

Most Americans are oblivious to 'forever chemicals' and risks, research finds

November 17 2023, by Leslie Lee



Credit: Pixabay/CC0 Public Domain

Texas A&M AgriLife scientists conducting the first generalized U.S. study on public awareness of perfluoroalkyl and polyfluoroalkyl substances, or PFAS, found most Americans do not know what the

substances are or have knowledge of any potential associated risks.

PFAS are a category of thousands of manufactured chemicals and an emerging concern to environmental and human health. PFAS are called "forever chemicals" because their bonds between carbon and fluorine molecules, one of the strongest chemical bonds possible, make PFAS removal and breakdown very difficult.

"This is the first survey of its kind, and what we found is that the vast majority of people do not have a clear understanding of PFAS," said Texas Water Resources Institute, TWRI, Interim Director Allen Berthold, Ph.D., lead author of the study [published](#) in the journal *PLOS ONE*.

PFAS compounds have been used in industry and products since the 1940s, including fire extinguishing foam, nonstick cookware, food wrappers and many other consumer goods. Levels of PFAS compounds have also been detected in food and water supplies.

Americans largely unaware of PFAS chemicals

In March, the U.S. Environmental Protection Agency, EPA, [proposed a national standard](#) for PFAS in drinking water. As communities grapple with how to ensure their water supplies do not contain unsafe levels of PFAS, most consumers are completely unaware there is an issue with these chemicals.

"When I ask an audience at a public presentation if they've ever heard of PFAS, usually only a few people from a room of 100 will say yes, and that's fairly consistent with these [survey results](#)," Berthold said. "PFAS in drinking water has received media and regulatory attention this year, but the general public's awareness of the contaminant had not been measured until this research."

TWRI's Stephanie deVilleneuve, corresponding author and research specialist; Audrey McCrary, program specialist; and Michael Schramm, research specialist, also co-authored the research. Together, they measured and analyzed U.S. residents' knowledge of PFAS, experience with PFAS, and perceptions of potential environmental and health risks related to PFAS.

Some notable findings were:

- 45.1% of respondents had never heard of PFAS and did not know what they are, and 31.6% responded that they had heard of PFAS but did not know what they are.
- 11.5% knew their community had been exposed to PFAS.
- 97.4% did not believe their drinking water had been impacted by PFAS.

PFAS in tap water

In July, the U.S. Geological Survey published research showing that at least 45% of the nation's tap water was estimated to contain one or more types of PFAS chemicals.

"Research has come out in the last year showing that many Americans are exposed to PFAS, including through drinking [water supplies](#), whether they know it or not," McCrary said. "So, a significant knowledge gap here needs to be addressed."

Schramm said in the study the strongest predictor of PFAS awareness was community exposure.

"However, of the people aware they were exposed to PFAS, approximately half stated they did not know what PFAS were," Schramm said. "This indicates a large gap in the information being

provided to the public."

The respondents aware of community exposure were more likely to know PFAS sources, change their use of items with potential PFAS contamination, and answer that their drinking water sources were also contaminated with PFAS.

About the survey

The survey was conducted online, and 1,100 respondents from across the U.S. participated. Schramm led the formal data analysis of the responses, and Berthold, McCrary and deVilleneuve developed the survey methodology and administration.

The study found no major differences when comparing PFAS knowledge, experience and risk perceptions across various demographics.

"It was very notable that there was no statistical difference depending on race, gender or age—perception was largely the same across the board," deVilleneuve said. "This research was a fact-finding effort and gives us baseline data moving forward as interest in PFAS remediation continues to grow."

More information: T. Allen Berthold et al, Let's talk about PFAS: Inconsistent public awareness about PFAS and its sources in the United States, *PLOS ONE* (2023). [DOI: 10.1371/journal.pone.0294134](https://doi.org/10.1371/journal.pone.0294134)

Provided by Texas A&M University

Citation: Most Americans are oblivious to 'forever chemicals' and risks, research finds (2023, November 17) retrieved 29 April 2024 from <https://phys.org/news/2023-11-americans-oblivious-chemicals.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.