

CDC/ATSDR PFAS Exposure Assessment Community Level Results

Orange County (NY) near Stewart Air National Guard Base

INFORMATION TO PROTECT OUR COMMUNITIES



In 2019, the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) started exposure assessments (EAs) in communities near current or former military bases known to have had per- and polyfluoroalkyl substances (PFAS) in their drinking water. Individuals who participated in the EAs provided blood and urine samples to CDC/ATSDR for analysis. We sent letters with lab results to the participants.

We are also reviewing additional information, like age and location, to better understand the community's exposure. Once our full analysis is complete, CDC/ATSDR will host a community meeting to share our findings and recommendations.

The assessment focused on Orange County, NY near the Stewart Air National Guard Base (ANGB). A map of the sampling area can be found at <https://www.atsdr.cdc.gov/pfas/activities/assessments/sites/orange-county-ny.html>.

Orange County (NY) near Stewart Air National Guard Base PFAS Exposure Assessment Participation

A total of
59
people



participated in the
exposure assessment:

58 adults
1 child

Those people represented

48

households

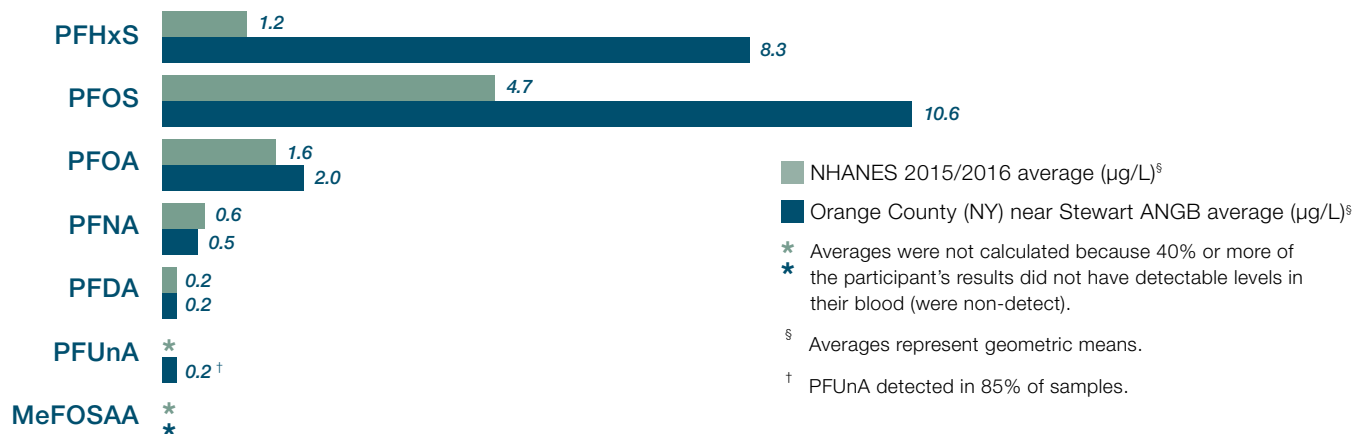
PFAS Levels in Blood

The lab tested participants' blood for 7 different PFAS. PFAS levels are measured in micrograms per liter ($\mu\text{g/L}$).

CDC/ATSDR compared the levels of PFAS in participant's blood across the community to the levels found in the U.S. population. Three PFAS (PFHxS, PFOS, and PFOA) were detected above national averages. The levels of PFNA, MeFOSAA, PFUnA, and PFDA were similar to or below national averages.

Since 1999, the National Health and Nutrition Examination Survey (NHANES) has measured PFAS levels in blood in the U.S. population. Most people in the United States have been exposed to PFAS and have PFAS in their blood.

PFAS Levels in Blood Compared to National Averages[§]



The numbers below show the **percentage** of participants with PFAS levels above the national average.

