

# The Poison in Us All – Investigating the “Forever Chemicals” Scandal

Analysis by [Dr. Joseph Mercola](#)

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## STORY AT-A-GLANCE

- › "The Poison in Us All," a documentary by Bloomberg Investigates, explores the origins of per- and polyfluoroalkyl chemicals (PFAS) or "forever chemicals," and how they are putting our lives and the lives of future generations at risk
- › The U.S. Environmental Protection Agency (EPA) now recognizes more than 14,000 different chemical structures as PFAS. These synthetic, man-made chemicals don't break down easily in the environment, and can bioaccumulate in people and wildlife
- › Rates of cancer diagnosis in children are increasing in Minnesota, which is where chemical company 3M's global headquarters are located. As far back as the 1960s, the company has been dumping PFAS chemicals in the surrounding areas
- › Minnesota sued 3M for the damage that it has caused to the state's natural resources, and in 2018, the company was ordered to pay \$850 million for contaminating the state's water supply for decades

"The Poison in Us All," a documentary by Bloomberg Investigates, explores the origins of per- and polyfluoroalkyl chemicals, more commonly known as PFAS or "forever chemicals," and how they are putting our lives and the lives of future generations at risk. I encourage you to watch this eye-opening film as it will expose just how pervasive these deadly chemicals have become.

## Forever Chemicals Were a Product of the Manhattan Project

According to the film, the U.S. Environmental Protection Agency (EPA)<sup>1</sup> now recognizes more than 14,000 different chemical structures as PFAS. These synthetic, man-made chemicals have a unique biochemistry, in that they have many carbon-fluorine bonds, which are "some of the strongest bonds in organic chemistry," says Laurel Schaidler, a senior scientist from the Silent Spring Institute.

This is why PFAS don't break down easily in the environment, and why they can bioaccumulate in people and wildlife. In fact, PFAS have half-lives of two to five years in the human body.<sup>2</sup>

But how were PFAS discovered? Strangely enough, the origins of these chemicals can be attributed to one of the most controversial moments in U.S. history – The Manhattan Project. As most of you know, this was the top-secret program conducted in the 1940s, when the American government rushed to build an atomic bomb. Bloomberg News reporter Tiffany Kary explains:

*"After the war, companies began experimenting with these chemicals. One company had a scientist who accidentally splashed some of it on their canvas shoes. They discovered the chemicals had stain-proof and waterproof properties. That company was 3M."*

The unique chemical properties of PFAS – greaseproof, stainproof and water-resistant – made them useful for the manufacturing of various products and industrial applications. However, as time progressed and more scientific research started to come out, the problems and potential dangers of these chemicals came to light.

*"It's hard to even talk to people about these chemicals and tell them, 'Look, there's a chemical that's in you that's not found anywhere in nature.' These chemicals are found in 99% of people. It just sounds crazy. Tell people that these are also forever chemicals, that we've created a chemical that we don't know how to destroy, it sounds even stranger," Kary says.*

## **PFAS Are Like a 'Ticking Time Bomb' in the Body**

Forever chemicals are everywhere. They're in our food supply, and are polluting our soil and drinking water. Even the most remote places in the world, like Antarctica and the Himalayas, are now contaminated with PFAS.

I've repeatedly warned about the dangers of PFAS, as these are endocrine-disrupting chemicals that can affect hormone and metabolism, as well as interfere with growth, fertility and development, which could put young children at risk.<sup>3</sup>

PFAS may also contribute to cancer, including promoting its spread.<sup>4</sup> This is because PFAS can cause changes in epigenetics, immunosuppression, oxidative stress, inflammation or via hormone and metabolomic pathways.

In one study, for example, researchers examined the link between plasma PFAS levels and thyroid cancer diagnosis. Using data from 88 patients with thyroid cancer and 88 matched controls without thyroid cancer, the researchers measured levels of eight PFAS, and found "a 56% increased rate of thyroid cancer diagnosis per doubling of linear perfluorooctanesulfonic acid (n-PFOS) intensity."<sup>5</sup>

Another study looked at the link between PFAS and colorectal cancer risk and found that every quantile increase in PFAS mixtures was associated with a 4.67% increase in the number of metastatic lymph nodes among patients with colorectal cancer.<sup>6</sup> There's also evidence suggesting that exposure to forever chemicals can trigger gastrointestinal inflammation and cause ulcerative colitis — a known precursor to colorectal cancer.<sup>7</sup>

What's worse is that not only are the potential health effects becoming more apparent, but they're also occurring at lower and lower doses and exposure levels.

