PFAS
Fact Sheet

What are PFAS? Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a group of more than 12,000 man-made chemicals that do not occur in nature. Accidently discovered in 1938 PFAS chemicals have made their way into all facets of life. The widespread use of PFAS can be attributed to their unique properties including oil, water and heat/flame resistance. These properties have earned PFAS the nickname "forever chemicals" because the carbon-fluorine bonds that make up these chemicals do not naturally break.

How Are We Exposed?

- Drinking contaminated water (private or municipal)
- Eating food raised or grown near places where PFAS was manufactured or used or where PFAS contaminated biosolids have been spread
- Eating food in PFAS-containing packages
- Using consumer products that contain PFAS:
  - Make-up
  - Water repellent clothing
  - Stain resistant carpets/fabrics
  - Non-stick cookware
- Eating wildlife obtained from contaminated environments:
  - Fish
  - Deer
  - Turkey

PFAS persist and accumulate in our bodies and in the environment.

2,800 PUBLIC DRINKING WATER SYSTEMS HAVE BEEN FOUND IN ALL 50 U.S. STATES

95% OF THE U.S. POPULATION HAS DETECTABLE LEVELS OF PFAS IN THEIR BLOOD

What Are The Health Effects?

Exposures to PFAS have been associated with a wide range of adverse human health effects, including:

- ⚠ Altered metabolism (i.e., increased cholesterol)
- ⚠ Reproductive health (increased risk of high blood pressure or preeclampsia)
- ⚠ Development (low birth weight, birth defects, delayed development)
- ⚠ Decreased vaccine response
- ⚠ Increased risk of cancer (i.e., kidney, testicular)

How Do We Limit Exposure?

- 👍 Use an activated carbon or reverse osmosis filter to reduce PFAS in drinking water
- 👍 Stop using non-stick cookware
- 👍 Pop your own popcorn the old-fashioned way, on the stovetop
- 👍 Avoid stain and grease resistant products containing PFAS
- 👍 Avoid “water-resistant” cosmetics and personal care products
- 👍 Purchase non-PFAS clothing and sports gear (i.e., water repellent)
- 👍 Check with your local or state health and environmental departments for fish or hunting advisories in your area

Meet the Investigator

Jamie Lynn Young, Ph.D., is an Assistant Professor of Pharmacology and Toxicology in the School of Medicine at the University of Louisville. Using a One Environmental Health approach, Dr. Youngs research integrates human, animal and ecosystem health to gain insight into how environmental contaminants such as heavy metals and per- and polyfluoroalkyl substances (PFAS) contribute to disease. Dr. Young grew up in a small rural community in Maine where PFAS contamination has become a major environmental and human health concern impacting family-owned dairy farms and the local hunting and fishing industry. Thus, studying these “forever chemicals” has become a key component of her research.

Scan the QR code to watch Dr. Young's Youth Exchange Session entitled "Nothing Lasts Forever...Except PFAS: Reducing Your Exposure to 'Forever Chemicals'"

This research was conducted by the University of Louisville's Center for Integrative Environmental Health Sciences (NIEHS grant P30 ES030283). CIEHS strives to inform the public on environmental health science and build transparent relationships with surrounding communities to support healthier lifestyles. For more information regarding The Center for Integrative Environmental Health Science, please visit https://louisville.edu/ciehs.

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References:

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