

2024

Dear ,

Thank you for participating in the GenX Exposure Study 2023 blood collection event. We aim to understand human exposure to per- and polyfluoroalkyl substances (PFAS), including GenX, in people living in the Cape Fear River Basin, NC. PFAS are human-made chemicals that have unique properties making them resistant to heat, water, and grease. PFAS last for a long time in the environment and can accumulate in people, plants, and animals.

We are working in the lower Cape Fear River Region (Brunswick and New Hanover County), the private well community around the Chemours facility in Fayetteville, and Pittsboro, NC. We are also studying if PFAS exposure is associated with health effects. You are part of an important health study which will help us understand the long-term health consequences of PFAS exposure.

What did we do?

- From August 2023 through November 2023, we collected blood samples from participants in the three study areas.
- Participants provided blood and urine samples, completed a questionnaire, and had their height, weight, and body composition measured. These samples and data were collected for research purposes only—they are not diagnostic. We are sharing your results with you so that you will know what we measured.
- We tested blood samples for 41 PFAS. The list of all PFAS we tested for in 2023 is on our website (https://bit.ly/GenX_reportback). The blood samples were analyzed at Eurofins Environment Testing in Sacramento, California.
- We sent the blood samples to the lab in batches.

- We are reporting personal PFAS results on a rolling basis when they are available from the lab. This means other study participants may get their results before or after you.
- Community-level findings will be shared with you after all sample results are available.

What's in this letter?

- Your personal PFAS blood results from the 2023 sampling event.
- Your *prior* PFAS results (if available) from the 2020-2021 sampling event.
- Information that you can share with your health care provider about your PFAS results.

What about my community-level results?

- When results from all participants are available, we will send you graphs to show your individual results within your community.
- At that time, we will have community meetings and webinars to discuss these results.

Is there any medical guidance for people exposed to PFAS?

- **Yes**, in July 2022, the National Academies of Science, Engineering, and Medicine (NASEM) released a report based on an unbiased review of the human data for PFAS exposure and health. This report provides recommendations for medical follow-up for people exposed to PFAS. The summary of the NASEM report is available online (bit.ly/PFAS-guidance).
- The NASEM panel recommended that exposed people get their blood tested for PFAS to inform medical decisions. The panel recommended certain health-based actions depending on the summed concentration of **seven (7) key PFAS**: PFOS, PFOA, PFHxS, PFNA, PFDA, PFUnDA, and MeFOSAA. We tested for these seven PFAS in the blood samples of study participants in 2023.
- The current guidance from NASEM are recommendations. At this time, there is no money set aside to help people pay for PFAS blood testing or health testing. However, many of these recommendations are activities that are included in regular checkups with your health care provider(s).

What is on the following pages of this letter?

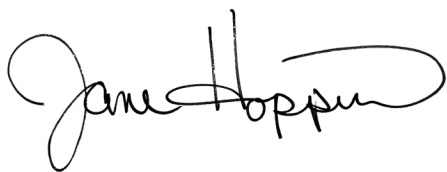
- **Pages 5 – 6** show your individual concentrations and the summed concentration of the **seven key PFAS** in your blood sample in a small table next to the recommended medical actions based on the current NASEM guidance.
- **Pages 7 – 8** includes a longer table of your PFAS results from 2023, prior results from 2020-2021 (if available), and the laboratory's reporting limits for 2023.

What's next?

- When we have PFAS results for all study participants, we will create summary results for each community. We will then send you a letter with these findings.
- We will host online webinars and in-person community meetings to discuss our findings from the 2023 sampling period. We will send more information when these details are finalized.
- Please check our study website (<https://genxstudy.ncsu.edu/>) or the NC State Superfund website (superfund.ncsu.edu) for more information on the study and upcoming events.
- If you have questions about these results, the GenX Exposure Study, or the NASEM recommendations, please contact our study office by phone (855-854-2641) or email (genx-exposure-study@ncsu.edu).

Once again, we thank you for your participation in the GenX Exposure Study.

Sincerely,

A handwritten signature in black ink that reads "Jane Hoppin". The signature is fluid and cursive, with a large loop at the end of the last name.

Jane Hoppin, ScD
GenX Exposure Study, Principal Investigator

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Clinical Guidance for PFAS Exposed People

In July 2022, the National Academies of Sciences, Engineering, and Medicine (NASEM) published recommendations for medical monitoring based on the total (sum) concentration of seven specific PFAS in blood.

Below, the table on the left shows the levels of seven key PFAS we measured in your blood sample from 2023, and the sum of these seven PFAS. On the right, the current NASEM recommendations are provided — the clinical recommendations based on the sum of the seven PFAS in your sample are shaded with a bold box around them.

PFAS Chemical	Your 2023 Blood result (ng/mL)
PFOS	14
PFOA	1.5
PFHxS	2.2
PFNA	1.2
PFDA	0.86
MeFOSAA	<MRL
PFUnDA	0.46
Your Sum (total)	20.22

2022 Guidance on PFAS from the National Academies of Sciences, Engineering, and Medicine

Sum PFAS More Than 20 ng/mL

Associated with higher risk of adverse effects. You should...

- Reduce PFAS exposure
- Speak with your medical provider and ask them to check cholesterol levels, hypertensive disorders of pregnancy, breast cancer, thyroid function, kidney and testicular cancer, and ulcerative colitis, as per NASEM guidance.

Sum PFAS Between 2 and 20 ng/mL

Associated with potential for adverse effects in sensitive populations. You should...

- Reduce PFAS exposure
- Speak with your medical provider and ask them to check cholesterol levels, hypertensive disorders of pregnancy, and breast cancer, as per NASEM guidance.

