Making Sense of Forever Chemicals

Strategies and Messages for Public Health Communicators

In late 2024, the Public Health Communications Collaborative (PHCC) sponsored four focus groups, in partnership with PerryUndem, a nonprofit research firm, to explore the public's understanding of "PFAS" or "forever chemicals." As a result of this research, PHCC has developed the following strategy and messaging guide for public health communicators.

While PFAS (per- and polyfluoroalkyl substances) is a common technical term, a more understandable and self-explanatory term is "forever chemicals." Forever chemicals will be used throughout this guide and can be used instead of, or in tandem with "PFAS" for public health messaging.

What are Forever Chemicals: A Plain Language Explanation

Forever chemicals are often used to make products more durable and resistant to water or heat. They are commonly found in products like nonstick cookware, waterproof clothing, and furniture. Because forever chemicals are microscopic and do not break down, they are increasingly found in our water, soil, and air. There are thousands of different forever chemicals in the environment, and they build up in our bodies over time. Scientists and public health workers are continuing to research their effects, but early studies have linked forever chemicals to cancer, heart and liver problems, and developmental damage to infants and children.

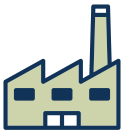
Where are Forever Chemicals Found?

People can be exposed to forever chemicals by touching, drinking, eating, or breathing. They may be found in:

Drinking water that has been contaminated by other sources of forever chemicals.

Water sites near landfills, trash disposal sites, and hazardous waste sites.

Fire extinguisher foam used in emergency training and response.



Manufacturing facilities, especially for chrome plating, electronics, and certain paper and textiles.

Household products like stain- or water-repellant items, nonstick products, paints, water sealants, and some cosmetics.

Food packaging such as grease-resistant paper, microwave popcorn bags, pizza boxes, and candy wrappers.

Fertilizer or "biosolids" from wastewater treatment plants that is used on agricultural lands and can affect ground and surface water.

Food, especially fish, dairy, or livestock that has been exposed through contaminated water or soil.

Source: PFAS Explained (EPA)

Messaging for Frequently Asked Questions

This sample messaging can help answer questions from the community and inform public health communications.

Question	Additional Information
I live in an area that is free of water and air pollution. Am I still vulnerable to forever chemicals?	Yes. Even if you live in a place without pollution, forever chemicals still affect you. Because they are microscopic and very prevalent, you are likely exposed through everyday consumer products or in your water, air, or food sources.
How much exposure do I have to forever chemicals every day?	While it is difficult to know your exact exposure to forever chemicals, most people have been exposed. Over the past 20 years, there has been a general decline in the use of forever chemicals, which has led to a decline in exposure. Examples of commonly used products that contain forever chemicals include nonstick pans, fast food wrappers, pizza boxes, cleaning products, and some shampoos, dental floss, or cosmetics. Items that are designed to be heat-resistant or water-resistant are most likely to contain forever chemicals.
Can I take steps to limit my exposure to forever chemicals?	Yes. Food and water are the most common ways people are exposed to forever chemicals. **Water** • Take steps to monitor forever chemicals in your drinking water or use an EPA-approved water filter at home. **Food** • Most nonstick pans can transfer forever chemicals into your food or air when on high heat. If possible, choose anodized aluminum, stainless steel, or cast iron options instead. • Choose seafood from clean waterways to be sure the fish you eat does not have forever chemical buildup.
Are certain groups more likely to be exposed to forever chemicals than others?	Yes, certain groups are more vulnerable to forever chemical exposure than others. Firefighters and industrial workers who make or process forever chemicals will likely have a higher rate of exposure than the general public. Children are more susceptible to forever chemicals for several reasons: • They are more likely to put toys or fabrics in their mouths that contain materials with forever chemicals. You can limit exposure by choosing safer toys. • Forever chemicals have been found in human breastmilk and can pass to infants when breastfeeding. Infants can also ingest forever chemicals through formula mixed with contaminated water.

What to Know When Communicating about Forever Chemicals

Acknowledge the topic is complex and evolving. While we know forever chemicals are very prevalent, researchers continue to study their effects and some states have passed new legislation and regulations to protect our health. Reinforce that public health officials will share new information and recommendations as it becomes available.

Acknowledge the topic can inspire fear and anxiety. Most people in the United States have been exposed to forever chemicals. This fact can be scary. Underscore the steps that people can take to limit exposure.

People want to know something is being done to keep them safe. According to focus group research, forever chemicals are not a polarizing issue. In 2021, the Environmental Protection Agency(EPA) released a strategic roadmap with three goals that can be shared in public health messaging:

- **Research** is being done to learn more about forever chemicals and their effects on our health.
- **Restricting** forever chemicals from entering air, water, and soil will limit our exposure.
- **Treating** areas that have been contaminated by forever chemicals is one way to reduce harm.

Tested Messaging for Communicating about Forever Chemicals

In late 2024, the Public Health Communications Collaborative (PHCC) held four focus groups to explore the public's understanding of forever chemicals. While awareness and understanding of the topic is generally low, sharing information about forever chemicals can also cause concern. Complement your awareness-building tactics with the following tested messages.

Starting Message: Public health officials are monitoring forever chemicals and protecting us from harm.

Why it works: This message is action-oriented and reinforces a commitment to health and safety. Focus group participants said it was comforting to know steps were being taken to monitor and protect the public.

Supporting Message: Public health officials will share information to help you make informed choices.

Why it works: After becoming aware of forever chemicals, most focus group participants wanted to know "What can I do to protect myself?" This message encourages people to make informed choices, but does not pass the entire burden onto the individual. It reinforces a partnership between officials and the public.

Supporting Message: Public health officials will act on evidence, and revise regulations when new research or information is available.

Why it works: It is reassuring that rules and regulations are being continually added to keep people safe. Acting on evidence also conveys credibility and reinforces long-term efforts.

Complementary Message: Forever chemicals affect everyone, but some people are more vulnerable than others.

Why it is complementary: Participants agreed with the sentiments here, especially when it came to disparities in water quality. However, they emphasized that this message might minimize the fact that forever chemicals affect everyone. This should be used as a complementary message, after your audience is aware of the prevalence of forever chemicals.