

WHAT ARE PFAS?

PFAS, or per- and polyfluoroalkyl substances, are a class of nearly 15,000 synthetic chemicals including PFOS or PFOA and are often referred to as "forever chemicals" because they are notorious for their persistence in the environment.

WHY SHOULD I BE CONCERNED WITH PFAS?

PFAS degrade very slowly, allowing them to build up in people, animals, and the environment over time¹. PFAS can be found in a wide variety of consumer products such as foodware, water-resistant fabrics, or personal care products. There are multiple health effects associated with PFAS exposure that have been identified and supported by different scientific studies. One report by the Centers for Disease Control and Prevention, using data from the National Health and Nutrition Examination Survey (NHANES), found PFAS in the blood of 97% of Americans². New PFAS chemicals have been created and exposure to them is difficult to assess.

HOW ARE PEOPLE EXPOSED TO PFAS?

People may encounter different PFAS chemicals in various ways. Over time, people may take in more of the chemicals than they excrete, a process that leads to bioaccumulation in bodies. Human exposure to PFAS is widespread because PFAS are used in a variety of different products. Over time, PFAS may leak into the soil, water, and air, and they have become widespread in the environment. People are most likely exposed to these chemicals by consuming PFAS-contaminated water or food, using products made with PFAS, or breathing air containing PFAS³. Because PFAS break down slowly, if at all, people and animals are repeatedly exposed to them, and blood levels of some PFAS can build up over time.



PFAS IN FOOD PACKAGING

PFAS are commonly used in food packaging such as takeout boxes and wrappers because of their ability to resist grease, oil, water, and heat⁴.

The FDA states that food exposed to paper packaging coated in a PFAS grease-proofing medium is a concern for dietary exposure and overall safety⁵.

PFAS are a concern in this application because the grease-proofing agent is applied at temperatures not high enough to remove small residual components of PFAS that can migrate into food⁶.

These components can migrate when in contact with fatty and oily foods or high temperatures such as being microwaved⁶.

HEALTH IMPACT

PFAS have been detected in the blood of almost all people in the United States, and can cross the placenta during pregnancy and enter the fetus³.

Even at low concentrations, exposure to certain PFAS has been linked to a variety of serious health concerns, including increased risk of kidney, testicular, and prostate cancers⁷.

Additionally, PFAS exposure has been linked to reproductive issues, such as decreased fertility and high blood pressure in pregnant women, as well as developmental effects or delays in children, including low birth weight, accelerated puberty, bone variations, and behavioral changes⁷.

PFAS can disrupt hormones, increase cholesterol levels and/or risk of obesity, alter liver and kidney function, and reduce the immune system's vaccine response and ability to fight infections^{7,8}.

U.S. EPA POLICIES

In recent years, PFAS have rapidly become a point of interest and public health concern because of studies that showed their prevalence in human bodies and their effects on human health. In response to this growing body of evidence, the US Environmental Protection Agency has begun to establish several policies and actions including setting legally enforceable Maximum Contaminant Levels for six PFAS in drinking water, conducting robust health and safety reviews and restricting certain PFAS uses via the Toxic Substances Control Act (such as protecting people from PFAS that leach from plastic containers into pesticides and other products), and laying the groundwork to list nine PFAS chemicals as hazardous constituents under the Resource and Recovery Act⁹. Additional and more robust policies are needed to protect people from exposure to PFAS and associated adverse health effects.



CONCLUSION

PFAS are increasingly recognized as unsuitable for use in consumer products, particularly in food packaging, due to the serious health risks associated with these chemicals.

Their persistence in the environment, combined with their ability to accumulate in the human body, has been linked to various adverse health effects.

Given these concerns, it is essential to strengthen regulations on PFAS and continuously assess the extent of public exposure to these harmful substances.

There is also a growing need to use safer, more sustainable alternatives that can replace PFAS in consumer goods without compromising public health or environmental safety.

References:

1. Brunn, H. et al., 2023
2. Lewis, et al., 2015
3. ATSDR, 2024
4. Phelps, et.al., 2024
5. FDA, 2024
6. FDA, 2024
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