



Chemicals in Private Drinking Water Wells Fact Sheet Florida Department of Health, Bureau of Environmental Health

This fact sheet discusses possible health risks from exposure to low levels of dibromo-3-chloropropane (DBCP) typically found in drinking water wells.

Dibromo-3-chloropropane (DBCP)

What is dibromo-3-chloropropane?

Dibromo-3-chloropropane (also known as 1,2-dibromo-3-chloropropane or DBCP) is a colorless synthetic liquid with a sharp smell. You can taste DBCP in water at very low concentrations.

Until 1979, farmers used DBCP to kill pests that harmed crops. Some fire retardants also use DBCP.

How might exposure to DBCP in drinking water occur?

- Drinking water from a contaminated well
- Breathing air contaminated with DBCP
- Living near uncontrolled hazardous waste sites containing DBCP products

What is the standard for DBCP in drinking water?

The Florida Department of Environmental Protection's drinking water standard for DBCP is 0.2 micrograms per liter of water (0.2 ug/L). There is no required sampling of private drinking water wells.

How can DBCP 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 does not significantly increase the risk of illness. However, because health risks increase as the levels of a chemical (or how long a person drinks it) increases, it is best to drink water that meets standards.

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 (eating, drinking, or breathing)?

A number of personal factors also determine health effects. 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 chemical exposures to effect someone, in general?

Drinking water with levels of DBCP well above the drinking water standard for an extended period increases the risk of low fertility and kidney damage.

How likely is DBCP to cause cancer?

The ability of DBCP to cause cancer in humans is unknown. The U.S. Department of Health and Human Services considers DBCP as reasonably anticipated to cause cancer. In animal studies, DBCP caused stomach and kidney cancer. The ability of DBCP to cause these same cancers in humans is unknown. The drinking water standards is set to protect against cancer.

Is there a medical test for DBCP exposures?

Tests are available that measure the amount of DBCP in exhaled air, blood, and samples of tissues from the body. These tests may require special equipment and they may not be available in your doctor's office.

Is it safe to keep drinking water with DBCP in it?

Levels of DBCP less than the drinking water standard of 0.2 ug/L are not likely to cause illness. Drinking water with levels slightly above the standard for a short time period does not significantly increase the risk of illness. However, because health risks increase as the levels of a chemical (or how long a person drinks it) increases, it is best to drink water that meets standards.

For additional health information, please call the Florida Department of Health at 850-245-4240 or visit us online at www.floridahealth.gov/environmental-health/drinking-water/Chemicals-HALs.html

For more information about the health effects from exposure to DBCP in different situations and at higher levels than those usually found in drinking water wells, please see the ATSDR ToxFAQs for dibromo-3-chloropropane at www.atsdr.cdc.gov/toxfaqs/tfacts36.pdf