

New study reveals unregulated toxic chemicals are building up in people

Testing of breast milk finds unregulated flame retardants for the first time, while banned substances are decreasing.

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/EINPresswire.com/ -- A [new peer-reviewed study](#) in Environmental Pollution reveals that unregulated toxic chemicals are building up in people.

Led by scientists from Toxic-Free Future, Emory University, the University of Washington, and Seattle Children's Research Institute, testing of breast milk found unregulated toxic flame retardants for the first time, while banned substances were found to be decreasing over time. These chemicals are used in plastics, especially the plastic enclosures of televisions.



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[The data shows](#) that banned flame retardant chemicals are still present in humans, but that levels have declined since they were last measured in the United States 10 years ago. Levels of these substances—called PBDEs (polybrominated diphenyl ethers)—were found to be declining in North America with samples testing 70% lower than levels from the same region from 20 years ago. However, the study confirms for the first time that bromophenols, another type of brominated flame retardant used to replace PDBEs, are building up in breast milk from U.S. moms. These

largely unregulated chemicals were found in 88% of breast milk samples tested.

“Our results show that when we prohibit the use of persistent toxic chemicals like PBDEs, we make breast milk safer for babies,” said Erika Schreder, study co-author and science director at Toxic-Free Future. “But it’s disturbing to find that the replacement chemicals are now building up in breast milk. I hope we can learn our lesson this time and put policies in place that address the entire class and make sure chemicals used in products are known to be safe.”

In the first study in 10 years to measure PBDEs in U.S. women’s breast milk, the researchers

analyzed breast milk samples from 50 U.S. mothers for various types of brominated flame retardants (BFRs). Compounds analyzed included 37 PBDEs, 18 bromophenols, and 11 other BFRs. A total of 25 BFRs were detected, including 9 PBDEs, 8 bromophenols, and 8 other BFRs.

Often put into casings for TVs and other electronics, brominated flame retardants are dangerous chemicals linked to negative health impacts such as learning problems, hormone disruption, and reduced fertility. Brominated flame retardants are members of a larger class of harmful compounds known as organohalogens.

"It's concerning to find flame retardants in breast milk that can disrupt hormones and affect children's brain development," said Dr. Amina Salamova, study co-author and assistant professor at Emory University's Rollins School of Public Health. "This study is the first one to find harmful flame retardants called bromophenols in breast milk in the U.S. They've already been found to affect key thyroid hormones during fetal development, and now we know that infants are exposed through breast milk."

Earlier research by Toxic-Free Future found that most televisions contained these toxic flame retardant chemicals. In studies published in 2017 and 2019, Toxic-Free Future found that most companies had replaced PBDEs with members of the same class—brominated flame retardants. Studies have shown that chemicals can escape out of products into dust and air in our homes, travel through wastewater, and pollute homes, waters, the food supply, and even us.

"While we know that flame retardant chemicals may be harmful, it is important to remember that breast milk provides significant benefits to newborn and child health. Breast milk is still best for newborns," explained Dr. Sheela Sathyanarayana, study co-author and professor of pediatrics at the University of Washington and Seattle Children's Research Institute.

Currently, New York and Washington are leading the country in getting these toxic flame retardant chemicals out of enclosures for electronics like TVs. New York adopted a law similar to the European Union's banning organohalogen flame retardants in enclosures for electronic displays. Most recently, Washington state took it a step further and finalized rules under the Safer Products for Washington Act to ban all organohalogen flame retardants in plastic enclosures of all indoor electric and electronic products. This restriction applies to many more types of products, from hair dryers to toasters.

"Our communities deserve safe products that don't cause cancer or pollute our baby's first food," said State Representative Beth Doglio (D-WA). "This is why I'm especially proud that Washington is leading the nation with its prevention-focused law regulating toxic chemicals in products. Banning toxic chemicals like flame retardants in TVs will result in more protections for people and less harm to our health."

This new study adds to previous breast milk studies analyzing these same samples confirming that, when left unregulated, dangerous chemicals—PFAS, quats, and OPEs (organophosphate

flame retardants and plasticizers)—are building up in people.

“Hazards associated with several kinds of flame retardants are well known,” said Clare Hobby, director purchaser engagement, global for TCO Certified, a sustainability certification for IT products. “What’s critical is to not only regulate their use, but to actually identify substances that are tested and verified as safer for human health and the environment. It’s vital that we drive a market shift toward safer options as the mainstream choice.”

These chemicals are not needed to make products safe. Retailers and brands are increasingly adopting safer chemicals policies to eliminate hazardous chemicals in key product sectors, according to Toxic-Free Future’s Retailer Report Card. Many leading retailers have already adopted voluntary commitments to reduce and eliminate dangerous chemicals like brominated flame retardants. In 2022, Best Buy announced display enclosures and stands of all newly designed models of Best Buy’s Exclusive Brand televisions will no longer contain toxic organohalogen flame retardants (OFRs). Instead, they will use a safer flame retardant identified by Best Buy after assessing potential substitutes for hazard. Other leading consumer electronic brands such as Samsung, LG Electronics, and SONY have also taken action to reduce the use of OFRs in the enclosures of televisions they sell.

Following the release of this new study, Toxic-Free Future today launched [a petition to Best Buy](#) to expand its policy and prevent unnecessary toxic flame retardants in more electronics products. The petition highlights the importance of swift action to protect our health.

For more information: <https://toxicfreefuture.org/research/toxic-flame-retardants-in-breast-milk/>

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