

What are nitrates?

Nitrates are chemicals that exist naturally in soil and groundwater. They come from the breakdown of plants and animal waste. Humans can be exposed to nitrates through both food and drinking water. Common sources of nitrates include:

- vegetables such as carrots, spinach and lettuce
- smoked meats such as ham and bacon
- septic systems
- inorganic fertilizers such as 'Weed and Feed'®
- runoff or leachate from fertilized agricultural lands

It is common to find higher nitrate levels in agricultural areas where fertilizer is used and in neighbourhoods where there are many septic tanks. Nitrate levels also tend to be higher in water from shallow wells.

What are the health effects of nitrates?

A high nitrate level in drinking water is 10 mg/L. High nitrate levels are a health concern for infants less than six months of age and for pregnant women. Nitrates can convert to nitrites and decrease the amount of oxygen carried in the blood. This can cause Blue Baby Syndrome in infants less than six months of age. Pregnant women are also at risk when nitrate levels are high because nitrites are able to be passed on to the unborn child. If your water has a nitrate level of more than 10 mg/L, you should use a different water supply to prepare baby formula or food. There is also a weak link between gastric cancer and nitrates in drinking water. This risk is not immediate and occurs over a long period of time.

How do I know if there are nitrates in my well water?

Nitrates are tasteless, odourless and colourless. The only way to know whether there are nitrates in your well water is to have the water tested. There is a fee to have your well water tested for nitrates.

Accessible formats of this document are available upon request.

Region of Waterloo Public Health

Health Protection and Investigation

Please see below for pick-up and drop-off locations of sample bottles throughout Waterloo Region. You should test your well water for nitrates once a year. Once your nitrate sample is submitted it can take up to four weeks for results to be sent to you.

Pick-up and drop-off water sample bottles on the last Tuesday of every month at the following locations:

Waterloo: 99 Regina St., S., 1st Floor

Cambridge: 150 Main St., 1st Floor (rear of building)

North Dumfries: 1171 Greenfield Rd.

Wellesley: 4639 Lobsinger Line, Crosshill

Wilmot Township: Castle Kilbride, Baden

Woolwich Township: 24 Church St., Elmira

St. Jacobs: Woolwich Community Health, 10 Parkside Dr.

Linwood: Linwood Vet Clinic, 3860 Manser Rd.

Do not boil your water to get rid of nitrates; Boiling water will concentrate nitrates.

A water treatment device is recommended for wells with high nitrate levels. Reverse osmosis is the most common device used to remove nitrate contamination. A filter may also be required to remove minerals so that a reverse osmosis device will work properly. If you choose to install a treatment device, a licensed professional should be contacted as they can inform you of any limitations of the device and instruct you on maintenance requirements.