease causing organisms. Contact: 455-5400

**Recreational Premises:** Inspect public swimming pools for safety and sanitation. Contact: 455-5400

**Sewage Disposal:** Ensures that septic tanks and other on-site sewage disposal systems are properly permitted, installed and operated to prevent the spread of disease. Contact: 455-5400

**Individual & Community Land Development:** Monitors, evaluates and enforces regulations on land being developed in Southwestern Idaho. Contact: 455-5400

For more information on arsenic in water systems please contact the  
**Public Water Coordinator at  
Southwest District Health**  
**(208) 455-5400**



**13307 Miami Lane**

**P. O. Box 850**

**Caldwell, ID 83606**

*Southwest District Health serves the residents living in Adams, Canyon, Gem, Owyhee, Payette and Washington Counties.*

# Arsenic in Drinking Water

Arsenic is a metallic element that occurs naturally in its pure form. It can also combine with other elements to form various chemical compounds. It is present in trace amounts in water and many foods and, as a result, most people have minute quantities in their bodies. When arsenic combines with oxygen, chlorine, and sulfur, it is called *inorganic arsenic*. Arsenic in plants and animals combines with carbon and hydrogen and is called *organic arsenic*. Inorganic arsenic is generally the more harmful of the two and tends to be more predominant in drinking water. Arsenic compounds have no smell or taste.

## What are the sources of arsenic contamination in water?

Contamination of a drinking water source by arsenic can result from either natural or human activities. Arsenic is an element that occurs naturally in rocks, soil, water, air, plants, and animals. Volcanic activity, erosion of rocks and minerals, and forest fires are natural sources that can release arsenic into the environment. About 90 percent of the arsenic used by industry in the United States is currently used for wood preservative purposes; arsenic is also used in paints, drugs, dyes, soaps, metals and semi-conductors. Agricultural applications, mining, and smelting also contribute to arsenic releases.

## How Can Arsenic Affect My Health?

Arsenic poisoning is either acute (high level doses over a short period), or chronic (low doses with symptoms developing over time), and when confirmed by a simple urine analysis, is medically treatable. Chronic exposure is first noticeable as weakness, tiredness, scaly skin, changes in skin coloration, and swelling of the lining of the mouth. Nerve degeneration then sets in leading to a “tingling” and then numbness in the hands and feet. Acute arsenic poisoning from consumption of high levels of arsenic produces painful intestinal symptoms resulting in the sudden onset of nausea, vomiting, and diarrhea.

## Arsenic and Private Wells.

Ground water is well known for containing many minerals that give it a distinguishable taste. However, because there are minerals contained within ground water, there is also the possibility that you might have amounts of specific metal such as arsenic in your water. It is recommended that you test your water at least once a year. Southwest District Health will be able to refer you to a certified laboratory that can test your water for arsenic for a nominal fee. Southwest District Health also has information about the typical levels of arsenic in the groundwater in the area where you live.

## How Much Arsenic Is Allowed In Public Drinking Water?

The Environmental Protection Agency (EPA) sets public drinking water standards called “Maximum Contaminant Levels” (MCL) to help reduce public

health risk associated with drinking water. The EPA has set the arsenic MCL at 0.010 milligrams per liter (mg/L) or 10 parts per billion (ppb). This level was set in 2006 to provide additional protection against cardiovascular disease and cancer.

## Can I Make My Water Safe for Consumption?

If you have an arsenic problem, there are water treatment technologies available now that can reduce or even remove arsenic from your drinking water. The following water treatment technologies are effective in reducing arsenic from drinking water:

- Ion exchange
- Reverse osmosis

Pretreatment may be needed in some cases to ensure acceptable treatment by the primary unit. If a treatment system is to be used, one with National Sanitation Foundation Certification should be used.

## How likely is arsenic to cause cancer?

The Department of Health and Human Services (DHHS) has determined that arsenic is a known carcinogen. Breathing inorganic arsenic increases the risk of lung cancer. Ingesting inorganic arsenic increases the risk of skin cancer and tumors of the bladder, kidney, liver, and lung.