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 of nitrates, such as animal waste and commercial fertilizer, are primary water well contaminants. Septic systems in the vicinity of privately-owned wells are another, though less likely, source of nitrates. Excessive nitrate levels in drinking water have caused serious illness and sometimes death in infants under six months of age, including 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 converts nitrates to nitrites. The nitrites then pass into the bloodstream and combine 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 older than six months old usually have a different form of hemoglobin that is not as susceptible to nitrites, but high levels of nitrites in the diet can still present similar health problems for susceptible individuals, including adults.

Federal law requires that consumers be periodically notified by their local public water supplier if this or other violations occur. 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 value in your area.

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.