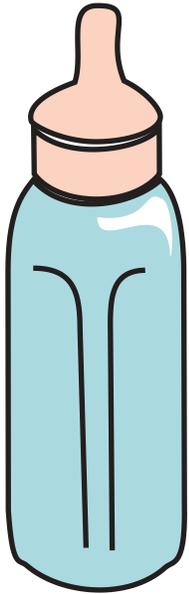


WATER

METHEMOGLOBINEMIA (Blue Baby Syndrome)



In 1995, Oklahoma had 25 public water supplies that exceeded the nitrate maximum allowable limit of 10 mg/l. Nitrate is considered a health risk for those individuals who are under the age of six (6) months or are pregnant.

All pregnant women and families with children below the age of six (6) months should immediately consult their physician and local public water supply system upon notification of high nitrates. Public water supply systems are required to provide bottled water to those consumers which are at risk. The public water supply system will inform the “at risk consumers” of the location where the bottled water is dispensed.

Nonpoint sources of nitrate, such as animal waste and commercial fertilizer, are primary well contaminants. Human sewage from septic systems located in the vicinity of privately owned wells is another, though less likely, source of nitrate. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six (6) months of age, including fetuses. Although public water supplies in the State have a history of nitrate exceedances, there have been no reported cases of illness due to nitrates associated with a public water supply in Oklahoma.

Methemoglobinemia occurs when bacteria in the stomach converts nitrate to nitrite. The nitrite then passes into the bloodstream where it combines with hemoglobin, thereby inhibiting the blood’s ability to carry oxygen. Humans older than six (6) months usually develop a different form of hemoglobin which is not as susceptible to nitrite, but high levels of nitrite in the diet can present similar health problems for susceptible individuals, including adults. The condition, also referred to as “blue-baby syndrome,” gives a characteristic blue cast to the person’s lips and fingernails.

This is an acute disease in that symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include a shortness of breath and blueness of skin. Clearly, expert medical advice should be sought immediately if these symptoms occur.

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 (WQD) of the Department of Environmental Quality to find out the nitrate value in your area. The WQD can be contacted by phone at (405) 702-8100.

