VERMONT AGENCY OF NATURAL RESOURCES
DEPARTMENT OF HEALTH

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Facts about PFOA for Concerned Residents

What is PFOA?

PFOA is a manufactured chemical that belongs to a group of chemicals used to make household and commercial products that resist heat and chemical reactions, and repel oil, stains, grease and water. These chemicals are widely found in nonstick cookware, stain-resistant carpets and fabrics, water repellant clothing, paper and cardboard food packaging and fire-fighting foam.

PFOA does not break down easily and therefore persists for a very long time in the environment, especially in water. Its toxicity and persistence in the environment means it is a potential danger to human health and the environment.

Why is PFOA contamination a health concern?

PFOA levels in blood are related to increased lipids, uric acid and liver enzymes in the blood, which may or may not lead to effects on an individual's cardiovascular system, kidneys or liver. Health care providers may want to consider a thyroid panel, liver panel, lipid panel and a uric acid analysis for patients who have drinking water contaminated with PFOA.

Studies have also shown a correlation – but not a cause-and-effect relationship – between levels of PFOA in the blood and high blood pressure, decreased birth weight, some immune system effects, thyroid disease, kidney cancer and testicular cancer. The Health Department has recommended to health care providers that screening for these outcomes be determined on a case-by-case basis, and testing considered in the event of symptoms.

In Vermont, the Health Department has established a health level of 20 parts per trillion (ppt) for drinking water. If water contains more than 20 ppt, it should not be used for drinking, food preparation, cooking, tooth brushing, or any other way it could be ingested. If you have drinking water that is contaminated or potentially contaminated with PFOA, the most important action to take now is to stop exposure by using only bottled water or water from a known safe source.

Where can I learn more about PFOA studies?

For information on exposure and health studies conducted on a large population, visit the C8 studies: http://www.c8sciencepanel.org/

The Agency of Toxic Substances & Disease Registry (ATSDR) is part of the Centers for Disease Control & Prevention. ATSDR published a toxicological profile for PFOA and the related perfluoroalkyl chemicals. ATSDR uses a weight-of-evidence approach to evaluate whether the available data supported a link between exposure and a particular health effect. You can view the webpage and download the PDF of the toxicological profile to read more about the scientific studies. http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=1117&tid=237

EPA also has a draft health effects document for PFOA, listed as Health Effects Document for Perfluorooctanoic Acid. https://peerreview.versar.com/epa/pfoa/

If my well water is contaminated with PFOA, or I am concerned about possible contamination —

Should I drink the water?
No. Use bottled water or water from a known safe source for drinking, food preparation, cooking, brushing teeth – any way that you could ingest the water. The Department of Environmental Conservation is distributing bottled water to residences that have PFOA detected in their water, and those potentially affected but not yet tested.

Is it OK to shower or bathe?
Routine showering or bathing would not likely cause a significant exposure. Studies have shown very limited absorption of PFOA through the skin.

As a precaution, we recommend shorter showers, and use of bathroom fans (or opening bathroom windows) to help remove water droplets (aerosols) formed during showering. The shorter the shower, the lower the possible exposure to PFOA-contaminated water. We also recommend that children or people with skin conditions (rashes, cuts, abrasions, etc.) avoid prolonged contact with PFOA-contaminated water in the bath. Children are more likely to swallow water while playing in the bath.

What about brushing teeth?
Use bottled water for brushing teeth.

Can I do laundry and wash my dishes?
Yes. Doing laundry or washing dishes is not likely to pose a significant exposure to PFOA. If washing dishes by hand, you can minimize exposure by wearing rubber gloves, especially if you have a rash, cuts or abrasions on your hands.

Can I use a humidifier?
If you must use a humidifier, only use water from a safe source.

Will it be OK to eat produce from my garden, eggs from our chickens, or fish from the Walloomsac River?
We know people have many questions about this. The Department of Environmental Conservation is developing a sampling plan for testing soil and water from the river, and the Health Department is reviewing the science and reaching out to the Agency of Agriculture to help answer these questions.

