PFAS 101

How does PFAS affect our everyday lives?

What is PFAS?

PFAS stands for "per- and poly-fluoroalkyl substances." PFAS chemicals include over 5,000 varieties of substances that are manufactured to make coatings that resist heat, grease, oil, stains, and water.[1] These coatings are used in a wide variety of household products, from nonstick cookware to clothing, food packaging, furniture, adhesives, and the insulation of electrical wire.

PFAS chemicals are sometimes called "forever chemicals," because they don't break down in the environment.[2] This means that they can persist in our soils, contaminate our water sources and food, and remain in our bodies for long periods of time. PFAS chemicals can also bioaccumulate, which means that they can gradually build up in our bodies over time.

Where is PFAS found?

Drinking water, including public drinking water systems, private wells, and rainwater

Soil and water near waste disposal areas, like landfills and hazardous waste sites

Food, such as fish caught from PFAS-contaminated water

Food packaging, such as grease-resistant pizza boxes and microwave popcorn bags

Personal care products, like some shampoos and cosmetics

Household products, like nonstick cookware and stain repellents used on carpeting and upholstery

Fire extinguishing foam, such as that used in training and emergency response activities

Manufacturing facilities, such as those that produce or use PFAS chemicals

Breastmilk, though there are significant health benefits to breastfeeding [3]

How do people get exposed to PFAS?

Exposure to PFAS is widespread. PFAS exposure can occur when people drink contaminated water, eat contaminated food, work in fields like firefighting or chemicals manufacturing, breathe air that contains PFAS, or use products that contain or are packaged in materials that contain PFAS.[4]

Since 1999, the CDC has been monitoring levels of PFAS chemicals in Americans' blood through the National Health and Nutrition Examination Survey (NHANES).[5] Scientists have found measurable levels of several PFAS chemicals in nearly all of the people tested, suggesting that most Americans have been exposed to PFAS.[6]

What are the health impacts of PFAS?

PFAS exposure has been linked with harmful health effects in humans, including decreased fertility, cancer, liver damage, thyroid problems, immune effects, and cholesterol changes.[7, 8] When pregnant people are exposed to PFAS chemicals, their developing babies may be at higher risk for low birth weight, skeletal changes, and early puberty later in life.[9]

PFAS may be especially dangerous to the health of children.[10] Pound for pound, children breathe more air, drink more water, and eat more food than adults. Small children crawl on floors and tend to put objects in their mouths, putting them at higher risk for exposure to PFAS chemicals from carpets, toys, household dust, and cleaning products. Because babies' and children's bodies are still developing, they may be more sensitive to PFAS.

The sheer volume of PFAS chemicals makes it challenging for scientists to study all the possible ways they might impact human and environmental health.[11] There may be other health impacts of PFAS that are still unknown.

How is PFAS regulated?

Current PFAS regulation is inadequate and inconsistent.[12] Thirty-one states have at least some legislation to address the health harms of PFAS, such as laws that give state agencies the authority to ban PFAS in certain products.[13] Only seven states currently have enforceable drinking water standards.

You can learn more about your state's PFAS policies at **SaferStates.com/Toxic-Chemicals/PFAS**.

EPA recently proposed to designate two PFAS chemicals (PFOA and PFOS) as hazardous substances. This proposed rule would increase transparency about the release of harmful chemicals and hold polluters accountable for cleaning up PFAS waste.[14]

In addition, EPA plans to release new proposed national drinking water standards that could set stronger federal standards for PFAS.[15]

Our families and communities deserve strong PFAS standards. Tell EPA to support the proposal to designate PFOA and PFOS as hazardous, and visit **www.momscleanairforce.org** to learn more about how you can demand policies that protect our families and communities from toxic forever chemicals.

How can I protect my family at home?

Reduce PFAS exposure at home with the following steps:[16]

- Avoid nonstick cookware; choose safer options like stainless steel, cast iron, and glass.
- If you do use nonstick cookware, keep the heat below 400 degrees when using, use wood or silicone utensils to avoid scratching the nonstick coating, and stop using the cookware if the coating starts to peel or flake.
- Avoid grease-resistant food packaging, from takeout containers to microwave popcorn bags.
- Reheat food in glass containers or on the stovetop, rather than in takeout containers or plastic.
- Avoid products labeled "nonstick," "waterproof," "no iron," "stain resistant," or "easy care," from upholstery to clothing—there's a good chance they contain PFAS.
- Bring your own plastic-free water bottle, utensils, and plates. Even some compostable and "green" disposable items have been shown to contain PFAS.
- Some residential water filters may reduce PFAS. See our resources to learn more.[17]

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Full list of sources:
momscleanairforce.org/sources-pfas-101

MOMS clean air FORCE

The mission of Moms Clean Air Force is to protect children from air pollution and climate change. We envision a safe, stable, and equitable future where all children breathe clean air. We fight for Justice in Every Breath, recognizing the importance of equitable solutions in addressing air pollution and climate change. www.momscleanairforce.org