Is Your Drinking Water Safe?
Is Your Drinking Water Also Safe For Infants?

Too much nitrate in drinking water can cause serious health problems for young infants six months of age and younger. If an infant is fed water or formula made with water that is high in nitrate, a condition called "blue baby syndrome" (or "methemoglobinemia") can develop.

Bacteria which are present in an infant's stomach can convert nitrate to nitrite (NO2), a chemical which can interfere with the ability of the infant's blood to carry oxygen. As the condition worsens, the baby's skin turns a bluish color, particularly around the eyes and mouth. If nitrate levels in the water are high enough and prompt medical attention is not received, death can result.

Pregnant women, people with reduced stomach acidity, and people with certain blood disorders may also be susceptible to nitrate-induced methemoglobinemia. Some research has suggested that nitrate may also play a role in the development of some cancers. However, at this time there is no clear evidence that nitrate ingestion results in an increased cancer risk.

Nitrate is a common contaminant found in many wells in Minnesota. It is a natural occurring chemical made of nitrogen and oxygen. Nitrate is found in air, soil, water, and plants. Much of the nitrate in our environment comes from decomposition of plants, animal wastes or human sewage. People also add nitrate to the environment in the form of fertilizers. Nitrate concentrated near the ground surface, may seep down and contaminate the groundwater. Elevated nitrate levels in groundwater are often caused by run-off from barnyards or feedlots, excessive use of fertilizers, or septic systems. Wells most vulnerable to nitrate contamination include shallow wells, dug or bored wells with casing which is not watertight or may have been submerged by floodwater, and wells with damaged, leaking casing or fittings.

Nitrate contamination of a well is often regarded as a first sign of deteriorating groundwater quality.

The federal drinking water standard for nitrate is 10 mg/L of nitrate-nitrogen, which provides newborns with reasonable protection against blue baby syndrome. This level is mandatory for all public water systems, and recommended for private wells.

Nitrate is tasteless, odorless, and colorless. To find out if there is nitrate in your water, have it tested by a laboratory. Water test kits can be obtained at the Root River SWCD office, 805 N. Hwy. 44/76, Suite 1, Caledonia, MN. Our office hours are Monday – Friday 7:00 a.m. till 4:30 p.m.

Houston County offers reimbursable testing costs for nitrates if there is a pregnancy or young infant less than six months of age in the home. When picking up a test kit at the Root River SWCD office simply let them know.