



**Mount
Sinai**

*Selikoff Centers for
Occupational Health*



Medical Treatment for a PCB Exposure Incident

What are PCBs?

PCBs, or polychlorinated biphenyls, are man-made chemicals found in common building materials including paint, old fluorescent light ballasts, and caulking. They are also found in old industrial equipment, such as transformers found on utility poles or pad-mounted. Due to their properties, PCBs were used in many industrial and commercial applications before being banned in 1979 and still persist in the environment. If PCB-containing materials are directly disturbed, they can get into the air, onto surfaces, or onto your skin. They can also get into the air by simply evaporating from the PCB-containing material. They can also condense again and attach to new surfaces, thus creating a vicious cycle of evaporation-condensation-evaporation. At low levels, PCB contamination will not be visible or have an odor.

PCBs are found in most people's bodies. PCBs can get into your body by inhalation, absorption during skin contact, or ingestion. An important source of exposure is food, especially contaminated fish, meat, or poultry.

What are the symptoms and illnesses caused by overexposure?

Usually there are no immediate symptoms caused by exposure to PCBs, unless it is a massive exposure, such as falling in a tank containing PCBs or ingesting a significant amount of PCBs. In these cases, a worker may experience nausea, vomiting, respiratory irritation (sniffles, cough), and skin irritation (redness). Longer, typically low-level exposures at the work place may result in workers developing a type of acne over weeks or months called chloracne. Darkening of the skin or nails may also occur. PCB exposure may also cause abnormal liver tests or an enlarged liver in some individuals.

PCBs can cause reproductive and hormonal effects, and, in exposed children, developmental, immunological and neurological effects. Data strongly suggests that long term overexposure may cause cancer.

Workers who experience a one-time massive exposure to PCBs at work, should:

- Gather as much information as you can about the type and amount of exposure, including labels, Material Safety Data Sheets (MSDS), and the medical emergency phone number on the MSDS.
- If you are feeling ill, seek medical attention at an emergency room immediately.
- Contact Poison Control at 1-800-222-1222 for advice about treatment and follow their recommendations.
- Once the urgent situation has been taken care of, you may contact the nearest occupational health clinic in New York State www.health.state.ny.us/environmental/workplace/clinic.htm or in the country www.aoc.org/directory.htm for recommendations and follow-up.
- Report any exposure to your employer immediately. Complete an incident or exposure form. If neither are available, write a memo informing them of the exposure incident (date, time, location, what you were doing in the area, and for how long). Keep copies.

Do I need medical attention?

Smaller exposures, such as to indoor air or surfaces contaminated by PCBs in building materials or a one-time disturbance of PCB containing materials, such as caulking or a leaking or burning light ballast, would usually not require medical attention. These exposures are very limited and not expected to result in medical consequences.

Larger exposures, such as directly touching PCB-contaminated oils or paint or breathing dust from disturbing PCB containing material on a continuous basis over months, require a doctor's visit. If such exposures occur at work, you should see an occupational medicine specialist. A detailed occupational history describing the extent of the exposure is a crucial tool for determining if any illnesses could be related to PCBs. If you were exposed outside of work, you should see your primary care physician first, and you may be referred to a specialist in occupational and environmental medicine or a medical toxicologist if your doctor is concerned about your exposure. The specialist physician would do a thorough examination and pay special attention to your skin and liver.

Liver function tests should be done in case of massive exposures to see if there has been a toxic effect to the liver. However, a positive test result could be from another cause, and a negative result does not rule out significant exposure. Doctors do not recommend testing of breast milk under most exposure circumstances because, even if there are elevated levels in breast milk, they usually recommend breastfeeding.

Are there tests that would prove I have recently been exposed?

Unless you were exposed to massive amounts of PCBs, testing would not be useful. There are no tests that prove you were recently exposed to PCB. High blood levels (measured in serum) or fat tissue levels may indicate long term exposure levels to PCB, but the source of these exposures would not be identified by these tests (elevated levels could be from food, for example). The levels would not be used to recommend treatment.



What is the treatment for acute exposures?

If PCBs splash in the eyes, irrigate with tepid water immediately for at least 15 minutes and follow with an eye exam if symptoms exist. Remove contaminated clothing and discard properly. Gently wash affected skin with soap and warm water for at least 15 minutes. In the rare event that PCB-containing substances are ingested, immediately seek care at a medical facility. Orally activated charcoal is often administered to prevent absorption of poisons like PCBs in the body.

Exposed individuals should have periodic follow-up exams, with special attention to the skin and liver. Routine blood tests to measure PCB levels are not recommended.

Suggested Further Reading:

Environmental Protection Agency:

www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm

Agency for Toxic Substances and Disease Registry:

www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=26

This information is intended for general reference purposes only and is not intended to address specific medical conditions. It is not the intention of this fact sheet to provide specific medical advice, but rather to provide users with information to better understand workplace exposures. This information is not intended to be used as a substitute for professional medical advice or a medical exam.



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The Mount Sinai Selikoff Centers for Occupational Health are dedicated to providing **cutting-edge clinical services** with a focus on **prevention** to keep workers **healthy** and their workplaces **safe**. Our physicians are leaders in the field of occupational medicine, providing care to injured and ill workers and retirees in the **New York City** and **Mid-Hudson Valley** regions.

Our **highly skilled** and **multilingual team** of physicians, nurse practitioners, industrial hygienists, ergonomists, and benefits specialists provide comprehensive **patient-centered** services. We also help employers evaluate the work environment and establish programs to advance the general health and well-being of their entire workforce.

Our **medical experts** and **outreach team** members visit organizations, unions, and employers to bring **quality training** and **education** programs to the communities serviced by our clinical centers.

For an appointment or more information:

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