Northwest PEHSU Pediatric Environmental Health Specialty Units

ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH
UNIVERSITY of WASHINGTON

Q&A: PFAS Information for Families

Per-and polyfluoroalkyl substances (PFAS) have recently been discovered in various consumer products and in the drinking water of millions of Americans. Because of this, you may have questions and concerns about the potential effects of PFAS on your child's health. This resource provides basic information on common questions people may have.

What are PFAS & why are they used?

PFAS are a group of nearly 12,000 manmade chemicals sometimes referred to as “forever chemicals" because they are persistent and slow to break down in both the body and environment.

PFAS are resistant to water, oil, and fire, making them useful in a wide range of consumer and industrial products. Certain PFAS have been detected in the drinking water of millions of people across the country.

How could my child be exposed to PFAS?

The most common way children may be exposed to PFAS is by eating or drinking contaminated liquids (drinking water) or foods. The types of PFAS found drinking water do not cross the skin easily or evaporate into the air. However, some PFAS in consumer products, such as in carpet and furniture treatments and waterproof apparel, can cross the skin and evaporate into the air.

The highest and most concerning exposures have been associated with drinking contaminated water. Drinking water contamination can occur in systems near industrial sites or sites where aqueous film forming foams (AFFF) are or were used to control fires (ex. Military site, firefighting training centers). Lower-level, everyday exposures can occur from use of consumer goods that contain PFAS, such as non-stick cookware, grease-proof food packaging, water-repellent clothing, and furnishings/carpets that have been treated with stain- and water-resistant products (ex. Scotchgard). This widespread use of PFAS in everyday products makes it difficult for individuals to avoid exposure completely.

Young children may also ingest PFAS in indoor dust or soil through normal hand-to-mouth activity. PFAS can also be present in breastmilk (see below). Household members that work in settings where PFAS are made or used may incidentally take home PFAS and other chemicals in dust on their clothing or shoes.

What health effects have been associated with PFAS exposure in children and pregnant individuals?

There is **strong evidence of an association** between PFAS exposure and decreased antibody response (children's immune systems may not mount a full response to vaccination or infection); dyslipidemia (high cholesterol); and decreased infant and fetal growth.

There is **some evidence of an association** between PFAS exposure and changes in liver function. There is also suggestive evidence for exposure during pregnancy and risk of gestational hypertension and preeclampsia (high blood pressure).

How do I know if I am living in an area with PFAS drinking water contamination?

The Environmental Working Group published an interactive map with known water contamination sites. Living near military bases, firefighting training centers, airports or industrial sites that use PFAS, can increase your risk of PFAS exposure. If your home drinking water is supplied by a municipal (public) water system, you can contact your water system operator to ask if PFAS testing has been done. If your home drinking water is supplied by a private well and you are concerned about PFAS contamination, you can contact your local water quality agency to inquire about testing.

For Washington residents: the Department of Health (DOH) is developing an interactive map of PFAS in drinking water in WA. It will be available on the WA DOH PFAS page here.

How can I reduce my child's exposure to PFAS?

Follow any drinking water advisories issued by local authorities.

One of the easiest and most effective ways to reduce exposure to PFAS in drinking water is to filter water used for drinking and cooking. Not all water filters are effective at removing PFAS. See this Washington DOH factsheet on water treatment for PFAS here. You may also consider using an alternative water source for drinking and cooking until your water can be filtered. **Boiling water does not remove PFAS.**

Whenever possible, use cosmetics, carpet and furniture protection sprays, cleaners, and other consumer products that do not contain PFAS. A list of PFAS-free products can be found here.

Avoid eating fish from waters where local authorities have listed or posted health advisories due to PFAS contamination of local fish.

Should I have my child's blood tested for PFAS?

If you think your child has been exposed to high levels of PFAS, such as having a home drinking water source that has high PFAS levels, talk to your child's primary care provider (PCP) about the pros and cons of having your child's blood tested for PFAS. To learn more, read our PFAS for Clinicians guide and/or share it with your child's PCP.

Is it safe to breastfeed my child if I have been exposed to PFAS?

PFAS can pass through breast milk from a parent to their baby. However, given the multiple and very well-established benefits of breastfeeding for the breastfeeding parent and the infant's health, breastfeeding is still currently recommended by the American Academy of Pediatrics, the American Academy of Family Physicians, and the American College of Obstetricians and Gynecologists. Discuss with your child's PCP if you have specific concerns about your PFAS exposure and breastfeeding.

What if my water has high levels of PFAS and I need to mix infant powder formula?

If your tap water has high PFAS above state or federal action levels, we recommend filtering your tap water with a certified PFAS water filter before you use it to mix infant powder formula. Alternatively, or while setting up a filtration system, we recommend using a different source of water (I.e., bottled water) as a temporary solution.

Can my child be exposed to PFAS by eating produce that has been grown with PFAS-contaminated water?

Potentially, however this source of exposure is not well-studied. When plants absorb water that has high PFAS levels, some PFAS stay in the roots while others may distribute to shoots, leaves, and fruits. Specific plants vary in how much PFAS ends up in edible portions.

To limit exposure via produce, wash or scrub all dirt off before eating to avoid swallowing soil, peel and wash root vegetables before eating, add clean compost to your garden soil (increasing the organic matter content of soil can reduce the amount of PFAS your plants pick up) and use rainwater or install a filter to remove PFAS from garden irrigation water.

Can my child be exposed to PFAS by eating eggs, dairy, and meat from animals that drank PFAS-contaminated water?

Potentially, however this source of exposure is not well-studied. Currently, there are no advisories to guide consumption of animal products. However, you can reduce your exposure by avoiding eating organ meats (such as liver and kidney), as PFAS tend to build up in these tissues.

Can we bathe and shower using unfiltered water if there are high levels of PFAS in our water?

Yes. PFAS in water do not absorb well through the skin, so it is safe to bathe and shower in. To the extent possible, try to avoid swallowing the water while bathing or showering if it contains high levels of PFAS.

You can learn more about PFAS and medical monitoring, this Silent Spring Institute webinar provides a useful overview of key concepts. It is designed for clinicians, may be of interest to the public.

Acknowledgement: This material was supported by the American Academy of Pediatrics (AAP) and funded (in part) by a cooperative agreement with the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR). The U.S. Environmental Protection Agency (EPA) supports the PEHSUs by providing partial funding to CDC/ATSDR through an Inter-Agency Agreement.

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