

Many citizens don't know what the words "public health" really mean. Most people think public health is only for the poor. While we do attend to the health needs of low-income families, we also provide many other services to citizens living in our six-county area. Below are a few of the programs offered at Southwest District Health:

Public Water Supply: Monitor and provide guidance to small public drinking water systems to maintain safe drinking water for their customers. Contact: 455-5400

Private Drinking Water Supply: Provides guidance and technical assistance to private well owners. Contact: 455-5400

Vector and Rodent Control: Provide guidance in controlling vectors (mosquitoes, ticks) and rodent infestations that could prevent the spread of disease causing organisms. Contact: 455-5400

Recreational Premises: Inspect public swimming pools for safety and sanitation. Contact: 455-5400

Sewage Disposal: Ensures that septic tanks and other on-site sewage disposal systems are properly permitted, installed, and operated to prevent the spread of disease. Contact: 455-5400

Individual & Community Land Development: Monitors, evaluates, and enforces regulations on land being developed in Southwestern Idaho. Contact: 455-5400

For more information on nitrate in water systems please contact the
**Public Water Coordinator at
Southwest District Health
(208) 455-5400**



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Southwest District Health serves the residents living in Adams, Canyon, Gem, Owyhee, Payette and Washington Counties.

Nitrate in Drinking Water

Is your water safe? Nearly 95% of Idaho's population depends on groundwater for their drinking source. Protecting groundwater from contamination by any substance that might cause health problems is a serious concern. Two potential groundwater contaminants are nitrate and nitrite.

How Are You and Your Family Exposed To Nitrate/Nitrite

Elevated nitrate levels in drinking water are often caused by animal waste run-off from dairies and feedlots, excessive use of fertilizers, or seepage from private septic systems. Due to the nitrification process, nitrates are predominantly found more in drinking water than nitrite. However, partial conversion of nitrates to nitrites in humans takes place in saliva of all ages, and in the stomach and intestines in infants.

How Does Nitrite Affect You

Nitrite in the body causes the hemoglobin in the blood to change to methemoglobin. Methemoglobin reduces the amount of oxygen that can be carried in the blood. This results in cells throughout the body being deprived of sufficient oxygen to function properly. This condition is called methemoglobinemia, or in infants "blue baby syndrome."

Infants and Blue Baby Syndrome

Infants, particularly those under six months of age, are most at risk of developing serious health problems from elevated levels of nitrate or nitrite. Infants have relatively low acidity in their stomachs compared to adults.

This allows for the growth of certain bacteria that readily convert nitrate to nitrite. Nitrite causes Blue Baby Syndrome in infants because of the lack of oxygen in the blood. This lack of oxygen causes the baby's skin to turn a bluish color, particularly around the eyes and mouth. If untreated, infants may die from this condition.

Nitrate/Nitrite and Private Wells

Public water systems must maintain a rigorous water quality testing schedule to ensure they conform to national drinking water standards. There are no testing requirements for private wells, so it is especially critical that you have your private well water tested if you have an infant, or someone in your household who is planning to become pregnant. It is recommended you test your water at least once a year. Southwest District Health will be able to refer you to a certified laboratory that can test your water for nitrate and nitrite for a nominal fee. Southwest District Health also has information about the typical levels of nitrate/nitrite that may exist in the groundwater in the area where you live.

What Do Test Results Mean

Southwest District Health has certified Environmental Health Specialists that will help clarify test results if you have questions or concerns.

How Much Nitrate/Nitrite Is Allowed In Drinking Water

The federal and state governments have set standards for public drinking water at 10 Milligrams Per Liter (mg/L) for nitrate (NO₃-N), and 1mg/L for nitrite (NO₂-N). These standards, called Maximum Contaminant Levels (MCLs), define levels of contamination that are allowed in public drinking

water without causing harmful health effects. Long-term exposure to low levels of nitrate in drinking water is still not fully understood.

Is Your Water Safe

One water sample may not take into account fluctuations in nitrate/nitrite concentrations over time. Therefore, to be safe, especially infants and pregnant women may wish to avoid drinking tap water if the levels of nitrate and nitrite are close to the MCL.

What Can I Do

If levels of nitrate or nitrite are above the MCL, you have several options: Use bottled water for drinking and cooking, and limit well water usage to bathing and showering. Consider treatment methods either at the wellhead or the tap. Mechanical filters, chemical disinfectants, or boiling do not remove nitrates. Nitrates/nitrites may successfully be removed from water using a treatment process such as Reverse Osmosis, ion exchange, and distillation. These treatment techniques require careful maintenance and sampling to achieve effective operation. If a treatment system is to be used, one with National Sanitation Foundation certification should be selected.

Does Nitrate Cause Cancer

There is no evidence that nitrate or nitrite causes cancer in laboratory animals or humans. Studies have shown that diets lacking dietary fiber, and foods with high levels of nitrate and nitrite, such as smoked meats, may promote stomach cancers. However, studies have not indicated that drinking water high in nitrate is associated with stomach cancer.