*"The safety advisories keep getting lower and lower. From 70 parts per trillion for both PFOA and PFOS in drinking water in 2016, the EPA lowered it to just four parts per trillion each. That's less than a single drop in an Olympic-size swimming pool.*

*Each time those levels are lowered, it means that more people live in an area where contaminated water is thought to be a concern," Kary narrates.*

## **Cancer Rates Among Children Are Soaring**

In the documentary, Kary journeys to Cottage Grove, Minnesota, where 3M's global headquarters are located. In the surrounding areas, particularly in Oakdale and Lake Elmo, the company has been dumping the chemicals as far back as the 1960s. Alarming, the rates of cancer diagnosis in children are increasing in these communities.

*"Death records show a child who died in Oakdale from 2003 to 2015 was 171% more likely to have had cancer compared to those who lived outside the contaminated area," Kary reports.*

Oakdale resident Amy Philpot suspects that using tap water contaminated with PFAS was a significant factor in her daughter Lexi's cancer diagnosis. When Lexi was an infant, Amy used water from their local supply to prepare her infant formula. "We didn't buy the filtered water then. It was more of a luxury. People didn't want to spend money on that," she said.

Lexi also shared that as a child, she ate the fish that her grandfather, an avid fisherman, caught from the lakes around their area. After five years of battling with the disease, she is now cancer-free.

But not everyone was as fortunate as Lexi. Twenty-year-old Amara Strande's story is perhaps one of the most unforgettable yet heartbreaking examples of just how dangerous PFAS are. At age 15, she was diagnosed with Stage 4 fibrolamellar hepatocellular carcinoma, and had undergone "over 20 surgeries, including two liver resections and one open chest surgery."

Amara blamed her cancer on the PFAS-contaminated water — dubbed by residents as "cancer water" — she was exposed to all her life. Although her condition progressively worsened, her determination stayed staunch, and she became a spokesperson who urged lawmakers to support the legislation to ban PFAS.

*"We have all paid a high price due to large corporations carelessly dumping known toxic chemicals. Through no fault of my own, I was exposed to these toxic chemicals, and as a result, I will die with this cancer,"* she said in a press conference.

## **Confidential Files Reveal Chemical Companies Knew PFAS Were Hazardous**

In 2010, the state of Minnesota sued 3M for the damage that it has caused to the state's natural resources. During the investigation, a mass of the company's internal documents was released. What they discovered was disturbing, as it was found that, as early as 1975, the company was aware that PFAS were showing up in human blood.

3M also conducted its own internal investigation and found that workers who were exposed to the chemicals also had PFAS building up in their bodies. Animal studies also revealed disturbing effects. What's more, in 1997, 3M provided DuPont, another chemical company, with a material safety data sheet with a cancer warning label – then removed that label the same year.

Robert Bilott, an environmental attorney who has spent over 20 years exposing the dangers of forever chemicals through litigations, comments, "You see the companies internally debating, 'Do we say anything? Do we tell the government?' And unfortunately, what they decided was, 'no.'"

3M ended up settling in 2018, and was ordered to pay \$850 million for contaminating Minnesota's water supply for decades. Yet, there was no admission of any wrongdoing, nor did they admit that any cover-up occurred.

## **PFAS Have Infiltrated One of the Most Remote Communities on the Planet**

The documentary also takes us to the Faroe Islands – a small archipelago in the North Atlantic with a population of just over 50,000 people. There are no manufacturing of chemicals in this area. Yet, many of the cutting-edge research regarding PFAS are being conducted on these islands.

One study explored the mercury levels within the local community. The Faroese were noted to have high mercury blood levels in their system, mainly from eating pilot whale meat, which is one of their staple foods. Pilot whales are prone to having high mercury levels. Once the people reduced their whale meat consumption, their mercury levels dropped over time.

