



Polychlorinated Biphenyls (PCBs)

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Fact Sheets for Schools and Teachers About PCB-Contaminated Caulk

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Caulk Containing PCBs May Be Present in Older Schools and Buildings

Between 1950 and 1978, caulk containing potentially harmful PCBs (polychlorinated biphenyls) was used in many buildings, including schools. Although PCBs were banned in the United States in 1978, contaminated caulk still exists in older establishments that have not had the caulk replaced. PCB bioaccumulation in children can damage immune, reproductive, nervous, and endocrine systems.

Fact Sheets

[Fact Sheets for Schools and Teachers About PCB-Contaminated Caulk \(PDF\)](#) (3 pp, 339K, [About PDF](#))

Children can be exposed to PCBs by:

- Breathing in dust contaminated with PCBs
- Touching caulk and contaminated soil directly
- Putting their hands into their mouths after touching the caulk, soil, and surrounding building materials.

What are PCBs?

PCBs are organic chemicals that were used in construction materials and electrical products produced before 1978. Caulk containing these chemicals may still be present in older schools and buildings, sometimes at high levels. With increased awareness and cleanup efforts, PCB levels in the United States have decreased substantially.

How are people exposed to PCBs?

People whose workplaces and jobs involve working with PCB-laden objects or in PCB cleanup are at the highest risk for elevated exposure. Most people have some accumulation of PCBs in their bodies. Fish, meat, and dairy contain small

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amounts of PCBs. In fact, most peoples' exposure to PCBs is via the food chain. When products containing PCBs are disposed of improperly, PCBs can enter waterways and contaminate fish and other animals. Indoor air has been found to contain PCBs from some types of caulk in building materials. People can also be exposed to PCBs when handling PCB-containing products such as caulk.

Does the caulk in my home or other places contain PCBs?

PCBs in caulk have not been found in single-family homes. EPA has only found the chemical in caulk in large, older apartment complexes and some older buildings, such as schools.

What can I do about PCBs in schools?

If caulk containing PCBs is discovered, you should avoid direct contact with caulk and nearby porous materials, if possible. If caulk-containing PCBs are discovered, be sure to limit exposure to the caulk until it has been safely removed. Here are some ways for decreasing exposure:

- Keep children from touching caulk or surfaces near caulk
- Clean frequently to reduce dust
- Use wet cloths to clean surfaces
- Use vacuums with HEPA filters
- Wash children's hands with soap and water before eating
- Wash children's toys often
- Wash surfaces, windowsills, walls, and objects often in rooms known to have PCB-containing caulk
- Consider testing the air for PCBs or test the caulk if it is peeling or visibly deteriorating
- Follow safe work practices when renovating
- Improve ventilation by opening windows or adding exhaust fans
- Clean air ducts

What NOT to Do:

- Do not attempt to remove PCB-containing caulk by yourself. PCBs should be removed by personnel wearing protective equipment who follow procedures to minimize the spread of PCBs
- Do not sweep with dry brooms or use dusters because they spread dust

Are children in direct danger if their school has caulk containing PCBs?

PCBs accumulate in the body in high levels only after prolonged exposure to the chemical. Follow the recommended procedures to reduce exposure. Restricting children from areas where PCB-containing caulk is located, promoting safe work practices during renovation activities in schools, and removing caulk safely as part of a PCB removal or renovation project reduces the potential for exposure.

EPA is helping to address the issue of PCBs in caulk

EPA is conducting research on how the public is exposed to PCBs in caulk and on the best approaches for reducing exposure and potential risks associated with PCBs in caulk. Where PCBs have been found in caulk, EPA is committed to helping schools and communities enact plans to reduce exposure. Please

contact your regional PCB coordinator at 888-835-5372 for help with assessing contamination and exposure and developing cleanup plans.

Contact

Call EPA's PCBs in Caulk Hotline: 888-835-5372 to learn more about PCBs in caulk and to get information on PCB professionals in your area.

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PCBs in Caulk School Checklist

Was your school built or remodeled between 1950 and 1978?

Many older schools and older buildings built or remodeled before 1978 have been found to have caulk containing PCBs (polychlorinated biphenyls). These chemicals can have adverse effects on human health, so children and teachers need to be informed about potential risks.

