

# Per- and Polyfluoroalkyl Substances (PFAS)

# HEALTH EFFECTS



Michigan PFAS Sites Being Investigated as of October 29, 2018  
Michigan Department of Environmental Quality (MDEQ)

**Pregnant women, unborn fetus, and infants are most susceptible to adverse health effects once exposed to PFAS.**

Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), two common forms of long-chain PFAS, have been associated with the following



Low Birth Weight



Delayed Puberty



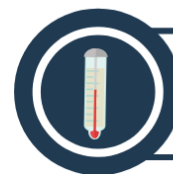
Preterm Birth



Attention deficit/hyperactivity disorder (ADHD)



Pregnancy-induced hypertension/Pre-eclampsia



Immune Response Suppression



Health effects that have been associated with exposure to PFAS in non-pregnant adults include:



Difficulty becoming pregnant



Chronic kidney disease

Cardiovascular disease



Altered liver function



Osteoarthritis



CANCER



- PFOA has been classified by the US EPA as "possibly carcinogenic to humans" [US EPA 2017]
- PFOA may cause prostate, testicular, bladder, liver, and/or kidney cancer [ATSDR 2018]

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## Additional Resources

### Michigan PFAS Action Response Team (MPART)

- <https://www.michigan.gov/PFASresponse>

### Per- and Polyfluoroalkyl Substances (PFAS) - US EPA

- <https://www.epa.gov/pfas>
- [https://www.epa.gov/sites/production/files/2018-03/documents/pfasv15\\_2pg\\_0.pdf](https://www.epa.gov/sites/production/files/2018-03/documents/pfasv15_2pg_0.pdf)

### Per- and Polyfluoroalkyl Substances (PFAS) and Your Health - ATSDR

- <https://www.atsdr.cdc.gov/pfas/index.html>
- [https://www.atsdr.cdc.gov/pfas/docs/pfas\\_fact\\_sheet.pdf](https://www.atsdr.cdc.gov/pfas/docs/pfas_fact_sheet.pdf)
- [https://www.atsdr.cdc.gov/docs/PFAS\\_Public\\_KeyMessages\\_June20\\_Final-508.pdf](https://www.atsdr.cdc.gov/docs/PFAS_Public_KeyMessages_June20_Final-508.pdf)

### Per- and Polyfluoroalkyl Substances (PFAS) - University of Michigan, MLEEaD Center

- [http://mleead.umich.edu/EHMI\\_Per\\_Polyfluoroalkyl\\_Substances\\_PFAS.php](http://mleead.umich.edu/EHMI_Per_Polyfluoroalkyl_Substances_PFAS.php)