

ELEVATED LEVELS OF ARSENIC IN SOUTH GEORGIA WELLS

REPORT HEALTH CONCERNS ABOUT ARSENIC IN WELL WATER TO THE DEPARTMENT OF PUBLIC HEALTH: 404-657-6534

- The Georgia Department of Public Health (GDPH) has reviewed private well water sampling results showing elevated levels of arsenic in several wells in South Georgia.
- It has been determined that the arsenic is naturally occurring. The city drinking water systems serving these communities do NOT contain elevated levels of arsenic.
- Under the Safe Drinking Water Act, the U.S. Environmental Protection Agency establishes maximum contaminant levels (MCLs) for contaminants in public drinking water supplies. The MCL for arsenic is 10 µg/l (micrograms per liter) or 10 ppb (parts per billion) in drinking water.
- Although private water wells are not subject to the same regulatory standards as those set for public drinking water supplies, it is recommended for health purposes that private well owners use these standards to guide their water treatment decisions.

What is arsenic?

Arsenic is an element that occurs naturally in rocks and soil and gets into well water through natural erosion. As a result, some private water wells in Georgia may exceed the federal regulatory standard for arsenic in public water supplies. Arsenic occurs in both bedrock and shallow wells and the amount of arsenic in well water will vary greatly over time, seasons, and locations. Regular testing is the only way to determine if water contains arsenic at levels of concern.

Potential Health Effects of Arsenic Exposure

Acute health effects include stomach pain, nausea, vomiting and diarrhea, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Long-term health effects include darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso; and disorders of the heart, kidney, lung, skin, reproductive, immune, and nervous systems. Arsenic exposure is a risk factor for bladder, skin, lung, liver, kidney and prostate cancers.

Recommendations:

1. GDPH recommends that residents concerned with exposure to arsenic in well water exercise the option of drinking bottled water and/or installing a point-of-use or whole house filtration system.
2. If residents are concerned about current arsenic exposure, they can consult with a health care professional for medical testing. If elevated levels of inorganic arsenic are found in urine, they can contact the Chemical Hazards Program, Georgia Department of Public Health, at (404) 657-6534.

Resources for Health Care Providers

Case Studies in Environmental Medicine: Arsenic

www.atsdr.cdc.gov/csem/arsenic/docs/arsenic.pdf

Information on exposure routes, physiological effects and clinical evaluation (CME/CNE credits available).

Emory University Pediatric Environmental Health Specialty Unit (PEHSU)

www.pediatrics.emory.edu/centers/pehsu

Telephone consultation on health risks from environmental exposures in children.

Medscape Reference

<http://emedicine.medscape.com/article/812953-overview>

Arsenic toxicity in emergency medicine.

Contact Information



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