

How “Forever Chemicals” Can Harm Children's Health in North Carolina

Ensuring children’s healthy growth and development should be a priority for all North Carolinians. Ending childhood exposure to hazardous pollutants like PFAS, also known as “forever chemicals,” is one way to protect kids’ long-term health.

The state of North Carolina and the US EPA have not yet set restrictions on PFAS, even though the chemicals are contaminating drinking water for over 250,000 residents of southeastern North Carolina.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a family of man-made organic chemicals. They are used in non-stick cookware like pots and pans, fabric stain-protective coatings, fast food wrappers, personal care products like dental floss and skin care, as well as in firefighting foams.¹

PFAS are often referred to as “forever chemicals” because they don’t break down in the environment. PFAS can persist for decades in water and air, and they build up in our bodies over time.² There are hundreds of PFAS chemicals in circulation; yet none of them are regulated by our federal or state governments.

PFAS can be harmful to people. Exposure has been linked to increased risk of certain cancers, reduced birth weight and reduced hormone levels.³ Among young children, exposure to these chemicals can affect growth, learning, and behavior in infants and children. PFAS have been shown to weaken the immune system during a critical period of development.⁴

How are we exposed to PFAS?

Food is the largest source of PFAS exposure for most people. Drinking water is another main pathway to exposure that has recently gotten more attention. PFAS runs off into our water when farms use a fertilizer mix known as “biosolids” – essentially the leftovers from sewage treatment. Some industrial

¹ Earth Justice, [“Congress must protect families from dangerous chemicals in drinking water,”](#) June 2019.

² Allen, J., [“These toxic chemicals are everywhere — even in your body. And they won’t ever go away,”](#) Washington Post, January 2, 2018.

³ Ibid

⁴ Stolber, T., [“PFAS chemicals harm the immune system, decrease response to vaccines, new ewg review finds,”](#) Environmental Working Group, June 21, 2019.

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users, such as wastewater treatments plants, discharge PFAS waste directly into rivers.⁵

In North Carolina, residents of the lower Cape Fear region have found contamination from PFAS chemicals, including GenX, in their drinking water coming from industries, like big chemical companies, upstream.⁶ It is estimated that the release of these “forever chemicals” affected the drinking water of approximately 250,000 North Carolinians over several decades.⁷ Once PFAS chemicals contaminate a drinking water supply, it is very difficult and costly to remove them.

Children are more vulnerable to harm from PFAS exposure than adults for three important reasons:

- **Children’s exposures are greater.** Children are rapidly growing and have high energy demands. They eat more food, drink more water and breathe more air per pound of body weight than adults. So the dose of toxic contaminants like PFAS are higher for small children than they are for adults.⁸
- **Children’s immature organs and systems are more susceptible to damage.** Because their body systems are growing, children’s ability to detoxify and eliminate toxics is variable, and toxicity may be higher for them.⁹
- **Children do things adults would not.** Exploration is key to development. Children’s age-appropriate behaviors – like putting everything into their mouths – means more frequent exposure than adults would get. Because PFAS is used to stain-protect surfaces like carpet and furniture, young children can be exposed to PFAS through normal hand-to-mouth activity.

The US EPA has not acted to regulate this class of chemicals. State and local decision-makers must step up to protect our children’s health in North Carolina.

⁵ Interstate Technology Regulatory Council, “[History and Use of Per- and Polyfluoroalkyl Substances \(PFAS\)](#),” November 2017.

⁶ Department of Environmental Quality, “[GenX Investigation](#).”

⁷ Wagner, A., “[NC State-led study shows cape fear river had ‘incredibly high’ levels of chemicals](#),” The News & Observer, October 10, 2019.

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Update: North Carolina Action on PFAS

The US Environmental Protection Agency (US EPA) does not currently regulate PFAS chemicals. In North Carolina, regulation of PFAS chemicals in water was outlined for the first time in a “Consent Order” in February 2019. The consent order does not explicitly require the same contamination threshold for surface water users downstream—mainly residents in Brunswick, Pender, and New Hanover counties who rely on the Cape Fear River as their source of drinking water.

Without meaningful statewide regulation of the industries discharging PFAS chemicals into drinking water, North Carolina families are left with few options to protect their children from further PFAS exposures.