

PCBs

| Description/Chemical Forms: | Sources/Routes of Exposure: | Health Effects: |
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| <p>Polychlorinated biphenyls (PCBS) are synthetic chemicals that once had industrial applications prior to the ban in 1977. Lab studies demonstrated their ability to cause cancer and have since been classified as a “probable human carcinogen.”</p> <p>There are no natural sources and scientific evidence suggests these chemicals persist in the environment. Therefore humans are still at risk of exposure.</p> | <p>Despite the ban on production, poorly maintained hazardous waste sites and old PCB-contained equipment such as fluorescent lights and transformers, still release the chemical into the environment.</p> <p>Their persistence allows for long-distance transport and easy cycling into air, water, or soil.</p> <p>Main Route of Exposure:</p> <ul style="list-style-type: none">• Ingestion: PCBs are lipophilic and accumulate in fatty tissue; consumption of dietary fat from dairy products, meat, fish | <p>High exposure levels in the general public can lead to skin conditions, such as acne and rashes. Occupational settings can lead to more chronic conditions, including respiratory irritation and GI discomfort.</p> <p>Fetal exposure: low level exposure to PCBs in the womb has been traced to increased problems with attention, memory, and IQ deficits in children born to exposed mothers. Breast milk can also further accumulate PCBs and thus causing exposure in nursing infants.</p> |

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Diagnosis/Treatment Options:

All humans have varying levels of PCBs in adipose tissue, blood, and breast milk. Blood tests are the easiest, safest, and likely the best method for detecting recent exposures to large amounts of PCBs.

Results of such tests should be reviewed and carefully interpreted by physicians with a background in environmental and occupational medicine.

Prevention Strategies:

Dietary Recommendations:

- Ask patients to review their local fish advisory guide to determine which species are the safest to eat, as well as proper cooking and cleaning to reduce exposure

Environmental Recommendations:

- Advise parents to keep their children away from hazardous dump sites or old electrical appliances that may still contain PCBs

Links for Additional Information:

More information concerning PCB exposure and health effects can be found at the following sites:

<http://www.atsdr.cdc.gov/PHS/>

<http://www.epa.gov/wastes/hazard/tsd/pcbs/about.htm>

<http://www.greenfacts.org/en/pcbs>

<http://fn.cfs.purdue.edu/fish4health/HealthRisks/PCB.pdf>