However, PFAS are entirely different. The Faroese, just like the rest of the world, were being exposed to these chemicals, but only in small quantities from materials like waterproof jackets and stainproof couches. Yet, even these small quantities were enough for them to develop health issues. In the film, researcher Pál Weihe, MD, says:

*"People in the Faroe Islands [are] far away from pollution, and they were exposed to these compounds at something we thought was very low concentrations. And still we found that every time a child had a doubled concentration of PFAS in the blood, the child would lose half of the antibody ...*

*It means that there is a fault, a weakness, in your immune system. It's not functioning optimally. We can see that those kids who have higher exposures have weaker skeleton[s]. And there's a tendency at young ages to develop what we call prediabetes."*

Another disturbing fact about PFAS is there are very few methods to eliminate them from your body. The film mentions that giving birth and breastfeeding can help take out PFAS from your body, but at a severe cost, as it means passing on the chemical to your infant.

Researchers in Faroe are also studying the environmental effects of PFAS. Ornithologist Sjúrdur Hammer, Ph.D., for example, is investigating the effects of PFAS on seabirds and to ecosystems as a whole. In the documentary, he said:

*"We very often look for sub-lethal effects. They may have more subtle effects on their reproduction, for example. And also, in relation to PFAS, there are indications that the mothers pass it on to their eggs. So there's what we call maternal transfer as well."*

## **Minnesota Will Ban PFAS Starting This Year**

Amara Strande passed away on April 21, 2023, just two days shy of her 21st birthday. However, through her testimonies, she has helped set off a plan that will put an end to PFAS and save the lives of future generations.

As Minnesota continues to work out how to deal with PFAS, one recent development they put into place is the "Amara Law" – basically, this legislation will require PFAS-containing products to be labeled and will ban nonessential use of these chemicals starting in 2024.

*"All Amara was asking for in testifying at the Capitol was for companies who are using these chemicals, do the right thing and take responsibility for their use. Her life doesn't seem over ... because she put so much in motion, and those things are still in motion,"* her parents said.

In 2018, Bilott also filed a class action lawsuit against several producers of PFAS. It's potentially bigger, as it could involve the entire U.S. population. He says:

*"[T]he [chemical] companies immediately sought appeal, saying this was too big. Nobody had ever had a class action this large, involving millions and millions of people.*

*And our argument was, 'Nobody else has contaminated the entire United States and has put chemicals into the blood of everyone in the country.' This case is only this big because the harm is this big."*

## **How to Reduce Your Exposure to PFAS**

As part of her research, Kary had her blood levels tested for PFAS, and she found that despite being cautious of these chemicals and living in an area with low PFAS levels in the water, her results still came back with "higher than average levels."

In today's modern world, it is truly difficult to avoid these chemicals entirely. This is why experts like Bilott are calling for a ban on the entire class of chemicals, rather than one at a time. The good news is, you can make a conscious effort to avoid products with high levels of PFAS, which will minimize your exposure.

I recommend avoiding the products listed below – you can find more useful tips in the Environmental Working Group's (EWG) "Guide to Avoiding PFAS Chemicals."<sup>8</sup>

**Pretreated or stain-repellent treatments** – Opt out of these treatments on clothing, furniture and carpeting. Clothing advertised as "breathable" is typically treated with polytetrafluoroethylene, a synthetic fluoropolymer commonly known as Teflon.

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**Products treated with flame retardant chemicals** – This includes furniture, carpet, mattresses and baby items. Instead, opt for naturally less flammable materials such as leather, wool and cotton.

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**Fast food and carry-out foods** – The containers are typically treated with PFAS.

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**Microwave popcorn** – PFAS may be present in the inner coating of the bag and may migrate to the oil from the packaging during heating. Instead, use "old-fashioned" stovetop non-GMO popcorn.

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**Nonstick cookware and other treated kitchen utensils** – Healthier options include ceramic and enameled cast iron cookware, both of which are durable, easy to clean and completely inert, which means they won't release any harmful chemicals into your home.

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**Personal care products containing PTFE, "fluoro" or "perfluoro" ingredients such as Oral B Glide floss** – The EWG Skin Deep database is an excellent source to search for healthier personal care options.<sup>9</sup>

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# **Progesterone**

Lastly, progesterone will minimize endocrine disrupting chemicals' ability to activate your estrogen receptors, thus helping to reduce their impact on your biology. It's not a magic bullet though. You get the most benefit by implementing a Bioenergetic diet approach that allows you to effectively burn glucose as your primary fuel without backing up electrons in your mitochondria that reduces your energy production.

My new book, "Cellular Health: The Unified Theory of All Disease for Ultimate Longevity and Joy" comes out very soon and covers this process in great detail.

