

PFAS AT THE TAP



HOW DO AT-HOME WATER FILTERS COMPARE?

PFAS (per- and polyfluoroalkyl substances): a group of over 9000 unique, human-made chemicals.



Well-studied PFAS are linked to cancer, high cholesterol, decreased immune function, and low birth weights in infants and stay in the human body for long periods of time (up to years). **People are mostly exposed to PFAS through contaminated drinking water.**

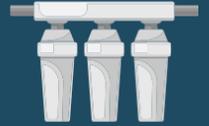
Eliminating PFAS at the source is the most equitable and effective response to PFAS contamination. However, there are multiple reasons why PFAS end up at your tap...

- PFAS are an "emerging" contaminant. No mandatory regulation level exists for PFAS in drinking water in North Carolina.
- PFAS sources can be difficult to identify. Chemical plants, landfills, and military sites are clear point sources, but PFAS are also present in the environment at low levels due to their widespread use.



WHAT ARE YOUR IN-HOME FILTER OPTIONS?

The most common in-home water filters that remove PFAS are **activated carbon** and **reverse osmosis**. Dual stage filters (activated carbon + reverse osmosis) are also an option.



Activated Carbon vs. Reverse Osmosis

COSTS LESS

COMES IN FAUCET FILTERS, PITCHER FILTERS, FRIDGES, AND UNDER-THE-SINK

COSTS MORE

GENERATES WASTEWATER

ATTACHED UNDER-THE-SINK

REVERSE OSMOSIS FILTERS REMOVE PFAS BETTER THAN ACTIVATED CARBON FILTERS.

Below we've compared their removal rates for different PFAS...

	ACTIVATED CARBON FRIDGE FILTERS	UNDER-THE-SINK REVERSE OSMOSIS
SHORT CHAIN PFAS (“Replacement” PFAS that tend to stay in the body shorter than long chain PFAS)	 29-65%	 94-99%
LONG CHAIN PFAS (“Legacy” PFAS that tend to stay in the body longer than short chain)	 57-72%	 88-100%
GENX (A newly discovered PFAS in the Cape Fear River, NC)	 56-78%	 75-99%



A FEW NOTES: Dual-stage filters perform similarly to reverse osmosis filters. Also, despite having activated carbon, pitcher filters are not expected to have effective PFAS removal because they have short retention times.

Proper filter maintenance is crucial for effective PFAS removal. Make sure to keep up with filter maintenance as suggested by the manufacturer.



The National Sanitation Foundation certifies water filters that reduce PFAS in drinking water. Certified filters remove PFOA and PFOS (two major PFAS) below the **U.S. EPA's health advisory level of 70 parts per trillion (PPT)**.

You can learn more about certified filters [HERE](#).

WHAT DO WATER FILTERS HAVE TO DO WITH ENVIRONMENTAL JUSTICE?



At-home water filters can be cost-prohibitive for many folks. This fact inevitably causes disparities in water quality and in turn disparities in health. It would be most equitable to have clean water at the source rather than it be the burden of the consumer.

Content Sources:

- 1) CDC. "[Choosing Home Water Filters & Other Water Treatment Systems](#)" (2020).
- 2) EPA. "[Masters List of PFAS Substances](#)" (2020).
- 3) Fenton, et al. [Per- and Polyfluoroalkyl Substance Toxicity and Human Health Review: Current State of Knowledge and Strategies for Informing Future Research](#). Environmental Toxicology and Chemistry 2020 40(3):606-630. DOI: 10.1002/etc.4890.
- 4) Herkert, et al. [Assessing the Effectiveness of Point-of-Use Residential Drinking Water Filters for Perfluoroalkyl Substances \(PFASs\)](#). Environmental Science and Technology Letters 2020 7 (3):178-184. DOI: 10.1021/acs.estlett.0c00004.
- 5) NSF. "[PFOA/PFOS in Drinking Water](#)" (2021).

