



What Patients Need to Know about PFAS

As a person or parent concerned about per- and polyfluoroalkyl substances (PFAS) exposures and potential health effects, the following questions are answered to help you understand your potential risk from PFAS exposure and ways to lower your risks and protect your or your family's future health.

What are PFAS?

PFAS are a group of chemicals that have been used to make items that are resistant to water, grease, and stains (e.g., non-stick cookware, carpets, clothing, upholstery, and paper food packaging). They are also used in aqueous film-forming firefighting foam (AFFF) on military bases and airfields.

How can I be exposed to PFAS?

Currently, it appears that the main source of exposure to PFAS is through drinking water, which can become contaminated by industrial discharge. Contamination is typically localized and associated with an industrial facility where the chemicals were produced or used or where firefighting foam was used. Other sources of exposure occur through food and consumer products, such as food packaging and non-stick cookware.

How are PFAS regulated in drinking water and how can I tell if my water contains PFAS?

The United States Environmental Protection Agency (EPA) has issued health advisories for two PFAS, PFOA and PFOS, in drinking water. If drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, the EPA health advisory is exceeded. Consumers should consider reducing their risk by seeking an alternative drinking water sources as described below. For details visit the EPA website listed below. Water testing is the only way to know if PFAS are present. Boiling water does not remove PFAS.

There are high levels of PFAS in my water. What should I do?

If the PFAS levels detected in your drinking water are above the Environmental Protection Agency's (EPA) health advisory level, or if you are concerned, you may consider reducing your exposure by installing a water filtration system or by using an alternative water source for drinking, making baby formula, food preparation, cooking, brushing your teeth, or any other activity that might result in ingestion of water.

Could my health problems be caused by PFAS exposure?

The types of health problems currently thought to be associated with PFAS are also caused by a variety of factors like lifestyle, environmental, social, and genetic. It is possible that PFAS has contributed to your health problems but there is no way to know if PFAS exposure has caused your illness or made it worse. Researchers continue to evaluate the potential health risks from PFAS exposure so more may be known in the future.

Will I have future health problems because of PFAS exposure?

Exposure to PFAS substances has been associated with health risks, but there is no way to predict whether PFAS exposure risks will result in a future illness. We can watch for symptoms related to PFAS associated health risks and investigate, if necessary. If any signs or symptoms of illness do occur, we will not know if those are related to PFAS. We will however be able to provide the care you need based on your signs and symptoms.

Should I get a blood test for PFAS?

Most people in the United States will have measurable amounts of PFAS in their blood because of wide-spread use of consumer products containing PFAS. The blood test will not provide information to predict a health problem, nor will it provide information for treatment. Test results will only tell you the levels of PFAS in your blood.

PFAS blood test results will not indicate whether a current illness can be attributed to past or current PFAS exposure. Neither will it predict or rule out the development of future health problems related to a known or suspected PFAS exposure.

What do my PFAS blood tests results mean?

Most people in this country have PFAS in their blood. The blood test for PFAS only tells us the levels of specific PFAS in your body at the time you were tested. PFAS blood test results will not indicate whether a current illness can be attributed to current or past PFAS exposure. Neither will it predict or rule out the development of future health problems related to a known or suspected PFAS exposure.

If you know or suspect you have been exposed to elevated levels of PFAS, the best action to take is to minimize ongoing PFAS exposure you may have from contaminated drinking water or other possible sources in your diet or home.

Should I be tested for any of the potential health effects associated with PFAS exposure?

Maintaining a healthy lifestyle that limits overall health risks is the first step for keeping you healthy. We will need to do all the clinical preventive services that are recommended for a person your age. Clinical preventive services like checking for elevated cholesterol have been established for the general population. We will conduct these recommended health screenings. This will help us evaluate your current health status.

Some of the testing for PFAS-related health concerns have risks and are not generally performed on patients showing no signs or symptoms of illness. We need to base your care on your overall risk factors, family health and environmental exposure histories, and any signs and symptoms of illness you may have. If any unusual symptoms occur, we will investigate those and treat as needed.

Should I have my child tested for any of the potential health effects associated with PFAS exposure?

Maintaining a healthy lifestyle that limits overall health risks for your child is the first step. There are recommended preventive services and screenings for children at every phase of development. These preventive services are known as the *Bright Futures Guidelines*. We can follow these guidelines to help keep your child healthy.

Some of the testing for PFAS-related health concerns have risks and are not generally performed on patients showing no signs or symptoms of illness. Following the Bright Futures recommendations and conducting routine well-child visits will help us understand your child's health status. We will base your child's care on overall risk

factors, family health and environmental exposure histories, and any signs and symptoms of illness that arise. If any unusual symptoms occur, we will investigate those and treat them as needed.

How will exposure to PFAS affect my pregnancy?

Some studies suggest that exposure to PFAS before pregnancy may be associated with pregnancy-induced hypertension and pre-eclampsia. We will monitor your blood pressure closely, as we do for all pregnant women; however, there is no need for additional blood pressure measurements as a result of your exposure.

Is it safe for me to breastfeed my baby?

Breastfeeding is associated with numerous health benefits for infants and mothers. It is recommended that you, as a nursing mother, continue to breastfeed your baby. Taking steps to eliminate ongoing exposure from PFAS contaminated drinking water and other sources of PFAS contamination is appropriate, like selecting a safe drinking water source for you and your baby.

The science on the health risks of PFAS for mothers and babies is evolving. However, given the scientific understanding at this time, the benefits of breastfeeding your baby outweigh those of not breastfeeding. More information on breastfeeding is available at: <https://www.cdc.gov/breastfeeding/about-breastfeeding/why-it-matters.html>.

How will exposure to PFAS affect my child's immunizations?

Although a few studies have reported that PFOS and PFOA might slightly lower the immune response to some immunizations, these studies have not shown an association with increased rates of vaccine-preventable diseases. Neither have these studies suggested a need to re-evaluate the normal immunization schedule.

Will I need to get my child vaccinated again?

At this time, there is no recommendation for repeating any vaccinations.

I have been very worried about health risks from PFAS exposure. How can I deal with this uncertainty?

It is normal to worry about uncertain health risks. Your health care provider is there to listen to your concerns and will do his or her best to provide helpful advice and other resources.

Where can I get more information?

- For information about PFAS health effects, visit: <https://www.atsdr.cdc.gov/pfas/index.html>
- For information about the CDC ATSDR PFAS exposure investigation for Fairbanks North Star Borough (AK) near Eielson Air Force Base, visit: <https://www.atsdr.cdc.gov/pfas/activities/map/region10.html>
- To find products certified to reduce the levels of PFOA and PFOS in tap water, visit: <https://www.nsf.org/knowledge-library/perfluorooctanoic-acid-and-perfluorooctanesulfonic-acid-in-drinking-water> Scroll to the bottom of the page and click on the certified filters link <http://info.nsf.org/Certified/DWTU/Listings.asp> or call the NSF at 1-800-673-8010
- For EPA information about PFAS in drinking water visit: <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos-questions-and-answers>
- For PFAS health effects and other guidance by Alaska Health and Social Services Environmental Health Division, visit: <http://dhss.alaska.gov/dph/Epi/eph/Pages/PFAS.aspx>
- To discuss child health questions with a pediatrician or environmental health nurse, contact the Northwest Pediatric Environmental Health Specialty Unit (PEHSU) based at the University of Washington at **1-877-543-2436** or pehsu@uw.edu or visit our website at: <https://deohs.washington.edu/pehsu/pfas>