Once you have dialed in your diet, an effective strategy that can help counteract estrogen excess is to take transmucosal progesterone (i.e., applied to your gums, not oral or transdermal), which is a natural estrogen antagonist. Progesterone is one of only four hormones I believe many adults can benefit from. (The other three are thyroid hormone T3, DHEA and pregnenolone.)

I do not recommend transdermal progesterone, as your skin expresses high levels of 5-alpha reductase enzyme, which causes a significant portion of the progesterone you're taking to be irreversibly converted primarily into allopregnanolone and cannot be converted back into progesterone.

## **Ideal Way to Administer Progesterone**

Please note that when progesterone is used transmucosally on your gums as I advise, the FDA believes that somehow converts it into a drug and prohibits any company from advising that on its label. This is why companies like Health Natura promotes their progesterone products as "topical."

However, please understand that it is perfectly legal for any physician to recommend an off-label indication for a drug to their patient. In this case progesterone is a natural hormone and not a drug and is very safe even in high doses. This is unlike synthetic

progesterone called progestins that are used by drug companies, but frequently, and incorrectly, referred.

Dr. Ray Peat has done the seminal work in progesterone and probably was the world's greatest expert on progesterone. He wrote his Ph.D. on estrogen in 1982 and spent most of his professional career documenting the need to counteract the dangers of excess estrogen with low LA diets and transmucosal progesterone supplementation.

He determined that most solvents do not dissolve progesterone well and discovered that vitamin E is the best solvent to optimally provide progesterone in your tissue. Vitamin E also protects you against damage from LA. You just need to be very careful about which vitamin E you use as most supplemental vitamin E on the market is worse than worthless and will cause you harm not benefit.

It is imperative to avoid using any synthetic vitamin E (alpha tocopherol acetate – the acetate indicates that it's synthetic). Natural vitamin E will be labeled "d alpha tocopherol." This is the pure D isomer, which is what your body can use. There are also other vitamin E isomers, and you want the complete spectrum of tocopherols and tocotrienols, specifically the beta, gamma, and delta types, in the effective D isomer.

There are also other vitamin E isomers, and you want the complete spectrum of tocopherols and tocotrienols, specifically the beta, gamma, and delta types, in the effective D isomer. As an example of an ideal vitamin E you can look at the label on our vitamin E in our store. You can use any brand that has a similar label.

You can purchase pharmaceutical grade bioidentical progesterone as Progesterone Powder, Bioidentical Micronized Powder, 10 Grams for about \$40 on many online stores like Amazon. That is nearly a year's supply, depending on the dose you choose.

You'll need to purchase some small stainless steel measuring spoons as you will need a 1/64 tsp which is 25 mg and a 1/32 tsp which is 50 mg. A normal dose is typically 25 to 50 mg and is taken 30 minutes before bed, as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

Unfortunately, this vendor frequently runs out of product, and if that's the case, then you can use [Simply Progesterone by Health Natura](#). It's premixed with vitamin E and MCT oil. Again, while Health Natura states that its product is for "topical use only," I recommend applying it transmucosally, by rubbing it on your gums.

If you are a menstruating woman, you should take the progesterone during the luteal phase or the last half of your cycle, which can be determined by starting 10 days after the first day of your period and stopping the progesterone when your period starts.

If you are a male or non-menstruating woman you can take the progesterone every day for four to six months and then cycle off for one week. The best time of day to take progesterone is 30 minutes before bed as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

This is what I have personally doing for over a year with very good results. I am a physician so do not have any problems doing this. If you aren't a physician you should consult one before using this therapy, as transmucosal progesterone therapy requires a doctor's prescription.

## Sources and References

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- <sup>1</sup> [U.S. EPA, PFAS Analytic Tools](#)
- <sup>2</sup> [Science of the Total Environment June 25, 2023, Volume 879, 163081](#)
- <sup>3</sup> [CNN March 20, 2023](#)
- <sup>4</sup> [Environ. Sci. Technol. 2023, 57, 50, 21016–21028](#)
- <sup>5</sup> [eBioMedicine October 24, 2023](#)
- <sup>6</sup> [Environ Res. 2024 Jan 1;240\(Pt 1\):117529](#)
- <sup>7</sup> [Front Toxicol. 2023; 5: 1244457](#)
- <sup>8</sup> [EWG's Guide to Avoiding PFAS Chemicals](#)
- <sup>9</sup> [Environmental Working Group Skin Deep Database](#)