Per-and polyfluoroalkyl substances (PFAS)

**What is PFAS?**
PFAS are human-made chemicals which repel oil and water. They break down very slowly over time.

PFOA and PFOS are the most widely studied forms of PFAS.

**PFAS in consumer products:**
- Non-stick cookware
- Waterproof clothing/shoes
- Aqueous film forming foams (fire-fighting foam)
- Food containers and drink cups
- Cosmetic/sanitary products
- Stain-resistant carpets/couches

**PFAS in the environment:**
- Landfills
- Fire training and response sites
- Industrial sites
- Wastewater treatment facilities

**Main points:**
- While PFOA and PFOS are being phased out of consumer products, they persist in the environment.
- Most PFAS do not break down in the environment.
- PFAS can pollute water, air, and soil.

**How can I be exposed to PFAS?**
- Drinking and eating contaminated food and water
- Inhaling dust
- Hand to mouth transfer

Some PFAS leave the body slowly and accumulate in many tissues. They leave the body through urine, menstrual blood, and breast milk.
Avoid or minimize drinking or cooking with PFAS contaminated water.

Check fish advisories and avoid consuming fish from waters containing PFAS. Visit www.michigan.gov/eatsafefish for more information.

Read consumer product labels and minimize the use of products with non-stick, water repellent, and stain-resistant properties.

Who is at the highest risk of exposure to PFAS?

- People working in industries related to PFAS
- People who live near or on military bases
- Firefighters
- Pregnant or lactating people
- Infants and toddlers
- People who rely on sustenance fishing and hunting

How to reduce your exposure:

1. Avoid or minimize drinking or cooking with PFAS contaminated water.
2. Check fish advisories and avoid consuming fish from waters containing PFAS. Visit www.michigan.gov/eatsafefish for more information.
3. Read consumer product labels and minimize the use of products with non-stick, water repellent, and stain-resistant properties.

(Agency for Toxic Substances and Disease Registry)
As of 2022, the Michigan PFAS Action Response Team (MPART) has identified 228 sites where PFAS in groundwater is higher than Michigan's limit.

Where can I learn more?

Michigan PFAS Action Response Team (MPART)
- [https://www.michigan.gov/PFASresponse](https://www.michigan.gov/PFASresponse)

Eat Safe Fish - State of Michigan Department of Health and Human Services
- [https://www.michigan.gov/eatsafefish](https://www.michigan.gov/eatsafefish)

National Institutes of Environmental Health Sciences

Per- and Polyfluoroalkyl Substances (PFAS) - US EPA

Per- and Polyfluoroalkyl Substances (PFAS) and Your Health - ASTDR
- [https://www.atsdr.cdc.gov/pfas/health-effects/exposure.html](https://www.atsdr.cdc.gov/pfas/health-effects/exposure.html)

Please see [http://mleead.umich.edu/Coec_Fact_Sheets.php](http://mleead.umich.edu/Coec_Fact_Sheets.php) for the citations included in this factsheet. The University of Michigan Lifestage Environmental Exposures and Disease Center (M-LEEaD) Community Engagement Core (CEC) promotes collaboration among UM environmental health researchers and communities to advance knowledge of environmental health issues that affect community members in Detroit and Southeast Michigan.

Support for this research was provided by grant P30ES017885 from the National Institute of Environmental Health Sciences, National Institutes of Health.