

Safe drinking water and baby formula are important to your health and your family's health, and especially for babies. For more information, call your local health department or the N.C. Occupational and Environmental Epidemiology Branch at (919) 733-3410.





State of North Carolina Department of Health and Human Services Division of Public Health Occupational and Environmental Epidemiology Branch www.dhhs.state.nc.us

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If you get your drinking water from a well, you should have your well water tested. If you live near a farm – especially a hog, cattle, chicken, or turkey farm or heavily fertilized fields – there could be a problem with your well water. Unsafe drinking water can be especially dangerous for young babies and people with existing health problems.

Here are answers to some questions about well water safety. Please read them carefully to protect your family's health.

Q. What could be dangerous about my well water?

A. Well water is not always pure. Chemicals and germs can get into your well from the ground. Fertilizers, pesticides (chemicals used to kill insects and plants), chemicals from industry, and sewage from people or animals can leak into the water and make your well water unsafe for drinking. Also, substances called nitrates can get into the water and cause serious health problems for small babies and for people with some existing health conditions.

Q. What are nitrates, and how can they get into my well?

A. Nitrates are chemicals that are found naturally in small amounts in the soil. Fertilizers and animal waste are also nitrate sources. Nitrates can mix with the water in the ground and then seep into your well. If you live near a poultry, cattle, or hog farm, or near areas where a lot of fertilizer is used, the groundwater may contain high levels of nitrates. Recently, when 1,500 wells next to hog, turkey and chicken farms were tested, the water in about 150 of them had nitrate contamination above acceptable levels.

Q. Why are nitrates dangerous to babies?

A. Babies under six months old who drink water with nitrates may develop "blue baby syndrome." This means that the babies' blood can not carry enough oxygen throughout their bodies. This condition can be serious and can sometimes even cause death. Boiling the water only makes the problem worse. When nitrate-contaminated well water is boiled to make baby formula, the boiling concentrates the nitrates in the water and increases the health risk to the baby.

Q. What health problems do nitrates cause for other people?

A. Older children and adults can also develop health problems from nitrates, which keep their blood from carrying enough oxygen. People with severe heart or lung disease may be at increased risk of being hurt by nitrates. Pregnant women who drink nitrate-contaminated well water may be more likely to have miscarriages. In animals, nitrates can cause thyroid problems, miscarriages, and other illnesses.

Q. What can I do to protect my family?

A. Have your well water tested. Call your local health department to find out about getting your well water tested or about digging new wells. The cost for well water testing is very low. If your well water comes to you through a community public water system, it is already tested regularly. Ask the water supplier to tell you the results of the tests.