# Climate Conversations

## PFAS Toolkit: Comprehensive Clinical Guidance for Addressing PFAS Exposure in Patients

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Per- and Polyfluoroalkyl Substances (PFAS), commonly known as "forever chemicals," are a class of over 12,000 synthetic compounds used in a variety of industrial and consumer products, including non-stick cookware, stain-resistant fabrics, firefighting foams, and food packaging. Due to their chemical structure, PFAS are resistant to breaking down in the environment, leading to widespread contamination in soil, water, and air.

Exposure to PFAS is a growing public health concern, as these chemicals accumulate in the human body over time, contributing to a range of serious health conditions. Research has linked PFAS exposure to health effects including (National Academies of Sciences, Engineering, and Medicine, 2022):

- Increased risk of kidney and testicular cancer
- Liver damage and elevated cholesterol levels
- Thyroid disease and hormonal imbalances
- Decreased vaccine response in children
- Hypertension and preeclampsia in pregnant individuals
- Impaired immune function and developmental issues

The widespread contamination of drinking water systems, agricultural areas, and consumer products has made it increasingly important for healthcare professionals to understand how to assess, manage, and educate patients on PFAS exposure. To address this need, the Alliance of Nurses for Healthy Environments (ANHE) has developed a PFAS Guidance for Clinicians Toolkit specifically designed to guide clinicians in recognizing and responding to PFAS exposure in their patients. The toolkit offers evidence-based clinical guidance and resources to support healthcare professionals in managing PFAS-related health risks.

### **Key Features of the PFAS Toolkit:**

1. PFAS Exposure Assessment Questionnaire: A comprehensive questionnaire to help clini-

- cians assess a patient's risk of PFAS exposure based on occupation, geographic location, and consumption of potentially contaminated food or water. This tool is critical for identifying individuals who are at the highest risk and need further testing or monitoring.
- 2. Clinical Testing Recommendations: PFAS testing is currently limited to a select number of chemicals, and the toolkit provides guidance on which PFAS blood tests are available and how to interpret the results. It includes a list of laboratories that can process these tests, including Eurofins, AXYS Analytical, and Quest Diagnostics, which offer reliable methods for PFAS detection. While testing helps determine the body burden of PFAS, it does not predict future health outcomes, so the toolkit also advises on how to communicate test results effectively to patients.
- 3. Follow-Up Care and Monitoring: The toolkit outlines recommendations for follow-up care based on PFAS exposure levels, including:
  - Regular screenings for testicular and breast
  - Liver function tests for patients with elevated PFAS levels due to their association with liver damage.
  - Blood pressure monitoring for pregnant patients, as PFAS exposure is linked to preeclampsia.
  - Lipid panels for monitoring cholesterol levels, especially in pediatric patients exposed to high PFAS levels.
- 4. Patient Education and Risk Reduction Strategies: Educating patients on how to reduce their exposure to PFAS is essential. The toolkit provides resources on:
  - Filtering drinking water with NSF-certified filters designed to remove PFAS.
  - Avoiding consumer products known to contain PFAS, such as non-stick cookware and grease-resistant food packaging.

- Understanding local advisories on the consumption of fish and wildlife from contaminated areas.
- 5. Advocacy and Policy Recommendations: The PFAS Toolkit also highlights the importance of advocacy in protecting public health from PFAS. It encourages healthcare providers to stay informed about regulatory developments, including the EPA's proposed regulations (2024) for setting maximum contaminant levels for PFAS in drinking water, which will be enforceable starting in 2025. Nurses and other healthcare professionals are urged to advocate for stronger protections and to support community efforts to reduce PFAS exposure.

#### **Call to Action for Clinicians**

As nurses and healthcare providers, we are on the frontlines of addressing the health impacts of environmental toxins like PFAS. By utilizing the PFAS Toolkit, clinicians can better assess patient exposure risks, provide tailored guidance, and advocate for stronger environmental health protections. Whether you work in primary care, public health, or specialty practices, understanding PFAS exposure is critical for protecting the health of our communities.

To access the ANHE PFAS Toolkit and integrate its clinical guidance into your practice, visit: https://bit.ly/4eH1FVr.

#### References

National Academies of Sciences, Engineering, and Medicine. (2022). Guidance on PFAS exposure, testing, and clinical follow-up. The National Academies Press. https://doi.org/10.17226/26156.

Environmental Protection Agency. (2024). Key EPA Actions to Address PFAS. Environmental Protection Agency. https://www.epa.gov/pfas/key-epa-actionsaddress-pfas