



*from
the*

Health files

Ministry of Health,
Health File #45, June 1995

Should I Get My Well Water Tested?

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Is my water safe to drink?

If you get your drinking water from a private well, and have not had the water tested by a laboratory, you can not tell whether your drinking water is safe or not.

Just because you are not getting sick does not mean that your well water is safe. Some chemical contaminants sometimes found in well water can cause long term health problems that may take years to develop.

And just because your neighbour's well has been tested and found to be safe also does not mean your well water is all right. Wells that are only a few paces apart sometimes have totally different water quality. It depends on surface and underground geology, the depth and construction of the well, and other factors.

The truth is, if you are drawing your water from a private well, the only way of knowing whether that water is safe for you and your family to drink is to have your water tested.

Who tests well water?

Publicly-owned drinking water systems (ie: municipal systems) that collect and distribute well water to entire communities are tested on a regular basis.

Operators of privately-owned systems that provide water to communities, large or small, are also required to conduct regular water quality tests.

It is up to you, as the owner of a private well, to have your own well water tested to determine whether your private water supply is safe to drink.

What might be wrong with my well water?

Even though your well water may taste and look fine, there are many possible harmful substances that you can't taste, see or smell.

Some of these substances get into groundwater as a result of human 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 your well. That is why it is important to test your well water, and also to protect and maintain your well to prevent groundwater contamination from taking place. (See [Safe Drinking Water - Vital to your Health](#)", available at your local Health Unit/Department).

Fecal coliforms

Coliforms, especially fecal coliforms, are an indication that your well water is contaminated, possibly by a nearby sewage system. If you have a high number of coliforms, or ANY number of fecal coliforms, in your well water then you will have to disinfect or boil your water for two minutes before you drink it.

Nitrates

One of the more common contaminants of groundwater is nitrates (see Health File [#05, Nitrate Contamination in Well Water](#)). Dangerously high levels of nitrates have been found in a number of wells in certain parts of the province - usually in areas where the groundwater is vulnerable to contamination 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.

Metals

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

One metal which can have serious and longer term health effects is arsenic. A number of private wells in the Sechelt area of British Columbia were recently found to have arsenic levels well above Canadian Drinking Water Guidelines. Manganese, iron, and zinc are other metals that are commonly found in British Columbia groundwater.

Lead and copper

Lead and copper are also sometimes found in private drinking water supplies. These metals are usually not in the groundwater itself, but 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, to 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, from naturally-occurring fluoride and hydrogen sulphide gas to petroleum products and pesticides which may have been accidentally spilled. These are less common, and are usually found 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 go about getting my well water tested?

Phone or visit the Environmental Health Division of your local Health Unit or Department. Ask the Environmental Health Officer (EHO) about possible contaminants that are typically found in wells in your area, that you should consider testing for. The EHO may be able to advise you about laboratories which test water. Some telephone books -- including the Vancouver phone book which you can see at your local library -- list "Laboratories, Analytical" in the yellow pages.

Whichever lab you choose to test your water, you should ask them about their quality control program, their detection limits, and how much it will cost to perform the tests you want. They 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 give you some information to help you understand what the test results mean, and whether you have a problem with your water.

Your local EHO will also be happy to help you interpret the results of these tests, and may refer you to the Canadian Drinking Water Guidelines which recommend maximum allowable amounts of a wide range of possible contaminants in drinking water.

What if the tests show that I have a problem?

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 which effectively remove various different contaminants. Prices and performance vary. Again, your EHO can offer advice on the treatment options open to you, based on your specific water quality problems. However, 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,
contact the Environmental Health Officer at
your local Health Unit or Department.**



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