

Nitrate in well water: What you should know

Nitrate is a naturally occurring form of nitrogen that has no color, smell or taste. It is an essential component of living things. Although nitrate can occur naturally in groundwater, high levels are often associated with human activities. Nitrate is a major part of animal manure, human sewage waste and commercial fertilizers. Nitrate in your well water is a potential health hazard.

Nitrate and your health

Presence of nitrates in drinking water can cause a variety of long- and short-term effects. Infants are at a particularly strong risk for blue baby syndrome, with some cases resulting in death.

Nitrate and your well water

The only way to know if you have nitrate in your well water is to test. Contact an accredited laboratory for specific instructions on how to collect, store and send the sample. The test will cost between \$20–\$40. To find accredited labs in Oregon, [visit www.healthoregon.org/wells](http://www.healthoregon.org/wells).

Nitrate is measured in parts per million (ppm) or milligrams per liter (mg/L) (1 mg/L = 1 ppm). Nitrate occurs naturally in surface and groundwater at concentrations up to 1–2 mg/L and is not harmful at these levels. The safe drinking water standard (also called maximum contaminant level or MCL) for nitrate is 10 mg/L. If your water has nitrate levels above 10 mg/L, you should switch to bottled water or another source of safe drinking water and seek treatment options.

Interpreting your nitrate results

Nitrate results	Water use	Recommendation
10 ppm (mg/L) or less	SAFE for all uses. Concentrations above 4 ppm may indicate contamination.	Test water at least once a year.
Between 11 and 40 ppm (mg/L)	NOT SAFE for babies or women who are or may become pregnant. SAFE for short term use* by healthy adults (<i>except pregnant women</i>), pets and livestock. SAFE for other domestic uses, including bathing, washing dishes, laundry or garden irrigation.	Use bottled water or water from a safe source. Do not boil the water. Supervise children to help them avoid swallowing water while bathing, brushing teeth, etc. Contact your local drinking water specialist for treatment advice.
More than 40 ppm (mg/L)	NOT SAFE for drinking. SAFE for other domestic uses, including bathing, washing dishes, laundry or garden irrigation.	Contact your local drinking water specialist for treatment advice.

*Long-term use poses risk for all. Do not use for infants and women who are pregnant or may become pregnant.



You should test for nitrate at least once a year.

For more information:

- Private well owners with health-related questions about nitrate in their water, well maintenance and testing recommendations, call 971-673-0977 or email domestic.wells@state.or.us.
- For questions about treatment options for your domestic well, contact the drinking water specialist at [your local health department](#) (<http://tinyurl.com/DWcontacts>).

This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact the Domestic Well Safety Program at 971-673-0977 or 711 for TTY.