ECHO Insights

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Arsenic in Public Drinking Water May Affect Birth Outcomes, Even Below Federal Limit

Why was this study needed?

ECHO researchers wanted to understand how exposure to arsenic in public drinking water—at levels below the current federally enforced limit—may affect birth outcomes.

What happened?

13,998 mother-infant pairs from ECHO research sites across the U.S. were included in the study. Researchers estimated the amount of arsenic participants were exposed to through public drinking water during pregnancy by looking at water quality data where they lived.

What were the results?

Pregnant participants exposed to arsenic in public drinking water, even at levels below the federal limit, were more likely to have babies born with low birthweight (less than 5 lbs 8 oz) or smaller than average for their duration of pregnancy.

What action could I take after reading this information?

Drinking filtered water can reduce exposure to arsenic and other water contaminants. Reverse osmosis filters are the most effective for removing arsenic and other chemical contaminants.

Read the summary: Adverse Birth Outcomes May Be Associated with Arsenic Levels in Public Drinking Water

Exposure to Airborne Lead May Affect Children's Brain Development

Why was this study needed?

Certain kinds of manufacturing can release chemicals like lead into the air and water. ECHO scientists wanted to test whether lead pollution in the air, even at very low levels, is related to children's intelligence, impulse control, ability to adapt to changing situations, and memory.

What happened?

Over 3,000 kids from across the U.S. were included in the study. Researchers matched their home addresses (between birth and age 5) to a public database that estimates lead pollution across the country. Kids also took tests that evaluated their intelligence, impulse control, and ability to adapt to new situations between the ages of 3 and 8.

What were the results?

Kids who lived in areas with relatively more airborne lead pollution showed less impulse control and had slightly lower IQ scores. Boys were more sensitive to the effects of airborne lead than girls.

What action could I take after reading this information?

Studies like this can help us understand how air pollution affects children's health outcomes. The EPA's Toxic Release Inventory program offers tools to help people learn more about the sources of air pollution in their local communities.

Read the summary: ECHO Research Suggests Airborne Lead Exposure Affects Children's Brain Development, Impacting Boys More Than Girls

Read more research results on the website:
echochildren.org/research-summaries/

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