PFAS Fact Sheet for Water Consumers

What are PFAS?

Per- and poly-fluoroalkyl substances are a group of thousands of chemicals collectively known as PFAS. Since the 1940s, PFAS have been used in manufacturing, firefighting, water- and oil-resistant products, and many consumer products such as carpet, clothing, cosmetics, and food packaging. Two of the most common compounds within this class, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), stopped being produced in the United States (U.S.) in the early 2000s, but these compounds may still be present in imported goods.

Most people are exposed to these chemicals from water, food, and consumer products. PFAS are very stable and do not break down easily in the environment. They are often referred to as "forever chemicals."

What are the potential health concerns associated with PFAS exposure?

Studies indicate that exposures to high levels of PFAS contaminated water over time may cause certain adverse health effects. Exposure to PFAS above the recommended Draft Guidance Levels does not necessarily mean that a person will get sick or an adverse health effect will occur. Research on the health effects associated with PFAS is ongoing.

Scientific studies of laboratory animals, as well as studies on human populations exposed to PFOA and PFOS over periods of time, have shown that exposure to PFOA and PFOS above certain levels may result in adverse effects such as:

- increased cholesterol levels
- changes in liver enzymes
- decreased response to vaccines in children
- increased risk of high blood pressure or pre-eclampsia in pregnant women
- small decreases in infant birth weight
- increased risk of kidney or testicular cancer

If you have specific health concerns, please consult your health care professional.

What should you do if PFAS have been detected in your drinking water?

Exposure to PFAS in drinking water can be minimized by

- using bottled water that has been tested for PFAS for drinking, cooking, and preparing infant formula.
- installing filters or treatment systems certified by American National Standards Institute (ANSI) or NSF International for the reduction of PFOA and PFOS. A searchable list is available here: http://info.nsf.org/Certified/DWTU/.

Boiling water does not destroy PFAS. You can safely use your water for bathing and showering as PFAS is not easily absorbed into the skin.

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Background

The United States Environmental Protection Agency (U.S. EPA) evaluates the presence of emerging and unregulated contaminants in community water supplies on a national basis pursuant to the Unregulated Contaminant Monitoring Rule (UCMR). U.S. EPA uses the data collected from these sample results to establish new drinking water standards known as maximum contaminant levels or MCLs. Traditionally, U.S. EPA develops MCLs that are then adopted by the states and used to determine if additional actions are needed to respond to contaminant concerns in drinking water. U.S. EPA has started the regulatory process for listing MCLs for PFOA and PFOS.

In 2016, U.S. EPA adopted a Lifetime Health Advisory for PFOA and PFOS of 70 parts per trillion (ppt), both individually and combined when both are present. This is a non-enforceable value intended to provide guidance for evaluating unregulated drinking water contaminants.

Given the concern about these unregulated contaminants, Illinois EPA developed health-based Draft Guidance Levels for PFOA, PFOS, and five other PFAS, perfluorobutanesulfonic acid (PFBS), perfluorohexanesulfonic acid (PFHxS), perfluorononanoic acid (PFNA), Perfluorohexanoic acid (PFHxA) and Hexafluoropropylene oxide dimer acid (HFPO-DA) using the procedures from 35 Illinois Administrative Code 620. In 2020, Illinois EPA also initiated a statewide investigation of all community water systems to determine how commonly PFAS can be found in community drinking water supplies. Illinois EPA will compare the analytical results of this testing with the PFAS Draft Guidance Levels to help community water supplies evaluate future actions that may need to be taken. This data will also be used to aid in the development of future regulatory standards in Illinois.

The confirmed sampling results are available on Illinois EPA's Drinking Water Watch system at http://water.epa.state.il.us/dww/index.jsp.

Additional Information

Illinois EPA: https://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/default.aspx

United States Environmental Protection Agency: https://www.epa.gov/pfas

Centers for Disease Control and Prevention: https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html

Agency for Toxic Substance and Disease Registry: https://www.atsdr.cdc.gov/pfas/index.html