

## **What is asbestos?**

Asbestos is the general name for a group of naturally occurring minerals that are silicon-based and made up of fibres. There are six main forms of asbestos, but the three most common are chrysotile, amosite and crocidolite.

Asbestos can be used to make or enhance products that are long-lasting and fire-resistant. It was mainly used in Canada before 1990 in commercial buildings and homes due to its heat resistance, tensile strength and insulating qualities.

However, when we breathe air that is contaminated with asbestos dust, we breathe in small sharp, barbed-like asbestos fibers that find their way deep into our lung tissues and other internal organs where they remain – for life. Breathing even small, invisible quantities can cause fatal diseases – including asbestosis, mesothelioma and cancer – to develop as long as 20 to 30 years after exposure. In December 2016, the Canadian government announced a commitment to ban asbestos and asbestos-containing products by 2018.

## **Where is asbestos used?**

The construction industry and commercial sectors have used asbestos in many products, including:

- Cement and plaster
- Building insulation
- House siding
- Car and truck brake pads
- Floor and ceiling tiles
- Insulation for industrial furnace and heating systems

## **How can you be exposed?**

The use of asbestos was widespread throughout Canadian society. Today, anyone who works in a building or area where asbestos exists is at risk for exposure if adequate control measures are not in place. Time can cause asbestos to become brittle, flake and deteriorate. For asbestos the term often used is “friable”). It’s this “friability” that allows the hazardous fibres to become airborne. There are other ways for asbestos contamination to spread. Products containing asbestos which have been damaged by water, or by abrasive procedures, or through improper maintenance or removal processes can also release fibres.

PSAC members can face contamination through otherwise common tasks that release fibres into the air. These can include:

- Disturbing or removing insulation that contains asbestos, including vermiculite insulation and insulation around hot water pipes and tanks
- Removing or disturbing siding or roofing shingles and felt that contain asbestos
- Sanding, sawing, drilling, breaking apart, scraping or smoothing rough edges of materials that contain asbestos such as vinyl asbestos floor tiles, acoustical plaster and older surface treatments that contain asbestos including caulking and dry wall

Many PSAC members may face exposure in institutional buildings such as federal government offices, military bases, correctional facilities and casinos. Others may have been exposed by working directly with asbestos, including IT staff, electricians, plumbers and carpenters.

### **What are the health risks?**

Asbestos is known to cause mesothelioma, a type of cancer almost exclusively associated with asbestos exposure. Mesothelioma develops in the thin membranes lining the lungs and abdomen. This type of cancer is inoperable and always fatal.

Asbestos can also cause asbestosis, an irreversible disease which causes scarring of the lungs, making it difficult to breathe. The loss of lung function often progresses to disability and death. Asbestos is also linked to other cancers, such as cancers of the esophagus, stomach, the large intestine and rectum. It also increases the likelihood of other types of lung cancer.

### **Does legal mean safe? What are “safe” levels?**

Legal does not mean safe.

Even though there is no evidence of a “safe” level of exposure to asbestos, most jurisdictions have established occupational exposure limits for asbestos to be as low as reasonably possible, but not more than 0.1 fibres per cubic centimetre (f/cm<sup>3</sup>). Although this may sound like a small amount, being exposed to 0.1 f/cm<sup>3</sup> (or 100,000 fibres in each cubic metre of air) for an eight-hour day means that a worker can easily breathe in hundreds of thousands of asbestos fibers per day.

Employers may make the claim that because a workplace follows government regulations, workers have nothing to worry about. This is false. Government standards for asbestos exposure are inadequate and will not protect workers from getting cancer. The standards were designed to protect asbestos factory workers against getting asbestosis, not to protect PSAC members from getting cancer.

### **How are asbestos diseases prevented?**

Prevention of asbestosis and any associated cancers can only be achieved by preventing any exposure to asbestos. Remember, there are no safe levels of exposure to asbestos.

### **Reducing the risk**

Wherever there is a fibrous material used in buildings, employers should have an asbestos management program. That program must contain the following elements:

- Testing to determine the existence of all materials containing asbestos
- An inventory that is reviewed periodically for accuracy
- A system that identifies where asbestos has been located
- A procedure to ensure any work that may be performed is done in accordance with proper asbestos controls in place
- Worker training on all aspects of the management program

Where there are no management programs, or where testing has not been performed, workers should automatically suspect that asbestos may be present. They should demand that a sample be sent to a laboratory for testing and identification. They should avoid disturbing asbestos materials.

If asbestos is found to be present, the employer must bring in a trained expert to determine what should be done about it. Accumulations of dust should be checked for asbestos. An air-sampling program should be conducted to determine if airborne fibres are present. If there is friable asbestos open to atmosphere, then asbestos dust can become airborne. This means a hazard exists, no matter what the results of the air sampling shows.

The only permanent solution to eliminate the hazard is to remove the asbestos. Sometimes the asbestos is covered up with other building materials. In other cases, it is “encapsulated” or sealed with a coating. Encapsulation alone is not generally considered an adequate solution. The best method for asbestos control will depend on the condition of the asbestos, its location and what will likely disturb it in the future.

FOR MORE INFORMATION CONTACT: PSAC National Health and Safety Office [healthandsafety@psac-afpc.com](mailto:healthandsafety@psac-afpc.com) , especially if there is no management plan to prevent disturbance.

### **Working with Asbestos**

Whatever action is taken to deal with the asbestos, the work must be done by properly trained workers following strict precautions to ensure that no one is exposed. No PSAC member who has not been fully trained to remove asbestos should perform this work, no matter how small.

The work area must be enclosed and kept under negative pressure with thick plastic. Since there is no safe level of exposure, any asbestos that gets into the air will endanger the health of anyone in the area. Workers must be provided with special work clothes, showers and two lockers: one for clean clothes and one for dirty clothes. Management should also arrange to have the work clothes laundered under controlled conditions.

Repair shops where asbestos is present should use local exhaust ventilation systems that include special HEPA (High Efficiency Particular Air) dust collection vacuum cleaners that remove the asbestos fibres at their source, for example when brake linings are being changed. Air hoses should not be used to clean asbestos dust, since they can blow dust around the workplace.

### **Who can help?**

If you suspect that asbestos is present in your workplace, get help by contacting the PSAC national health and safety representative in your region or the PSAC National Health and Safety Branch.

Members should know that cancers caused by asbestos – including asbestosis, mesothelioma and asbestos-induced lung, laryngeal and gastrointestinal cancer – may be designated as notifiable diseases under the relevant Workers’ Compensation Board.