PFHxS **95%**
of participants

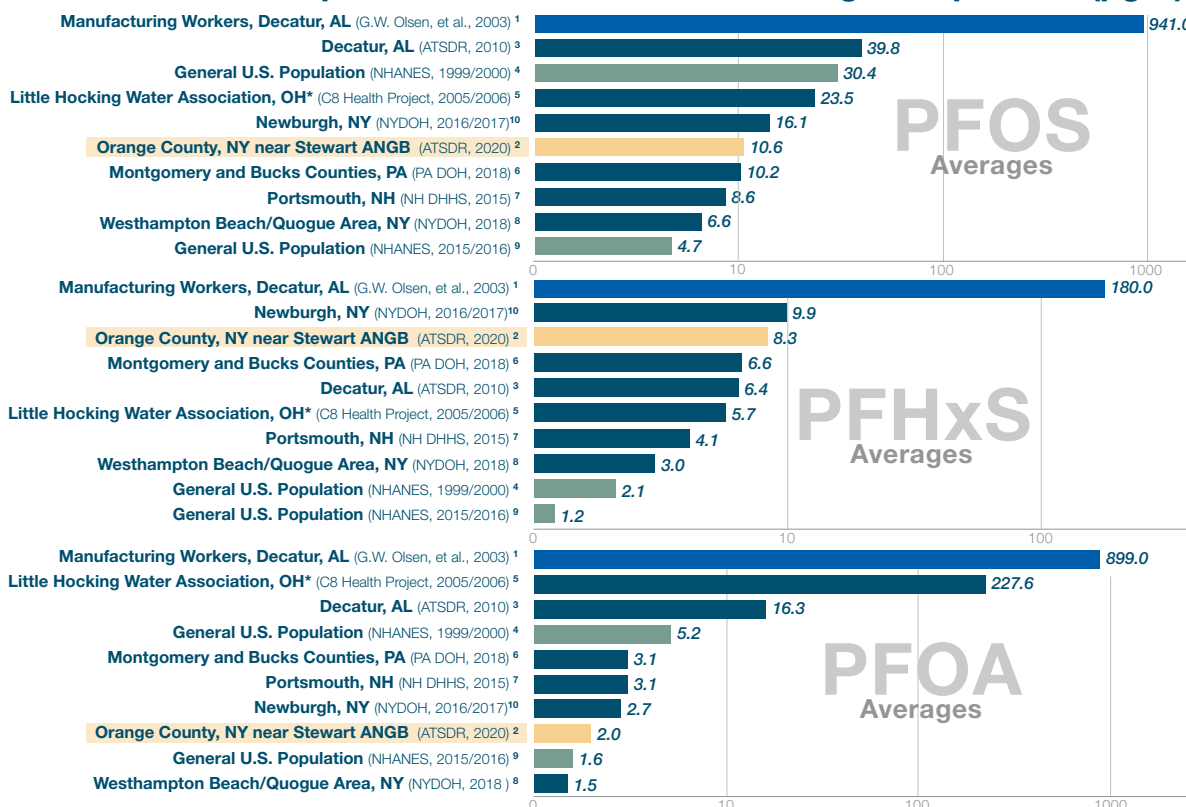
PFDA **83%**
of participants

PFOS **78%**
of participants

PFOA **73%**
of participants

PFNA **51%**
of participants

PFAS Levels in Blood Compared to Other Studies in micrograms per liter (µg/L)^{§†}



References:

- <https://www.tandfonline.com/doi/pdf/10.1080/15428110308984859?needAccess=true>
- CDC/ATSDR data collection completed in 2020
- https://www.atsdr.cdc.gov/HAC/pha/Decatur/Perfluorochemical_Serum%20Sampling.pdf
- https://www.cdc.gov/exposurereport/pdf/FourthReport_UpdatedTables_Volume1_Jan2019-508.pdf
- <https://ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.0800379>
- <https://www.health.pa.gov/topics/Documents/Environmental%20Health/PEATT%20Pilot%20Project%20Final%20Report%20April%202029%202019.pdf>
- <https://www.dhhs.nh.gov/dphs/documents/pease-pfc-blood-testing.pdf>
- https://www.health.ny.gov/environmental/investigations/drinkingwaterresponse/docs/westhampton_quogue_group_level_blood_testing
- https://www.cdc.gov/exposurereport/pdf/FourthReport_UpdatedTables_Volume1_Jan2019-508.pdf
- <https://www.health.ny.gov/environmental/investigations/newburgh/docs/infosheetgroupresults.pdf>



* The study reported medians instead of averages. § Averages represent geometric means. † Logarithmic scale (base 10).

PFAS Levels in Urine

All participants provided a urine sample but only a subset were analyzed because the laboratory method to detect PFAS in urine is still being refined. PFAS were not found in the samples that were analyzed by the laboratory. Therefore, ATSDR did not analyze the rest of the urine samples for PFAS and was not able to calculate average levels of PFAS in urine because of the small number of detections.

PFAS Levels in Tap Water and Dust

CDC/ATSDR planned to collect tap water and dust samples from some participating households in Orange County in fall 2020. Due to the COVID-19 pandemic, ATSDR had to postpone these efforts. ATSDR is in the planning stages to collect the samples in the City of Newburgh, Orange County (NY) later in 2021. Five of the households that participated in the Exposure Assessment will be selected at random and invited to participate in the environmental sampling. Household members will receive a phone call with an invitation. The results will be shared with household members as soon as they become available. When available, the analysis of the environmental results will be included with or added to the PFAS EA in Orange County report.

Local authorities in the City of Newburgh have taken action to reduce levels of PFAS in drinking water. Based on the information ATSDR has reviewed, the public drinking water supply in the City of Newburgh currently meets all federal guidelines and New York state standards for PFAS. ATSDR does not recommend community members use alternative sources of water.

About the Results

CDC/ATSDR is evaluating data collected from the PFAS EA to better understand exposure in the community. The PFAS EA measures PFAS levels in people's bodies but is not able to identify health effects associated with these levels of exposure. We are working to better understand health effects from PFAS exposure through the Multi-site Health Study, www.atsdr.cdc.gov/pfas/Multi-Site-Health-Study.html.

We are also reaching out to doctors, nurses, and other health care providers in your area to provide PFAS information. PFAS clinician guidance and continuing medical education can be found at <https://www.atsdr.cdc.gov/pfas/docs/clinical-guidance-12-20-2019.pdf>.

For More Information:

Visit www.atsdr.cdc.gov/pfas, or contact:
Luis Rivera-Gonzalez, PhD | Region 2 Toxicologist
lxq8@cdc.gov | (732) 906-6933



National Center
for Environmental Health
Agency for Toxic Substances
and Disease Registry