PFAS – The Invisible Toxins in Our Water



You may not be familiar with the group of chemicals known as PFAS, but you likely come into contact with them every day. PFAS can be found almost anywhere including your household products, drinking water, and even your blood.

Per- and polyfluoroalkyl substances (PFAS) are a diverse group of over 3,000 human-made chemicals including PFOA, PFOS, and others that do not break down in the environment. These persistent "forever chemicals" move down through soil into groundwater and contaminate drinking water sources<sup>1</sup>.

Many types of PFAS are resistant to grease, oil, water, and heat. This is why they've been used in a wide range of consumer and industrial products since the 1940s, including:

- stain and water-resistant fabrics and carpeting
- cleaning products
- paints
- fire-fighting foams
- non-stick cookware
- food packaging
- food processing equipment





Studies estimate 95% of the U.S. population has been exposed to PFAS and have measurable concentrations in their blood. The CDC is conducting ongoing research to test the impact of PFAS on people and animals. So far, studies reveal a concerning link between PFAS and health risks.

PFAS are linked to a number of health effects including

- liver damage
- kidney damage
- increased cholesterol levels
- pregnancy-induced hypertension
- certain types of cancer

These "forever chemicals" are also linked to the increased risk of

- thyroid disease
- decreased fertility
- asthma diagnosis
- decreased response to vaccines

<sup>&</sup>lt;sup>1</sup> Mikayla Mace-Arizona, PFAS Chemicals are Creeping Through Soil To Groundwater. Feb 12, 2020 https://www.futurity.org

People are most likely exposed to PFAS by consuming water or food that has been contaminated with them. You may also be exposed to PFAS by inhalation, contact, or by using products that contain them. They come from widespread use in consumer and industrial products, and are produced in the largest amounts within the United States.

PFAS are persistent, meaning once they enter the environment, they're not going anywhere or degrading over time. Due to the prevalent use of PFAS and the fact that they remain intact, these chemicals accumulate over time and are leading to growing levels of environmental contamination<sup>2</sup>.

# How PFAS Enter the Environment

PFAS are present in countless products used by manufacturers and consumers. In areas where these chemicals are used for manufacturing and large-scale industrial applications, they enter wastewater in large amounts. PFAS contamination can be found in landfills, and in the land and groundwater surrounding facilities such as airports, defense facilities, fire-fighting training centers, and other legacy industrial sites.

City water departments withdraw groundwater for a variety of public uses including delivery to homes and businesses, firefighting, water services at public buildings, and more<sup>3</sup>. As a part of the public water supply, this PFAScontaminated water can eventually end up in your home where it may be used to drink, bathe, and to cook food.

As awareness and concern around PFAS increases, environmental agencies are taking steps to better protect the nation's drinking water. Several states have established their own exposure limits for PFAS, and more plan to do so in the near future. In 2018, the EPA announced their ongoing four-part action plan to combat PFAS and in 2021, Administrator Regan called for the creation of a new EPA Council on PFAS that will work to better understand and ultimately reduce the potential risks caused by these chemicals<sup>3</sup>.

## Wastewater Treatment



Wastewater treatment plants are not equipped to properly treat these compounds, so PFAS remain in the water even after it's been treated. This PFAScontaminated water is then reused for irrigation and other applications where it enters land and eventually, groundwater.

# Ways to Guard Your Water Against PFAS

While progress is being made to address the growing presence of PFAS in our environment and in our drinking water, this issue can take years to be fully resolved. In the meantime, as this problem persists, there are ways you can take action to protect your home water supply from PFAS now.

<sup>&</sup>lt;sup>2</sup> Per- and Polyfluoroalkyl Substances (PFAS). 2021 <u>www.epa.gov</u>

<sup>&</sup>lt;sup>3</sup> Groundwater Use in the United States. 2015. <u>www.usgs.gov</u>

## Water Testing

Water testing is one way to gain insight into the types and levels of contaminants present in your home water supply. To properly test for PFAS in your drinking water, the EPA recommends contacting your state to learn if they have state certified laboratories to test for PFAS. Visit your state website to search for PFAS testing, find information about state certified laboratories, and tips on how to collect a water sample.



### **POU Filtration**

Point of use water filtration is a reliable way to protect a dedicated faucet in your home from PFAS contamination. This type of filter unit often fits underneath your kitchen or bathroom sink, and hooks up to your existing water line for that faucet. Once installed, you can rest assured that the water from that specific faucet is free from common contaminants including PFAS.

## **POE Filtration**

Point of entry water filtration is a trusted way to protect your entire home water system from PFAS contamination. This type of filter is installed at where water initially enters your home. It makes sure that water from any tap in your home, and any water from your home's water supply will be safe from PFAS and other common water contaminants.

