

Study finds diet and culture influences Hispanic children's exposure to 'forever chemicals'

Northern Virginia study is among the first to explore potential sources of PFAS exposure in children from primarily Central American families.

FAIRFAX, VA, UNITED STATES, October 13, 2026 /EINPresswire.com/ -- Participation in school meal

“

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Rooshna Mohsin, George Mason University PhD in Public Health

programs was linked to lower blood concentrations of certain PFAS, pollutants commonly known as “forever chemicals,” in a new study of Hispanic children in Northern Virginia.

The George Mason University-led study also found that eating more animal-based foods was associated with higher levels of some PFAS. Stronger English skills, being born in the United States, and having mothers who had lived in the country longer were associated with lower exposure to certain PFAS.

Published in the [Journal of Exposure Science & Environmental Epidemiology](#), the study is among the first to investigate potential sources of PFAS exposure in children from primarily Central American households.

Rooshna Mohsin, a recent PhD graduate of the College of Public Health, led the research with her mentor, Professor [Michael S. Bloom](#) of the Department of Global and Community Health.

“If we want to help families reduce their exposure to PFAS, we need to understand what they eat and the resources available to them,” said Mohsin, who earned her PhD in public health with a concentration in epidemiology and is now a postdoctoral research associate at Washington University in St. Louis. “This study highlights the necessity of community-informed interventions—such as with dietary habits—to mitigate exposure.”

Why it matters

PFAS, short for per- and polyfluoroalkyl substances, are manufactured chemicals that have been

used in products like nonstick cookware, stain-resistant fabrics, and grease-resistant food packaging. But these “forever chemicals” can also get into food and drinking water, and some stay in the body for years.

Previous research has linked early-life exposure to certain PFAS with weaker vaccine responses, asthma, and changes in metabolism and thyroid function. Some PFAS are also considered to be carcinogens.

The new study didn’t examine health impacts in children, but it helps identify potential sources of PFAS to investigate and opportunities to limit exposure.

More study details

The researchers tested blood samples from 106 Hispanic children ages 4–11 in Prince William County, Virginia, most of whom had obesity and were participating in a family lifestyle program. Among mothers who reported their birthplace, about two-thirds were born in El Salvador.

Key findings included:

- School meals were consistently associated with lower PFAS levels. Children receiving free or reduced-price lunches had lower concentrations in their blood of five PFAS. School breakfast participation was associated with lower levels of another PFAS. The authors suggest the provided meals may cut down reliance on individually packaged foods, though they didn’t directly test that explanation.
- Language and immigration history also mattered. Children with stronger English skills had lower levels of one PFAS. For another chemical called PFBS, U.S.-born Hispanic children had 75% lower odds of detection than Hispanic children born elsewhere. Each additional year their mothers had lived in the United States was associated with 8% lower odds of detecting PFBS.
- Food associations varied by chemical. Greater cheese consumption was linked to higher levels of one PFAS, while greater fish consumption was linked to a higher likelihood of detecting another. Burrito consumption was associated with higher total PFAS.

The study offers a snapshot of exposure, so it can’t show whether particular foods or family circumstances caused the differences in PFAS levels. And because it included a small group of children from one county, the findings may not apply to other communities.

Larger studies following children over time are needed to understand these relationships, the researchers say. They also call for studying drinking water, household products, and culturally specific foods missing from the questionnaire.

Mohsin and Bloom’s coauthors at George Mason University include faculty Jenna R. Krall and

alum Lameck Chiwaka of the Department of Global and Community Health; Allison J. McKay of the Department of Nutrition and Food Studies; Margaret T. Jones of the College of Education and Human Development; Robyn Mehlenbeck of the Department of Psychology; Virginia Espina and Veronica G. Sanchez of the Center for Applied Proteomics and Molecular Medicine. Additional researchers include Roy R. Gerona and Daniel Tomer of the University of California, San Francisco, and Sina Gallo of the University of Georgia.

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