



# Should I Get My Well Water Tested?

## Is my water safe to drink?

If you get your drinking water from a private well, get the water tested by a laboratory to ensure the drinking water is safe.

Your well water may not be safe, even if you are not getting sick. Some chemical contaminants sometimes found in well water can cause long-term health problems, which develop over years.

Even though your neighbour's well may have been tested and found to be safe, this does not mean your well water is all right. Wells only a few paces apart can have different water quality. It depends on surface and underground geology, the depth and construction of the well, and other factors.

If you get your water from a private well, you need to get your water tested to know whether the drinking water is safe for you and your family.

## Who tests well water?

Publicly-owned drinking water systems are tested regularly. These include municipal systems that collect and distribute well water to entire communities.

Operators of privately-owned systems supplying water to communities or 500 persons or more in any given 24 hour period are also required to conduct regular water quality tests.

If you are the owner of a private well, you need to have your own well water tested to determine whether your water is safe to drink.

## What might be wrong with my well water?

Even though your well water may taste and look fine, there can be many harmful substances that you can not taste, see or smell.

Some of these substances get into groundwater as a result of human or other activities on the surface. Nitrates from animal wastes and fertilizers can filter down through the soil and contaminate ground water.

Faulty in-ground sewage disposal systems can also pollute groundwater, as can spills of chemicals beside or near the well. It is important to test your well water, as well as protect and maintain your well to prevent groundwater contamination.

For more information, see the [Safe Water Supply: Vital to Your Health](#) report, available at your local Health Authority office or on the Ministry of Health Services website at [www.health.gov.bc.ca/protect/index.html](http://www.health.gov.bc.ca/protect/index.html).

## Fecal coliforms

Coliforms, especially fecal coliforms, indicate that your well water is contaminated, possibly by a nearby sewage system. If you have a high number of coliforms or any fecal coliforms in your well water, then you need to disinfect or boil your water for 1 minute before you drink it. At elevations over 2,000 meters (6,500 feet), boil water for at least 2 minutes to disinfect it. Water boils at a lower temperature at this elevation. See the fact sheet on [Total, Fecal & E. coli Bacteria in Groundwater](#) at [www.env.gov.bc.ca/wsd/plan\\_protect\\_sustain/groundwater/library/ground\\_fact\\_sheets/pdfs/no3\(020715\)\\_fin2.pdf](http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/library/ground_fact_sheets/pdfs/no3(020715)_fin2.pdf)

## Nitrates

Nitrates are common contaminants of groundwater. High levels of nitrates have been found in a number of wells in certain parts of the province. This occurs usually in areas where the groundwater may be contaminated by surface activities, such as intensive farming.

High levels of nitrates can be particularly dangerous for babies under six months, since nitrates interfere with the ability of the blood to carry oxygen. In severe cases, this can cause babies to turn blue. You should have your well water tested **before** your baby is born. Never give a baby well water that has not been tested.

For more information, see HealthLink BC File [#05a Nitrate Contamination in Well Water](#) and the fact sheet on [Nitrate in Groundwater](#) at [env.gov.bc.ca/wsd/plan\\_protect\\_sustain/groundwater/brochures\\_forms.html](http://env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/brochures_forms.html).

## Metals

Since well water comes from under the ground, different metals present in the soil and rock below can be dissolved in the water.

A metal like arsenic can have serious and long-term health effects. Manganese, iron, and zinc are other metals commonly found in groundwater in British Columbia.

## Lead and copper

Lead and copper are also found in private drinking water supplies. These metals are not usually in the groundwater itself, but these get into the water by leaching out of pipes and soldered joints. Lead and copper levels can be minimized by running the water for a minute before you use it. This helps clear standing water from the pipes and joints in your plumbing system.

## Other chemicals

A number of different chemicals can be found in well water. These can range from naturally-occurring fluoride and hydrogen sulphide gas to petroleum products and pesticides, which may have been accidentally spilled. These are less common and found usually in such small quantities that they pose no risk to human health. However, if there is a history of these contaminants in other wells in your area, you should consider testing for them too.

## How do I get my well water tested?

The Environmental Health Division of your local Health Authority can help. Ask the Drinking Water Officer (DWO) about possible contaminants found in wells in your area and those to consider for testing.

The DWO may be able to advise you on which approved laboratories can test water from homeowners. Some telephone books list "Laboratories, Analytical" in the yellow pages. Costs for a single sample test for Total Coliforms and E.Coli may vary at labs; however, the costs should be about \$50 plus GST and any additional shipping costs. Repeat sampling will be required to ensure the water is safe to drink if your well shows positive results for E.Coli or Total Coliform contamination.

When you choose a lab to test your water, you should ask about their detection limits, and how much it will cost to perform the tests. The lab will send you the necessary sample bottles and instructions. When you get these, read the instructions carefully and follow them exactly.

When you get the results back from the lab, they may provide information to help you understand what the test results mean and whether there is a problem with the water.

Your local DWO can help you interpret the results of these tests and may refer you to Health Canada's [Canadian Drinking Water Guidelines](http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index_e.html) ([www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index\\_e.html](http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index_e.html)), which recommend maximum allowable amounts for a wide range of possible contaminants in drinking water.

## What if the tests show possible contamination?

In some cases, where a serious health hazard exists, the use of bottled water for drinking and cooking is the easiest and least costly solution. There are also many different kinds of water treatment devices now on the market that effectively remove various contaminants. Prices and performance vary. Your DWO can offer advice on your treatment options, based on specific water quality problems. The final selection and costs associated with either bottled or home water treatment devices, including maintenance and follow-up sampling, are the responsibility of the private well owner.

**For more information on well water, visit the [BC Ministry of Environment](http://www.env.gov.bc.ca) website at [www.env.gov.bc.ca](http://www.env.gov.bc.ca), or contact the Drinking Water Officer in your local Health Authority.**

For more HealthLink BC File topics, visit [www.HealthLinkBC.ca/healthfiles/index.stm](http://www.HealthLinkBC.ca/healthfiles/index.stm) or your local public health unit.

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