1. Should you expect to find PFOS in your blood?

Yes. Studies show that human exposure to perfluorooctanesulfonic acid (PFOS) is widespread and that nearly all people in the United States have PFOS in their blood. People can be exposed to PFOS through air, water or soil contaminated from fire-fighting foam, industrial sources, food, and from PFOS-containing consumer products. For residents in the Newburgh area, we expect blood levels of PFOS to be higher than the U.S. average.

2. How high will PFOS levels be in blood?

The body removes PFOS very slowly, so it remains in blood for years after exposure. When PFOS is present in drinking water, PFOS levels in blood are expected to be much higher than levels in drinking water.

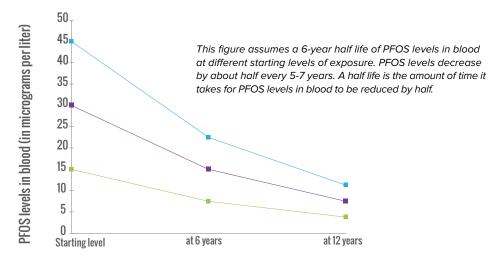
3. Do some people tend to have more PFOS in their blood than others?

Yes. Older people tend to have higher levels because the chemical builds up in the body over time. Please visit health.ny.gov/ **DrinkingWaterResponse** for more information.

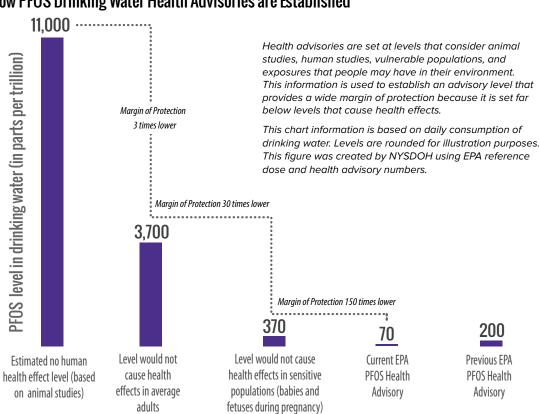
4. Will the PFOS blood levels go down?

Yes. Studies of the U.S. population show that levels of PFOS in blood declined after PFOS was phased out of use in 2000. PFOS levels decline in blood naturally by about half every 5-7 years, assuming there is no additional exposure. This is known as a half life. Your health care provider and the resources listed in #9 can provide further information if you have questions.

How Long it Might Take for PFOS Blood Levels to Decline



How PFOS Drinking Water Health Advisories are Established



5. Can your blood level tell you if you are likely to have health problems?

Knowing your PFOS blood level cannot tell you whether you have or will have a health effect related to the PFOS levels in your body.

6. What do the studies show about health effects and PFOS exposure?

While some studies showed associations with health effects, other studies did not. The studies that found associations were not able to determine with certainty if the health effects were caused by PFOS or some other factors.

Some human health studies have found associations between exposure to perfluorinated chemicals (PFCs), the chemical group that includes PFOS, and a variety of health effects. Human studies show associations between PFOS exposures and effects on the liver, immune system, thyroid function, and birth weight.

A large study of 70,000 people called the "C8 Study" was done in a number of water districts of the Ohio River Valley where the drinking water was contaminated and people were exposed primarily to perfluorooctanoic acid (PFOA). PFOA is a PFC that may affect the body similarly to PFOS.

To date there have been no in-depth health studies of large populations who had PFOS exposures. More information about PFC health studies is available on the DOH website.

Middle Levels of PFOS in Blood

Geometric mean shown (Micrograms per Liter)

3M Workers, Cottage Grove, MN (2000)

3M Workers, Decatur AL (2000)

Morgan-East Lawrence people on private wells, near Decatur, AL (2010)

75

Geometric means are a way of calculating the middle

Morgan-East Lawrence, people on public water, near Decatur. AL (2010)

East Metro area people on public water, as 35* near Minneapolis, MN (2008)

East Metro area people on public water after water treatment near Minneapolis, MN (2010)

U.S. population (1999) **30**

U.S. population (2013) 5

Geometric means are a way of calculating the middle level. They are used in science to prevent the highest and lowest values from distorting the average when the rest of the data are close together.

* East Metro (before and after water treatment) show levels declining after exposures are addressed.

7. How will you know how your level compares to others?

You will be able to compare your PFOS results to national U.S. population data from the U.S. Centers for Disease Control and Prevention (CDC) and also to results of PFOS biomonitoring projects conducted in other populations in the U.S. Some examples are provided in the chart above.

Some of the information we have in the above chart comes from people who were exposed to PFOS on the job, such as workers for 3M. Workers who handled PFOS on the job usually have the highest blood levels of PFOS and some other perfluorinated chemicals (PFCs). The blood test levels in the chart also come from two communities where there was PFOS in drinking water, one community (private wells and a public

water supply) near a Dupont plant in Alabama, and one community (public water supply) near a 3M plant in Minnesota.

8. What else is the New York State Health Department doing?

The New York State Health Department is conducting an investigation to see if there are unusual elevations of cancer among Newburgh area residents. The investigation is looking at total cancers and specific types of cancer diagnosed from 1995 through 2013 (latest available data), using the data from the New York State Cancer Registry, which receives reports on all cases of cancer occurring in New York State.

9. How can you find out more?

You can find more details and links to related studies at: health.ny.gov/
DrinkingWaterResponse
If you have other questions about the biomonitoring program, contact the New York State Health Department by calling 518-402-7950 or emailing beoe@health.ny.gov

Newburgh Area

Questions and Answers

about the

PFOS Blood Testing Program



February 2017

