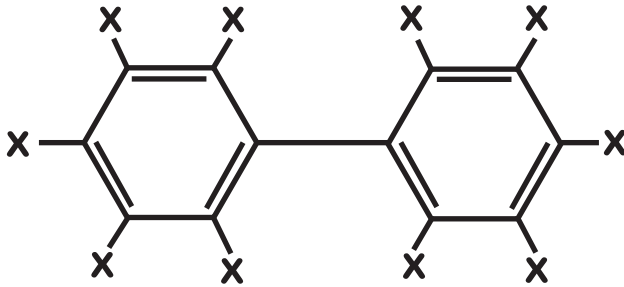




# PCBs: Polychlorinated Biphenyls

Understanding the dangers of this manmade chemical and its affect on our health.



**POLYCHLORINATED BIPHENYLS**  
(PCBs)

## WHAT ARE POLYCHLORINATED BIPHENYLS?

Polychlorinated biphenyls (PCBs) are a group of manmade chemicals. They are oily liquids or solids, clear to yellow in color, with no smell or taste.

PCBs are very stable mixtures that are resistant to extreme temperature and pressure. PCBs were used widely in electrical equipment like capacitors and transformers. They also were used in electrical, hydraulic fluids, heat transfer fluids, lubricants, and plasticizers. The primary company that made PCBs in the United States was Monsanto Inc. Commercial production of PCBs ended in 1977 because of health effects associated with exposure. In 1979, the U.S. Environmental Protection Agency (USEPA) banned the use of PCBs; however, PCBs are still present in many pre-1979 products.

## HEALTH IMPACT

Studies of PCBs in humans have found increased rates of melanomas, liver cancer, gallbladder cancer, biliary tract cancer, gastrointestinal tract cancer, and brain cancer, and may be linked to breast cancer. PCBs were shown to upset the balance of thyroid hormones, which may affect growth as well as intellectual and behavioral development.

Like dioxin, PCBs bind to receptors that control immune system function, disturbing the amounts of some immune system elements like lymphocytes and T cells.

**For more information visit:** [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov)

## RELEASE AND EXPOSURE OF PCBs

Today, PCBs can still be released into the environment from:

- Poorly maintained hazardous waste sites that contain PCBs
- Illegal or improper dumping of PCB wastes
- Leaks or releases from electrical transformers containing PCBs
- Disposal of PCB-containing consumer products into municipal or other landfills not designed to handle hazardous waste
- Burning some wastes in municipal and industrial incinerators

PCBs do not readily break down once in the environment. They have been found in air, water, soil, wildlife and sediments throughout the world. They can remain for long periods cycling between air, water and soil. Once in the environment, PCBs can be carried long distances and have been found in snow and sea water in areas far from where they were released into the environment. As a consequence, they are found all over the world. In general, the lighter the form of PCB, the further it can be transported from the source of contamination.

PCBs can accumulate in the leaves and above-ground parts of plants and food crops. They are also taken up into the bodies of small organisms and fish. As a result, people who ingest fish may be exposed to PCBs that have bioaccumulated in the fish they are ingesting.