“Forever Chemicals” Test the Fate of America’s Drinking Water

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Source

Are you familiar with “forever chemicals”? You should be.

“Forever chemicals” are man-made chemicals and substances that do not break down after they are released into the environment and they build up in our blood and organs.

Our friends at the Environmental Protection Agency (EPA) call these substances PFAS (from “perfluoroalkyl and polyfluoroalkyl substances”). They are exclusively man-made chemicals, and include an army of acronyms like PFOA, PFOS, GenX, and many other chemicals.

It’s all bad. Exposure to PFAS increases the risk of cancer. It harms the development of the fetus. It harms the immune system. Biomonitoring studies by the federal Centers for Disease Control and Prevention (CDC) show that the blood of nearly all Americans is contaminated with PFAS.

There has been scientific research, including epidemiological studies, that shows early life PFAS exposure damages the immune system and decreases the response to vaccines.

Could this be why stronger, riskier adjuvants are being used and developed for vaccination? In order to further supercharge our broken immune systems?

New laboratory tests commissioned by the Environmental Working

Group (EWG) have for the first time found the toxic fluorinated chemicals known as PFAS in the drinking water of dozens of U.S. cities, including major metropolitan areas.

The results confirm that the number of Americans exposed to PFAS from contaminated tap water has been dramatically underestimated by previous studies, both from the Environmental Protection Agency (EPA) and EWG's own research.

The EPA was first alerted to the problem of PFAS in drinking water in 2001 but in almost 20 years has failed to set an enforceable, nationwide legal limit. Along with EWG's reporting, *The Intercept*'s Sharon Lerner has written extensively over the past three years regarding the long-failed American regulatory climate surrounding PFAS's along with the widespread contamination crisis.

In 2016, the EPA issued a *non-enforceable* lifetime health advisory for PFOA and PFOS in drinking water of 70 ppt. In marked contrast, independent scientific studies have recommended a safe level for PFAS in drinking water of 1 ppt, which is endorsed by EWG.

In December 2019, environmental officials from Sweden, the Netherlands, Germany, and Denmark announced a plan to restrict all PFAS compounds under Europe's chemical regulations framework.

At the time Lerner wrote,

> ***"While in the U.S. a 3M executive recently told members of Congress that "the weight of scientific evidence has not established that PFOS, PFOA, or other PFAS cause adverse human health effects,"***

EWG's recent report found:

> ***"Of tap water samples from 44 places in 31 states and the District of Columbia, only one location had no detectable***

PFAS, and only two other locations had PFAS below the level that independent studies show pose risks to human health."

At a 2017 PFAS conference, Linda Birnbaum, director of the National Institute of Environmental Health Sciences, gave the audience a framework on how to understand the problem simply stating *"Every PFAS that has been studied is causing problems…"*

EWG's tests also found chemicals from the PFAS family that are not commonly tested for in drinking water.

According to EWG's new report, some of the highest PFAS levels detected were in samples from major metropolitan areas, including Miami, Philadelphia, New Orleans and the northern New Jersey suburbs of New York City.

The only sample without detectable PFAS was from Meridian, Miss., which draws its drinking water from wells more than 700 feet deep.

In 34 places where EWG's tests found PFAS, contamination has not been publicly reported by the EPA or state environmental agencies. Because PFAS are not regulated, utilities that have chosen to test independently are not required to make their results public or report them to state drinking water agencies or the EPA.

The Flint Water Crisis is a great/horrible example. Local and state officials engaged in a multiyear, interagency coverup of water contamination. Starting in 2014, a combination of lead in the drinking water and an outbreak of Legionnaires' disease injured 90 and killed 12 residents. This eventually led seven officials to take a plea bargain.

Then, in June 2019, prosecutors dropped all criminal charges against the eight remaining officials awaiting trial.

Even then-President Obama did his part to aid in the coverup

by denying the city the declaration of a disaster area, which would have allowed much-needed aid. He also pretended to drink city water at a press conference.

On a positive note, last week the Supreme Court cleared the way for thousands of water crisis victims to personally sue state and local government officials in Flint, Michigan – including former Governor Rick Snyder.

Nationwide sampling was mandated by the EPA between 2013 and 2015. However, a false sense of water security was given because the agency only tested for six PFAS compounds and the minimum reporting limits were between 10 ppt to 90 ppt. Those tests reported only 7 water systems with detectable PFAS levels.

Since the EPA monitoring program ended there has been no further nationwide testing of public water systems for PFAS.

Despite assurances by the EPA, the potential ill-health effects of America's drinking water supply is highly suspect.

In 2019 one of the CDC's ten greatest public health achievements of the 20th century was widely challenged. Published in the journal *JAMA Pediatrics* in late 2019 was the first study to estimate fluoride exposure in a large birth cohort receiving optimally fluoridated water. **The study** forced many to re-examine the practice of water fluoridation including the journal's editor-in-chief himself.

Funded by the Canadian government and the U.S. National Institute of Environmental Health Science, the the new study titled *Association Between Maternal Fluoride Exposure During Pregnancy and IQ Scores in Offspring in Canada* examined the association between fluoride exposure during pregnancy and the IQ scores of the children at ages 3 and 4 years of age.

The scientists assessed fluoride exposure in two separate ways. They measured fluoride in women's urine samples during

pregnancy while also calculating fluoride consumption based on how much is in a city's water supply and how much women recalled drinking.

The study found that of the 512 mother-child pairs, a 1-mg/L increase in maternal urinary fluoride was associated with a 4.49-point lower IQ score in boys.

The study's authors concluded:

> "…***maternal exposure to higher levels of fluoride during pregnancy was associated with lower IQ scores in children aged 3 to 4 years. These findings indicate the possible need to reduce fluoride intake during pregnancy.***"

As of 2018, **53 studies** have found that elevated fluoride exposure is associated with reduced IQ in humans while **45 animal studies** have found that fluoride exposure impairs the learning and/or memory capacity of animals.

Scheduled for an April 20 courtroom showdown is *Food and Water Watch et al v. EPA.* It represents the first time any citizen group will go to trial under Section 21 of the Toxic Substances Control Act. The plaintiffs in the case are requesting a ban on the addition of fluoridation chemicals to water in order "to protect the public and susceptible subpopulations from the neurotoxic risks of fluoride."

With Flint and now fluoride's chances at justice, aid and real change hanging in the balance of the legal system, how will the public come to terms with the emerging PFAS contamination?