

### **What are Perfluoroalkyl Substances (PFAS)?**

Perfluoroalkyl substances (PFAS) are a group of human-made chemicals that were created for a variety of household and industrial uses. PFAS can repel oil, grease, and water, so they have been used in protective coatings for many different products including food packaging, nonstick cookware, carpets and upholstery (stain-protectants), mattresses and clothing (water-proofing), and have also been used in fire-fighting foams. Some of the more commonly known PFAS are perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA).

### **Who is exposed to PFAS?**

Anyone can be exposed to PFAS. Ingestion is the primary route of exposure to PFAS for the general public. This can be due to food that has been stored or cooked in materials containing PFAS, by eating contaminated fish and shellfish, or by drinking contaminated water. People who live near PFAS production facilities or places where PFAS-containing firefighting foams were used are at higher risk of exposure from groundwater contamination.

### **How can PFAS affect my health?**

Health effects from exposure to low levels of PFAS are not well known, but may include elevated cholesterol levels, interference with thyroid function, preeclampsia, and decreased fertility. PFAS may also affect the immune system and a developing fetus or child. Animals exposed to high doses of some PFAS have shown changes in the liver, thyroid, and pancreatic function, as well as some changes in hormone levels.

### **How likely are PFAS to cause cancer?**

Some studies have found increases in prostate, kidney, and testicular cancers in workers exposed to PFAS and people living near a PFAS production facility. Findings from other cancer studies report otherwise or are inconsistent.

### **How can PFAS affect children?**

PFAS may affect growth, learning, and behavior in infants and older children.

### **Is there a medical test to show whether I have been exposed to PFAS?**

PFAS can be measured in blood, but this test is not commonly performed in doctor's offices, and the results of such tests would not predict health outcomes.

### **How can I reduce my exposure to PFAS?**

Filters containing activated carbon or reverse osmosis membranes have been shown to effectively remove PFAS from drinking water. You can further reduce your exposure by avoiding products that contain PFAS or eating food that was packaged in materials that contain PFAS.

### **Has the federal government made recommendations to protect human health?**

In 2016, the U.S. Environmental Protection Agency (EPA) developed a lifetime health advisory of 70 parts per trillion (ppt) combined PFOS and PFOA for drinking water. This level is not enforceable. It has been calculated to be protective of the most sensitive populations.

### **Where can I get more information on PFAS?**

- If you have concerns about PFAS, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at <https://www.vdh.virginia.gov/local-health-districts/>. Contact the Virginia Department of Health at (804) 864-8127 or at [toxicology@vdh.virginia.gov](mailto:toxicology@vdh.virginia.gov).
- Visit the Agency for Toxic Substances and Disease Registry website at <https://www.atsdr.cdc.gov/pfas/index.html>.

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