Should I be concerned about fishing in this area?
Currently, there is no specific advice to avoid fish due to the risk for PFOA. In general, PFOA does not accumulate in fish very much, and many fish that are sampled across the country do not have detectable levels of PFOA in them. The State will be testing fish soon.

Residents should be aware of the Health Department's fish advisory for the Hoosick River in Vermont. We advise that no one should eat fish from the Hoosick River, due to contamination with different chemicals, Polychlorinated Biphenyls (PCBs), which do accumulate in fish. The Vermont fish health alert is on the Health Department's website. Go to www.healthvermont.gov, then to 'fish' in the A-Z listing.

What about the water in my swimming pool?
PFOA does not move very well through the skin. People who swim are unlikely to absorb very much through the skin. However, people may accidentally swallow pool water. If your water is contaminated with PFOA, we recommend draining and refilling your pool after your water is treated to reduce any potential exposure.

PFOA and Human Health —

Is PFOA found in humans?
Studies show that human exposure to PFOA is widespread, and that most people have low levels of PFOA in their blood. PFOA does not break down in the human body and stays in blood for years after exposure, so levels of PFOA detected by a special blood test would reflect total exposure over many years. The time it takes for PFOA blood levels to go down by half is about two to four years, assuming there is no additional exposure to the chemical.

What are the health effects of the levels that have been measured in the drinking water?
We do not have an accurate way to predict what health effects people will experience if their water is contaminated. We have summarized the health effects from scientific papers, and suggest that people with contaminated water talk to their health care providers about their concerns.

What are the effects on animals?
The health effects on animals are likely to be similar to the effects on people. If people have PFOA in their water, we recommend they do not drink the water and that they not give their pets the water.

Has EPA developed exposure limits for PFOA? Does PFOA accumulate in the body?
The State is in contact with the EPA regarding the PFOA contamination of private drinking water. EPA sets Maximum Contaminant Levels (MCLs) for chemicals that can be found in drinking water. So far, EPA has not set an MCL for PFOA. EPA advised the town of Hoosick Falls, NY to set a drinking water level of 100 parts per trillion (ppt) for PFOA.

Here in Vermont, the Health Department set the drinking water level for PFOA at 20 ppt, which is lower than what EPA advised. The Health Department based the calculations on the same science that EPA used, but Vermont accounts for exposure to children early in life. EPA considers exposure to adults. When people are exposed to PFOA, the chemical stays in the body. These chemicals do not dissolve in fat like other persistent pollutants. Instead, they accumulate in the blood.

Medical Care—

Is there a medical test that can tell me if I have been exposed to PFOA?
Yes. PFOA can be measured in blood, but the test is not routinely done. PFOA is found at low levels in the blood of almost all Americans. The results of blood tests can be used to determine if a person's PFOA blood level is lower than, similar to, or higher than blood levels found in the general population.

When should I see a health care provider?
If PFOA is detected in your water, or if you or family members have signs or symptoms that you think are caused by PFOA exposure, discuss your concerns with your family's health care provider. The Health Department is providing health care providers in the area with information and recommendations.

Should we wait for the water tests before seeing our doctor?

It would be helpful for your health care provider to know the results of your water test, but you don't have to wait to discuss your concerns with your health care provider.

What can be done to take PFOA out of the body?

There are no medical interventions that will remove PFOA from the body. The best intervention is to stop the source of exposure. This means people who have PFOA in their water above 20 ppt should not drink the water.

For more information –

- To find how you can get your water tested, or for residents with general questions or concerns about PFOA contamination, call 2-1-1.

- For questions about potential health effects of PFOA, call the Health Department at 800-439-8550 Monday - Friday, 7:45 a.m. - 4:30 p.m.

  Department of Environmental Conservation PFOA Info:
  http://www.anr.state.vt.us/dec/dec.htm

  Department of Health PFOA Info:
  http://healthvermont.gov/enviro/pfoa.aspx