



The Teflon Problem: Why More Action is Needed



Highly fluorinated chemicals (PFCs) have been detected in the blood of more than 95% of Americans. How can this have happened? Facilities where they are manufactured for use in consumer products and their use in fire-fighting training have contaminated drinking water across the United States. Some manufacture and use of PFCs have been discontinued. Although short-chain versions have been substituted and advertised as safe, they are not proving to be safe

alternatives.

Source: ntp.niehs.nih.gov

“Most short-chain alternatives do not break down in nature. Like their long-chain cousins, they will be with us forever. Short-chain fluorinated alternatives are even more difficult to clean up from the environment than the long-chains. Activated carbon filtration, commonly used for removing long-chain compounds from water, is much less effective at removing short-chains. Studies show that highly fluorinated chemicals can move from contaminated water into food crops such as lettuce and strawberries. Surprisingly, short-chain alternatives are found in such crops at higher levels than long-chains.” (Green Science Policy Institute).

Major scientists working on this problem signed this letter

<https://ehjournal.biomedcentral.com/articles/10.1186/s12940-017-0321-6>

PFAs were in wide use before the health hazards were identified

According to the National Institute of Environmental Health Sciences “PFCs, perfluorinated chemicals, are a large group of manufactured compounds that are widely used to make everyday products more resistant to stains, grease, and water. For example, PFCs may be used to keep food from sticking to cookware, to make sofas and carpets resistant to stains, to make clothes and mattresses more waterproof, and may also be used in some food packaging, as well as in some firefighting materials. Because they help reduce friction, they are also used in a variety of other industries, including aerospace, automotive, building and construction, and electronics. PFCs break down very slowly in the environment and are often characterized as persistent. There is widespread wildlife and human exposure to several PFCs, including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Both PFOA and PFOS are byproducts of other

commercial products, meaning they are released into the environment when other products are made, used, or discarded.”

(https://www.niehs.nih.gov/health/materials/perflourinated_chemicals_508.pdf)

Individual states are leading the way in taking action because of the specific problems encountered across the nations. Several have set drinking water advisory levels lower than 70 parts per trillion (ppt) the level set by EPA. New Jersey's is 14 ppt.

Washington state just adopted HB 2658 banning the intentional use of “perfluoroalkyl and polyfluoroalkyl substances” (PFAS) in food packaging made from plant fibers

Here is a list of legislation proposed in other states:

<http://www.saferstates.com/toxic-chemicals/perfluorinated-chemicals/>

More websites with helpful information

“The Teflon Toxin: Dupont and the Chemistry of Deception”

-<https://theintercept.com/2015/08/11/dupont-chemistry-deception/>

Silent Spring Institute

<https://silentspring.org/research-update/fast-food-packaging-contains-potentially-harmful-chemicals>

Fluorinated Chemicals in Food

Packaging <http://pubs.acs.org/doi/abs/10.1021/acs.estlett.6b00435>

Scientists call for

action: <http://greensciencepolicy.org/drinking-water-of-millions-contaminated-by-fluorinated-chemicals-scientists-call-for-action/>

Green Science Policy “Myths vs Facts”

- <http://greensciencepolicy.org/wp-content/uploads/2017/04/Fluorinated-Alternatives-Myths-vs.-Facts.pdf>

More Green Science Policy Institute

information: <http://greensciencepolicy.org/highly-fluorinated-chemicals/>

EPA What EPA is Doing:

<https://www.epa.gov/pfas/and-polyfluoroalkyl-substances-pfass-what-epa-doing#tab-1>

EPA Background and Resources:

[https://clu-in.org/contaminantfocus/default.focus/sec/Per-_and_Polyfluoroalkyl_Substances_\(PFASs\)/cat/Overview/](https://clu-in.org/contaminantfocus/default.focus/sec/Per-_and_Polyfluoroalkyl_Substances_(PFASs)/cat/Overview/)

Health Advisories for PFAs:

<https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>

Bioaccumulation of PFAs in food

crops https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=307369

Department of Defense

<https://serdp-estcp.org/News-and-Events/Blog/New-Projects-Addressing-Issues-Associated-with-Per-and-Polyfluoroalkyl-Substances-PFASs>