



Perfluorooctanoic Acid (PFOA)

Perfluorooctanoic acid (PFOA) has been a manufactured perfluorochemical and a byproduct in producing fluoropolymers. Perfluorochemicals (PFCs) are a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. PFOA was used particularly for manufacturing polytetrafluoroethylene, but since 2002, manufacturers have used a new process not requiring this chemical. PFOA persists in the environment and does not break down. PFOA has been identified in bodies of water and in a variety of land and water animals.

How People Are Exposed to PFOA

People are most likely exposed to PFOA by drinking contaminated water sources, and possibly by using products that contain PFOA. Workers in the perfluorochemical industry can be exposed to greater amounts of PFOA than people in the general population.

How PFOA Affects People's Health

The human health effects from exposure to low environmental levels of PFOA are unknown. PFOA can remain in the body for long periods of time. In laboratory animals given large amounts, PFOA can affect growth and development, reproduction, and injure the liver. More research is needed to assess the human health effects of exposure to PFOA.

Levels of PFOA in the U.S. Population

In the *Fourth National Report on Human Exposure to Environmental Chemicals (Fourth Report)*, CDC scientists measured PFOA in the serum (a clear part of blood) of 2094 participants aged 12 years and older who took part in the National Health and Nutrition Examination Survey (NHANES) during 2003–2004. Serum PFOA levels generally reflect exposure that has occurred over several years. By measuring PFOA in serum, scientists can estimate the amount of PFOA that has entered people's bodies.

- CDC scientists found PFOA in the serum of nearly all the people tested, indicating that PFOA exposure is widespread in the U.S. population.

Finding measurable amounts of PFOA in serum does not mean that the levels of PFOA cause an adverse health effect. Biomonitoring studies on levels of PFOA provide physicians and public health officials with reference values so that they can determine whether people have been exposed to higher levels of PFOA than are found in the general population. Biomonitoring data can also help scientists plan and conduct research on exposure and health effects.

For More Information

- Agency for Toxic Substances and Disease Registry
Toxological Profile for Perfluoroalkyls
<http://www.atsdr.cdc.gov/toxprofiles/tp200.html>
- Environmental Protection Agency
Perfluorooctanoic Acid (PFOA) and Fluorinated Telomers
<http://epa.gov/opptintr/pfoa/>

November 2009

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.