A Large New Study Links PFAS to Earlier Menopause. What That Means for Your Brain, Bones, and Heart

2 MIN READ

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A breaking new study of nearly 5,000 women links PFAS exposure to early menopause. Taking simple measures to limit your exposure may help.

If you're reading this, you probably have per- and polyfluoroalkyl substances, or PFAS, in your blood. How do we know? Pretty much everyone in the U.S. has some amount of these "**forever chemicals**" in their systems.

PFAS are everywhere: our food, water, soil, dust, and even our dental floss. According to the **Environmental Protection Agency** (EPA), these manufactured chemicals may increase cancer risk, disrupt hormones, affect children's development, reduce immune function, increase cholesterol levels, and more. Now, new research sheds light on another specific way that PFAS could harm your health.

For a **recent study** published in the journal *Toxicology Letters,* scientists looked at PFAS blood levels in 4,743 women and found that exposure to three specific PFAS chemicals — PFOS, PFHxS, and PFOA — was associated with a shorter reproductive window. Besides potentially complicating family planning, **entering menopause earlier** can also put you at a greater risk of heart disease, cognitive decline, or osteoporosis.

"The fact that PFAS exposure may be linked to aberrations in reproductive lifespan of women is important because it may affect our overall health, chance of developing inflammatory conditions, and even our overall mortality," **Kelly Krisna Johnson-**

Arbor, MD, a medical toxicologist at MedStar Georgetown University Hospital, told Super Age.

But before you spiral, take a deep breath: “Overall, this study reinforces the associations that we are already aware of regarding PFAS and reproductive health. I don’t think that there is necessarily a need for people to become increasingly alarmed after reading the results,” the doctor adds.

The Menopause-PFAS Link Might Go Both Ways

PFAS may **decrease fertility** and mess with our hormones. But the connection with menopause is less clear.

The new study links PFAS buildup with early menopause, but a **2025 study** published in the journal *Environmental Research* complicates the picture. It suggests that early menopause causes a build-up of PFAS, not the other way around. PFAS can leave the body during menstruation, so the authors suggest that these chemicals may build up in the system once menstruation stops.

Since we still have *a lot* to learn about women’s health, menopause, and PFAS in general, there’s no straightforward answer to the question of which factor prompts the problem. We do know that PFAS can act as **endocrine disruptors**, which can **harm or mimic our hormones**, but scientists haven’t yet established the exact mechanisms that would trigger menopause.

“I am not sure anyone knows that yet. There is **one study** showing that PFAS alters follicle-stimulating hormone (FSH), which in turn alters estrogen. There are other studies showing that PFAS cause premature ovarian aging,” **Jamie K. Alan, RPh,**

PharmD, PhD, an associate professor in the department of pharmacology and toxicology at Michigan State University, told Super Age.

Early Menopause Puts Brain, Bones, and Heart at Risk

Let’s assume for a moment that PFAS exposure does in fact raise your risk of starting menopause early. That would also set off a chain reaction — one that touches the heart, brain, and bones and raises your overall mortality risk.

We’ll start with **the heart**. People who enter premature menopause have a 40% greater chance of developing coronary heart disease in their lifetimes, according to a recent ***JAMA Cardiology* study**. The connection isn’t coincidental: estrogen plays a protective role in cardiovascular health, and losing that protection earlier than expected appears to leave a lasting mark.

When estrogen levels drop too soon, the brain can also face complications. Early menopause carries a strong association with **Alzheimer’s disease**. This, too, makes sense: estrogen is key for brain metabolism and has a neuroprotective effect over the **prefrontal cortex and hippocampus**, so as this hormone drops in early menopause, **cognitive decline** can follow.

Menopause also accelerates **bone loss** and increases the odds of developing osteoporosis, with some women losing as much as **20% of their bone mass** during this life stage. If your protective window closes sooner and you spend more years in menopause, you risk losing even more bone mass, density, and strength.

Together, it creates a kind of snowball effect: PFAS exposure may lead to early menopause and early menopause can independently raise the risk of heart disease, cognitive decline, and bone disease — all hazardous to your healthspan. The PFAS

chemicals themselves may further compound those effects:

- **Brain:** **Some evidence** has linked forever chemicals with higher rates of ADHD and an increased risk of Alzheimer's and Parkinson's-related death. These chemicals can cross the blood-brain barrier and build up in our brains.
- **Bones:** PFAS exposure may lead to **lower bone mineral density** and osteoporosis in men and women, meaning early menopause isn't the only mechanism linking the two.
- **Heart:** Scientists have long suspected that PFAS exposure may cause a wide range of heart complications. One **study** by the American Heart Association showed a meaningful association with high blood pressure, high cholesterol, and high uric acid levels, a marker linked to gout and cardiovascular strain.

4 Ways to Cut Back on PFAS Exposure

The current research on PFAS may leave something to be desired, but it's likely still wise to limit your exposure however you can. And while PFAS turn up just about everywhere, the **Environmental Working Group** suggests that there are a handful of ways to lower your exposure: by being mindful of your drinking water, food and cooking tools, and clothing and textiles.

1. 1 **Use Water Filters:** The main thing you can do is use a water filter, Alan said. Check the U.S. Environmental Protection Agency (EPA) website for **certified PFAS water filters**. Your best options are charcoal (granular activated carbon or GAC), reverse osmosis systems, or ion exchange resins.
2. 1 **Cook With Safer Pans** **Nonstick and scratched cookware** may leach PFAS into your food. Switch to cast iron or stainless steel cookware if possible. Otherwise, try to

cook below 400 degrees F to avoid releasing PFAS fumes.

3. 2 **Choose Safe Fish**: Ingredients matter, too. For instance, locally caught **freshwater fish** are a surprising source of PFAS exposure. Check your local health department or environmental agency for PFAS warnings if you want to avoid contaminated fish, Johnson-Arbor said.

4. 1 **Cut Back on Fast Fashion:** PFAS are found in many products, but clothing tends to be a main culprit. “Because PFAS take a *very* long time to break down, we need to decrease the amount we are putting out into the environment — meaning buying less ‘stuff’ that contains PFAS,” Alan advises.

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