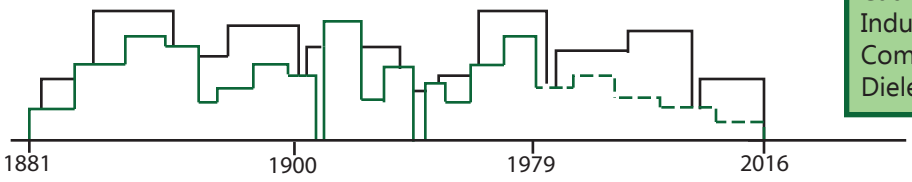
PCBs (polychlorinated biphenyls)

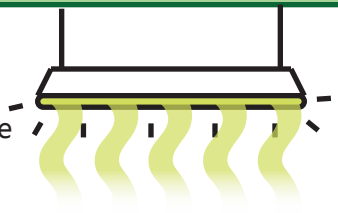
PCBs are chemicals that were often used in manufacturing because of their chemical stability (low solubility, vapr pressure, electrical conductivity, and flammability) and high heat capacity.

Even though PCBs were banned from production in 1979, they persist in the environment and are still present in old materials and equipment.



WHAT WERE PCBs USED IN?

Paint
Fluorescent light ballasts
Caulking
Industrial equipment, such as transformers
Commercial appliances
Dielectric fluids



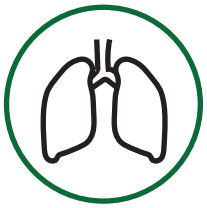
When the PCBs in these old materials are disturbed, they can evaporate off surfaces and be inhaled, absorbed through the skin, or ingested.

HOW CAN PCBs AFFECT MY HEALTH?

SHORT TERM EFFECTS

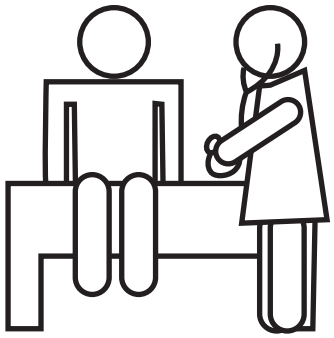
If there is a high exposure, symptoms of PCB exposure can appear in the short term.

Nausea and Vomiting



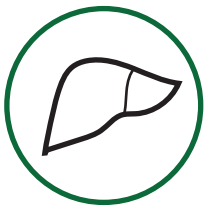
Respiratory Irritation

Skin Irritation (redness)

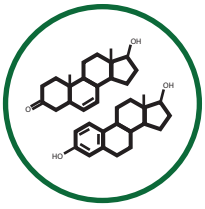


LONG TERM EFFECTS

Acne, or Darkening of Skin and Nails



Abnormal Liver Tests or Enlarged Liver



Reproductive and Hormonal Effects

Cancer

Developmental, Immunological, and Neurological Effects in Children

WHO IS AT RISK?

Occupations that involve handling, remediation, or removal of equipment that used PCBs in the past. This includes maintenance of old equipment, handling of construction materials like old paint or caulk, and disposal activities.

OCCUPATIONS AT RISK INCLUDE:

- Construction and demolition
- Electric cable repair and electroplating
- Emergency response and firefighting
- Maintenance or cleaning
- Medical lab work
- Transformer or capacitor repair
- Hazardous waste operation
- Paving and roofing
- Pipefitting and plumbing
- Timber products manufacturing
- Semiconductor operations
- Heat exchange equipment repair

WHAT DO I DO IF I HAVE BEEN EXPOSED?

Consult with an occupational medicine specialist even in the event of minimal exposure. If PCBs splash in your eyes or on your skin, wash the affected area for at least fifteen minutes. If PCBs are splashed on a worker, contaminated clothes should be removed immediately. If you show any symptoms of PCB exposure or if PCBs are ingested, seek medical attention.

If you have a long-term exposure, you should see an occupational medicine specialist to monitor your liver function and watch out for skin-related problems to determine if any illnesses may be related to your PCB exposure.

HOW DO I PREVENT EXPOSURE?

TRAINING

Workers should be trained on hazards of PCBs, safe work procedures, and cleanup procedures. Personal hygiene and sanitation procedures should be in place.

THE WORKPLACE

Showers, proper methods of disposal, and storage for contaminated materials should be provided. The Occupational Health and Safety Administration permissible exposure limit of PCBs at a 42% concentration is 1 mg/m^3. However, since PCBs are carcinogenic, exposure should be kept as close to zero as possible.

PERSONAL PROTECTIVE EQUIPMENT

Equipment that prevents skin and eye contact and controls respiratory exposure must be provided.

Examples of this include gloves, boots, aprons and goggles/face shields. If the worker is cleaning up a large spill, a full suit may be necessary. Work clothes should be laundered separately from other clothes.

MEDICAL SURVEILLANCE

Workers who use or handle materials that may contain PCBs should have regular checkups to make sure they have no PCB-related illnesses.

Mount Sinai *Selikoff Centers for Occupational Health*

To learn more, contact us at **888-702-0630** or visit us at **www.mountsinai.org/selikoff**