Do you see walls or window sills in your school with cracking caulk?

As caulk ages, it cracks and flakes from the source. This leads to PCB-laden dust. Also, PCBs can, over time, be released from caulk into the air. Find out if your school has PCBs by calling a professional to test for PCBs in the air or, if caulk is peeling or visibly deteriorating, by having a professional test the caulk.

Have PCBs already been detected in your school's caulk?

If so, caulk with the highest levels of PCBs should be removed in the short term. Ultimately, the goal is to remove all PCB-contaminated caulk at levels greater than 50 parts per million.

Do children touch surfaces frequently or play in soil around their school?

Yes, young children can put their hands in their mouths after touching PCB-contaminated surfaces, which could seriously impact their health. Wash children's hands and toys often to reduce potential exposure.

Soil around schools and buildings may also contain PCB caulk dust or flakes. This would include playground soil and soil surrounding building foundations. Children can accidentally swallow the soil after handling it when outdoors, or the soil may be tracked indoors from shoes onto carpet and floors where children have a greater risk of ingesting it. Teach children to wipe and remove their shoes and to wash their hands after playing outside.

School Advisory: Talking Points for Teachers and Daycare Staff

Why should you be worried about PCBs in caulk?

High levels of PCBs in the body can cause adverse effects on the immune, reproductive, nervous, and endocrine systems. PCB exposure could result in

cancer.

Can PCBs be found in and around my school?

PCBs are harmful chemicals sometimes found in schools and other buildings built or remodeled before 1978, and are found in and around building joints and other places, including:

- Cracking and flaking caulk
- Contaminated soil
- Masonry adjacent to windows
- Indoor air that has been exposed to PCBs
- Paint, electrical transformers, and light ballasts.

PCBs were not added to caulk after 1978. Therefore, in general, schools built after 1978 do not contain PCBs in caulk.

Are my children at risk for PCB exposure?

PCBs accumulate in the body in high levels only after prolonged exposure to the chemical. Follow the recommended procedures to reduce exposure. Restricting children from areas where PCB-containing caulk is located, promoting safe work practices during renovation activities in schools, and removing caulk safely as part of a PCB removal or renovation project reduces the potential for exposure.

How can you prevent PCB accumulation in the body?

- Keep children from touching caulk or surfaces near caulk
- Keep children away from soil that may contain PCBs
- Clean the floor, walls, and window sills regularly with wet cloths
- Wash children's hands and toys often
- Improve ventilation by opening windows or adding exhaust fans. Clean air ducts.

Contact

Call EPA's PCBs in Caulk Hotline: 888-835-5372 to learn more about PCBs in caulk and to get information on PCB specialist professionals in your area.

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What to Say to Children About PCBs

The dangers of the chemicals known as PCBs (polychlorinated biphenyls) in caulk need to be shared with children to encourage proper precautions.

Tell the Story

In simple terms, go step by step through why caulk is harmful to them.

An example follows:

A long time ago when this building was made, the builders used white material with chemicals in it to put in the windows and walls. These chemicals can make you sick. The stuff that's bad for you is in the white parts around the windows and doors (show without touching it yourself). You should not touch these. If you accidentally touch the white stuff, you need to wash your hands right away. This is one reason why we always wash our hands before we eat food.

The story should be repeated at least one other time within the week of the first presentation. Prompt the children to ask questions or even retell the story in their own words. This will help reinforce its importance.

How are people exposed to PCBs?

Most people have some accumulation of PCBs in their bodies. When products containing PCBs are disposed of improperly, the chemicals can enter waterways and contaminate fish and other animals. So, food is how most people are exposed. Fish, meats, and dairy contain small amounts of PCBs. People can also be affected by PCBs when handling products containing them; people whose workplaces and jobs involve working with PCB-laden objects or in PCB cleanup are at the highest risk for elevated exposure. More recently, indoor air has been found to contain PCBs from some types of caulk in building materials.

Distribute Coloring Exercise

See [Fact Sheets for Schools and Teachers About PCB-Contaminated Caulk \(PDF\)](#) (3 pp, 1.2MB, [about PDF](#)).

At the bottom of this document is a picture of the average classroom. Instruct the students to read the directions and color in the scene, ensuring that the students color all locations of where caulk may be found in RED.

Contact

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