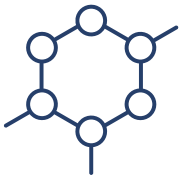


## Je, Baifenili zenye Klorini aina aina (Polychlorinated Biphenyls) (PCB) ni nini?



PCB ni kundi la kemikali zinazotengenezwa na binadamu. PCB zilitumika sana katika vifaa vya ujenzi na bidhaa za umeme hapo zamani. Kalafati, rangi, gundi, plastiki, vifaa vya kudhibiti umeme katika taa zenye kuakisi mwanga, transfoma na kapasita ni mifano ya bidhaa ambazo zinaweza kuwa na PCB.

Shirika la Ulinzi wa Mazingira (EPA) la Marekani lilipiga marufuku utengenezaji na matumizi fulani ya PCB mnamo 1979. Majengo yaliyojengwa au kukarabatiwa kati ya 1950 na 1979 yanaweza kuwa na vifaa vya ujenzi na bidhaa za umeme ambazo zina PCB.

## Je, watu hupata vipi PCB?

PCB zinaendelea kuenea katika udongo, hewa, maji na vyakula vyetu kwa sababu ya matumizi na utupaji wa zamani. PCB huoza polepole sana na zinaweza kubaki katika mazingira kwa muda mrefu. Watu wengi wana viwango vya chini vya PCB kwenye miili yao kwa sababu ya uwepo mkubwa wa PCB kwenye mazingira. Kwa jumla, hata hivyo, viwango vya PCB katika watu vimekuwa vikipungua tangu zilipopigwa marufuku.

Vyakula – ikiwa ni pamoja na nyama, bidhaa za maziwa na samaki (haswa samaki wanaovuliwa kwenye maji machafu) - ndivyo chanzo kikuu cha hatari ya PCB kwa watu wengi.

Katika miaka ya hivi karibuni, PCB zimepatikana katika majengo kadhaa ya zamani, ikiwa ni pamoja na shule katika Jiji la New York, Massachusetts na Connecticut. Vifaa vya kudhibiti umeme katika taa zenye kuakisi mwanga na kalafati za zamani ndivyo vyanzo vikuu vya PCB katika majengo ya shule.

Vifaa vya zamani vya kudhibiti umeme katika taa zenye kuakisi mwanga vinaweza kuwa na mafuta ya PCB na, kadri vifaa hivyo vinavyozeeka, mafuta ya PCB yanaweza kuvuja kwenye katika sehemu karibu au kutoa mvuke angani.

Kalafati ni bidhaa nyumbufu inayotumiwa kuziba mapengo katika kutengeneza madirisha, uashi na viungo katika majengo na miundo mingine isiyoruhusu uvujaji wa maji au hewa. PCB zilitumika kama sehemu ya kalafati hadi mwaka wa 1979. Kadiri kalafati iliyo na PCB inavyozidi kuharibika, PCB zinaweza kuachiliwa kwenye vumbi au hewa.

Watu walio ndani ya majengo ya shule wanaweza kuwa katika hatari ya PCB kwa:

- Kupumua vumbi au mvuke ambao una PCB

- Kupata vumbi iliyo na PCB mikononi mwao na kisha kuzimeza wakati kula na kunywa
- Kugusa bidhaa zenye PCB kwa ngozi

### **Je, ni athari gani za kiafya zinazoweza kutokana na kupata PCB?**

Uwezekano wa athari za kiafya kutoka kwa PCB, kama ilivyo kwa kemikali zingine, unategemea ni kiasi gani, mara ngapi, na urefu wa muda ambao mtu amekuwa katika hatari.

PCB zimeonyeshwa kuwa na athari kwenye mifumo ya kinga, uzazi, neva na endokrini (homoni) katika tafiti za wanyama. PCB pia zimeonyeshwa kusababisha saratani kwa wanyama. Tafiti katika wanadamu zinaonyesha kuwa wanadamu wanaweza pia kupata athari hizi za kiafya.

### **Una Maswali?**

Kwa maelezo zaidi kuhusu PCB na athari za kiafya, wasiliana na Idara ya Afya ya Vermont katika 802-863-7598.



## What are Polychlorinated Biphenyls (PCBs)?



PCBs are a group of human-made chemicals. PCBs were widely used in building materials and electrical products in the past. Caulk, paint, glues, plastics, fluorescent lighting ballasts, transformers and capacitors are examples of products that may contain PCBs.

The U.S. Environmental Protection Agency (EPA) banned manufacturing and certain uses of PCBs in 1979. Buildings constructed or renovated between 1950 and 1979 may have building materials and electrical products that contain PCBs.

## How do people come in contact with PCBs?

PCBs continue to be widespread in our soil, air, water and food because of past use and disposal. PCBs break down very slowly and can remain in the environment for a long time. Most people have low levels of PCBs in their bodies because of the widespread presence of PCBs in the environment. In general, however, PCB levels in people have been going down since they were banned.

Food – including meat, dairy products and fish (especially fish caught in polluted waters) – is the main source of exposure to PCBs for most people.

In recent years, PCBs have been found in some older buildings, including schools in New York City, Massachusetts and Connecticut. Lighting ballasts in older fluorescent lighting fixtures and caulk are the main sources of PCBs in school buildings.

Old lighting ballasts may contain PCB oil and, as the ballasts age, the PCB oil can leak onto nearby surfaces or produce vapors in the air.

Caulk is a flexible material used to seal gaps to make windows, masonry and joints in buildings and other structures watertight or airtight. PCBs were used as a component of caulk until 1979. As caulk containing PCBs deteriorates, PCBs may be released in the dust or air.

People inside school buildings may be exposed to PCBs by:

- Breathing in dust or vapors that contain PCBs
- Getting dust containing PCBs on their hands and then swallowing it while eating or drinking
- Skin contact with materials that contain PCBs

## **What are possible health effects from coming in contact with PCBs?**

The potential for health effects from PCBs, as with other chemicals, depends on how much, how often, and how long someone is exposed.

PCBs have been shown to have effects on the immune, reproductive, nervous and endocrine (hormone) systems in animal studies. PCBs have also been shown to cause cancer in animals. Studies in humans show that humans could also have these health effects.



### **Questions?**

For more information about PCBs and health effects, contact the Vermont Department of Health at 802-863-7598.