Sum PFAS Less Than 2 ng/mL

Health effects not expected at this time. You should...

- Maintain usual medical care.

What can you do with this information? You can discuss these PFAS blood results and the NASEM recommendations with your clinician to decide if you would benefit from specific medical tests.

If your clinician has questions about PFAS, they can refer to the NASEM report (bit.ly/PFAS-guidance) or to a memo from the North Carolina Department of Health and Human Services (bit.ly/DHHSMemo). If you would like use to email you a copy of the NASEM report, please contact our study office. These recommendations do not mean that insurance will pay for any additional PFAS or clinical testing at this time.

If you are underinsured or noninsured and are seeking primary care services, please contact one of the following resources.

- For Lower Cape Fear River Basin Region, NC (Wilmington area), contact Cape Fear Health Net (Phone: 910-399-2751; <http://www.capefearhealthnet.org/getting-care/>). Note that Novant outpatient clinics have assistance places for low-income and uninsured people.
- For Fayetteville area, NC, contact Stedman-Wade Health Services, Inc., 7118 Main St. Wade, NC, 28395 (Phone: 910-483-6694)
- For Pittsboro, NC, contact Siler City Community Health Center, 224 S 10th Ave., Siler City, NC, 27344 (Phone: 919-663-1744) *OR* Moncure Community Health Center, 7228 Moncure-Pittsboro Road, Moncure, NC, 27559 (Phone: 919-542-4991).

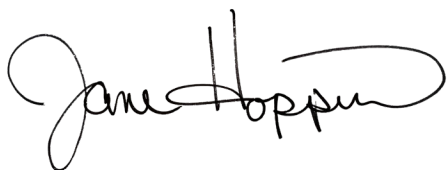
What about other PFAS besides these seven? The 2022 NASEM recommendations are based on the sum of these seven PFAS in blood. These seven PFAS have been monitored in Americans by the Centers for Disease Control and Prevention for the past 20 years. Health screening recommendations for people exposed to PFAS may change as scientists learn more about the health effects of PFAS. Please see pages 6-7 for your other PFAS results, including PFAS that are not in this list of seven specific PFAS in the Current NASEM recommendations.

What if you have more questions about PFAS or the GenX Exposure Study?

You can learn more about PFAS and the GenX Exposure Study by visiting our study website: <https://genxstudy.ncsu.edu/>. You can also learn more about PFAS by visiting NC State's Center for Human Health and the Environment resource page: superfund.ncsu.edu/pfas-hub/

If you have any questions about the study, please contact our study team by phone (855-854-2641) or email (superfund.ncsu.edu/pfas-hub/).

We thank you for your participation in the GenX Exposure Study.
Sincerely,



Jane Hoppin, ScD
GenX Exposure Study, Principal Investigator

On the next page are your *new* PFAS results for the blood sample you provided in 2023, and your *previous* PFAS results from 2020-2021 (if applicable).

All concentrations are given as nanograms of PFAS per milliliter of blood (ng/mL).

The laboratory's Method Reporting Limit (MRL) is the lowest concentration of PFAS that laboratory could test for in blood samples. The 2023 MRLs for each chemical are shown to the right of that chemical.

- If your result is listed as “<MRL” that means this PFAS was not detected in your blood above the MRL. You may still have this PFAS in your body, but it may be lower than the laboratory can measure.
- IF your result is listed as “—” that means we do not have data for you on this PFAS. If 2023 was your first time participating in the GenX Exposure Study, you will not have any results available for previous years.

Samples collected in 2020-2021 were analyzed at NC State University in Raleigh, NC. Samples collected in 2023 were analyzed at Eurofins Environment Testing in Sacramento, California. For more information on the PFAS we test for please visit our website.

https://bit.ly/GenX_reportback.

We will share visual charts with you of your PFAS results compared to the PFAS results in your community *after* we have analyzed everyone's samples from 2023.

See next page for your personal PFAS results

Your Personal PFAS Results

PFAS	Your <u>Previous 2020-2021</u> Blood Result (ng/mL)	Your <u>New 2023</u> Blood Result (ng/mL)	<u>2023</u> Laboratory MRL (ng/mL)
PFOS	13.35	14	0.05
PFOA	1.81	1.5	0.14
PFHxS	2.27	2.2	0.05
PFNA	1.01	1.2	0.05
PFDA	0.9	0.86	0.05
MeFOSAA	0.08	<MRL	0.05
PFUnDA	0.55	0.46	0.05
PFHpS	0.4	0.38	0.10
PFPeS	<MRL	<MRL	0.05
Nafion byproduct 2	0.16	<MRL	0.05
PFO5DoA	2	1	0.10
PFHpA	<MRL	<MRL	0.05
PFDoA	<MRL	0.07	0.05
PFDS	<MRL	<MRL	0.05
PFTrDA	<MRL	<MRL	0.05
PFBS	<MRL	<MRL	0.05
7:3 FTCA	<MRL	<MRL	0.05
4:2 FTS	<MRL	<MRL	0.05
NEtFOSAA	<MRL	<MRL	0.05
F53B Major (9CI-PF3ONS)	0.06	<MRL	0.05
PFHxA	<MRL	<MRL	0.10
PFO4DA	<MRL	<MRL	2.00
PFTeDA	<MRL	<MRL	0.05
8:2 FTS	<MRL	<MRL	0.05
PFBA	<MRL	0.11	0.10

"< MRL" means your result for this PFAS was below the laboratory's method reporting limit (MRL) for that year. The MRL is the lowest concentration of that PFAS the laboratory could test for in blood samples.

"—" means there is no available data for you for this PFAS that year.