

Methemoglobinemia (Blue Baby Syndrome)

Nitrates are considered a health risk for women who are pregnant and for children under six months old. All pregnant women and families with children below the age of six months should immediately consult their physician and local public water supply system upon notification of high nitrates. Some public water supply systems may provide bottled water to consumers who are at risk. The public water supply system will inform at-risk consumers of the location where the bottled water is dispensed.

Nonpoint sources, such as animal waste and commercial fertilizer, are primary sources of nitrate contamination of water wells. Septic systems in the vicinity of privately-owned wells are another source of nitrates. Excessive nitrate levels in drinking water have caused serious illness and sometimes death in infants under six months of age, and in fetuses. Although some public water supplies in Oklahoma have occasionally reported nitrate exceedances, there have been no reported cases of illness due to nitrates associated with the public water supply.

Methemoglobinemia occurs when bacteria in the stomach convert nitrates to nitrites. The nitrites then pass into the bloodstream and react with hemoglobin, inhibiting the blood's ability to carry oxygen. Symptoms in infants can develop rapidly and include shortness of breath and blueness of the skin. In most cases, health deteriorates over a period of days. Expert medical advice should be sought immediately if these symptoms occur.

People more than six months old rarely develop methemoglobinemia at nitrate levels typically found in drinking water, but high levels of nitrates can still present similar health problems for susceptible individuals, including adults.

The U.S. Environmental Agency (EPA) has set an enforceable limit for nitrate and nitrite in drinking water and requires that consumers be periodically notified by their local public water supplier if a violation of this limit occurs. If you are new to an area, you may want to contact your local public water supply or the Water Quality Division of the Oklahoma Department of Environmental Quality (DEQ) to find out the nitrate concentration in your public water supply. EPA does not regulate the quality of water from private wells, and people who obtain their water from private wells should have the water tested.

For additional information on this subject please contact your local DEQ representative or the Water Quality Division of the Department of Environmental Quality at (405) 702-8100.

