PFAS FAQs

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a large, complex group of synthetic chemicals that have been used in industry and consumer products worldwide since the 1940s.

- PFAS do not occur naturally, but are widespread in the environment.
- PFAS are found in people, wildlife and fish all over the world.
- Some PFAS can stay in people's bodies a long time.
- Some PFAS do not break down easily in the environment.

How can I be exposed to PFAS?

Nearly everyone in the world has some amount of PFAS in their blood. PFAS can get into our bodies when we:

- drink water from PFAS-contaminated municipal sources or private wells,
- eat foods produced near places where PFAS were used or made,
- eat fish caught from water contaminated by PFAS,
- eat food packaged in material that contains PFAS,
- swallow or breathe in contaminated soil or dust, or
- accidentally swallow residue or dust from consumer products containing PFAS such as stain resistant carpeting and water repellent clothing.

Research has suggested that exposure to PFOA and PFOS from today's consumer products is usually low, and, for most PFAS, showering, bathing, or washing dishes in water containing PFAS would also be low, especially when compared to exposures to contaminated drinking water.

Young children may be more likely to get PFAS in their bodies because they tend to chew on toys and fabrics and often put their hands into their mouths. Children can also be exposed by drinking formula mixed with PFAS-contaminated water or breastmilk from persons exposed to PFAS. PFAS can be transferred from the mother to the baby during pregnancy.

In communities affected by PFAS-contaminated drinking water, water can be the main source of exposure. For other communities, the exposure sources can vary.

For information on workplace exposures, please visit the National Institute for Occupational Safety and Health (NIOSH) PFAS webpage.

How can I reduce my exposure to PFAS?

PFAS are present at low levels in some food products and in the environment (air, water, soil etc.), so you probably cannot prevent PFAS exposure altogether. However, if you live near known sources of PFAS contamination, you can take steps to reduce your risk of exposure.

- If your drinking water contains PFAS above your state or federal standards, regulations, or health advisories, consider using an alternative or treated water source for any activity in which you might swallow water:
  - drinking
  - food preparation
  - cooking
  - brushing teeth, and
  - preparing infant formula
- Check the fish advisories for the lakes, rivers, oceans, and other water bodies where you fish.
  - Follow fish advisories that tell people to stop or limit eating fish from waters contaminated with PFAS or other compounds.
  - Research has shown the benefits of eating fish, so continue to eat fish from safe sources as part of your healthy diet.
- Read consumer product labels and avoid using those with PFAS.

How can PFAS affect people's health?

Some scientific studies suggest that certain PFAS may affect different systems in the body. NCEH/ATSDR is working with various partners to better understand how exposure to PFAS might affect people's health— especially how exposure to PFAS in water and food may be harmful. Although more research is needed, research involving humans suggests that high levels of certain PFAS may lead to the following:

- Increased cholesterol levels
- Changes in liver enzymes
- Decreased vaccine response in children
- Increased risk of high blood pressure or pre-eclampsia in pregnant women
- Small decreases in infant birth weights
- Increased risk of kidney or testicular cancer

If you are concerned about PFAS exposures, talk to your healthcare provider. CDC/ATSDR has developed information for clinicians that you can share with your provider and work together to determine the best path forward based on your unique circumstances.

If you work with PFAS, your healthcare provider may suggest that you discuss this with another provider who focuses on worker health. You may even be able to see one of these specialists through your workplace.

ATSDR is committed to reviewing the science on PFAS and providing evidence-based information as it becomes available.

How can I learn more?

You can visit the following websites for more information:

- **CDC/ATSDR:**
  - CDC Info: https://www.cdc.gov/cdc-info/, or (800) 232-4636.
  - https://www.atsdr.cdc.gov/pfas/
  - https://www.cdc.gov/exposurereport/index.html
- **Environmental Protection Agency (EPA):** https://www.epa.gov/chemical-research/research-and-polyfluoroalkyl-substances-pfas
- **Food and Drug Administration:** https://www.fda.gov/food/newsevents/constituentupdates/ucm479465.htm
- **National Toxicology Program:** https://ntp.niehs.nih.gov/pubhealth/hat/noms/pfoa/index.html

If you have questions about the products you use in your home, please contact the Consumer Product Safety Commission (CPSC) at **(800) 638-2772**.

List of Common PFAS and Their Abbreviations

Abbreviation
PFOS

Chemical name
Perfluorooctane sulfonic acid

Abbreviation
PFOA (or C8)

Chemical name
Perfluorooctanoic acid

Abbreviation
PFNA

Chemical name
Perfluorononanoic acid

Abbreviation
PFDA

Chemical name
Perfluorodecanoic acid

Abbreviation

PFOSA (or FOSA)

Chemical name

Perfluorooctane sulfonaminde

Abbreviation

MeFOSAA (aka Me-PFOSA-AcOH)

Chemical name

2-(N-Methyl-perfluorooctane sulfonamido) acetic acid

Abbreviation

Et-FOSAA (aka Et-PFOSA-AcOH)

Chemical name

2-(N-Ethyl-perfluorooctane sulfonamido) acetic acid

Abbreviation

PFHxS

Chemical name

Perfluorohexane sulfonic acid

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