



Chemicals in Private Drinking Water Wells Fact Sheet

Florida Department of Health, Division of Environmental Health

This fact sheet discusses possible health risk from exposure to low levels of lead typically found in private drinking water wells.

Lead

What is lead?

Lead is a naturally occurring, bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of the environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead is used in the production of batteries, ammunition, metal products, and devices to shield X-rays.

How might I be exposed to lead in my drinking water?

- Drinking water that contains lead
- Having a home with lead pipes or lead solder

What is the standard for lead in drinking water?

The Florida Department of Environmental Protection's (DEP) drinking water standard for lead is 15 micrograms per liter of water (15 ug/L). There is no required sampling of private drinking water wells.

How can lead affect my health?

To protect health, drinking water standards are set at very low levels. Drinking water every day at or below the drinking water standard for your entire lifetime is unlikely to cause illness.

To set drinking water standards, scientists study reports of people exposed to chemicals at work. They also study reports of experiments with animals. From these reports, they determine a "no-effect level" or level that does not cause illness. Then, to be on the safe side, scientists typically set drinking water standards hundreds or thousands of times less than the "no-effect level." Therefore, drinking water with levels slightly above the standard for a short time period does not significantly increase the risk of illness. The risk of illness, however, increases as the level of lead increases and the length of time you drink the water increases.

The type and severity of health effects associated with exposure to a particular chemical depends on a number of factors:

- How much of the chemical was someone exposed to each time?
- How long did the exposure last?
- How often did the exposure occur?
- What was the route of exposure? (Did someone eat, drink or breathe the chemical into their body?)

Health effects are also determined by a number of personal factors. From person to person, how someone is affected by a chemical exposure ranges widely. The drinking water standard is set to protect the most sensitive individuals. Health effects are also determined by a number of personal factors. These include:

- How old are they?

- What gender are they?
- Is the person generally healthy or do they already have other health problems?
- What are their health habits? (For instance, do they drink alcohol or smoke tobacco?)
- How likely are they to be affected by exposure to a chemical, in general?

Drinking water with levels of lead well over the drinking water standard over an extended period can cause illness. Too much lead can damage your brain, kidneys, nervous system, and red blood cells. Young children and pregnant women are at greatest risk.

How likely is lead to cause cancer?

The ability of lead to cause cancer in humans is unknown. Based on animal studies, the US Department of Health and Human Services has determined that lead acetate and lead phosphate may reasonably be anticipated to cause cancer in humans. The drinking water standard is set to protect against the risk of cancer.

Is there a medical test to see if I have been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth and bones can be measured with X-rays, but this test is not as readily available. Medical treatment may be necessary in children if the lead concentration in blood is higher than 45 micrograms per deciliter (ug/dL).

Should I continue to use my drinking water if lead is found?

Levels of lead less than the drinking water standard of 15 ug/L are not likely to cause illness. Drinking water with levels slightly above the drinking water standard for a short time period does not significantly increase the risk of illness. However, because the risk of illness increases with how much of a chemical a person is exposed to, how often an exposure occurs and how long the exposure lasts, you should seek drinking water that meets the standard.

Who can you contact for more health information?

Please call the Florida Department of Health toll-free help line 877-798-2772 weekdays from 10:00 a.m. to 7:00 pm. Outside of Florida, please call 850-245-4299 between 8:00 a.m. and 5:00 p.m. Or visit us online at: www.myfloridaeh.com

For more information about the health effects from exposure to this chemical in different situations and at higher levels than those usually found in drinking water wells, please see the ATSDR ToxFAQs for lead at: www.atsdr.cdc.gov/tfacts13.pdf