

The leading causes of occupational illness in Ontario



What you need to know about asbestos-related diseases and noise-induced hearing loss.

Asbestos and noise are two very different workplace hazards. But when it comes to their health and safety impacts, they have a lot in common. Respectively, they are the leading causes of fatal and non-fatal occupational illness in Ontario.

Between 2012 and 2021, asbestos-related diseases accounted for 80 per cent of fatal claims accepted by the Workplace Safety and Insurance Board (WSIB) for the industries that IHSA serves. More than 50 per cent of non-fatal claims were due to noise-induced hearing loss (NIHL).

Because asbestos-related diseases and NIHL often take years to develop, many WSIB claims were among older workers—whose exposures may have occurred at a time when jobsite controls were less strict than they are today. We might “know better” now, but the hazards have not gone away. It benefits everyone to understand the risks, work to minimize them, and recognize the signs of potential illness.

Asbestos-related diseases

We have known about the dangers of asbestos for decades. Over the years, workplaces have become quite good at controlling the risk of exposure. However, since asbestos-containing materials were widely used as fire retardants and insulation until the 1980s, construction workers remain at risk today—particularly during demolition or renovation activities. Certain vehicle parts and older electrical components may also contain asbestos, exposing transportation and utilities workers to the hazard.

What are the risks?

“The risk of exposure is greatest with asbestos-containing materials that can be easily crushed, pulverized, or powdered by hand pressure,” says Cristina St. Pierre, Provincial Hygienist at the Ministry of Labour, Immigration, Training, and Skills Development (MLITSD). When these materials are disturbed, inadequately protected workers may breathe in microscopic asbestos fibres.

Over time, fibres trapped in the lungs can lead to serious respiratory illnesses, including:

- Lung cancer
- Mesothelioma, a rare but aggressive cancer of the lining of the lungs, abdomen, and heart
- Asbestosis, a chronic scarring and inflammation of the lungs

What are the controls?

Ontario law says that project owners must disclose when asbestos is present on a jobsite. They must conduct a risk assessment and classify abatement work as either Type 1, 2, or 3, according to the asbestos hazard presented by the work.

The classification of the asbestos work determines the required controls. These include measures such as “the use of barriers and enclosures, wet methods and HEPA filtration to control asbestos dust, protective clothing and respirators, proper cleanup of the work area, and procedures for decontamination and waste removal,” St. Pierre says.

Though it’s not guaranteed that a single instance of limited contact with asbestos will result in illness, there is no “safe” level of exposure. That’s why employers must maintain an **Asbestos Work Report** for each worker who has been involved in a Type 2 or Type 3 operation, and submit it annually to the MLITSD.

Reports are collected in the **Asbestos Workers Register**, which tracks how often individuals work with asbestos over time. This enables the Ministry to provide workers and their doctors with information on potential health impacts, once they’ve had a certain cumulative amount of asbestos exposure.

KNOW YOUR HAZARD

Common asbestos-containing materials



- Ceiling panels and floor tiles
- Drywall joint compound
- Electrical cable wrap
- Insulation (loose-fill, pipe wrap, and spray-on)
- Shingles
- Vehicle brake pads, clutches, and gaskets



KNOW YOUR HAZARD

Common sources of damaging noise

- Backhoe (85-104 dBA)
- Nail gun (98-101 dBA)
- Concrete saw (97-103 dBA)
- Jackhammer (100-115 dBA)
- Grinder (106-110 dBA)
- Piledriver (119-125 dBA)



How is a diagnosis made?

Because asbestos most often affects the lungs, symptoms of asbestos-related disease include chronic chest pain, shortness of breath, and a persistent, dry cough. These symptoms, however, are common to a variety of illnesses, so providing an occupational history to your doctor is key.

“Making the link between an illness and whether it’s work-related depends on understanding what the patient does for a living,” says Dr. Nikhil Rajaram, the MLITSD’s Provincial Physician. This is even more important given the long time that may pass between exposure and the presence of disease.

From there, a full physical exam is carried out, typically including a chest x-ray and lung-function tests. Workers who have obvious signs of disease may need to proceed with more advanced tests with their doctor or a specialist.

Noise-induced hearing loss (NIHL)

As with asbestos, we have long known that noise is a hazard on construction jobsites, in truck yards, and at many other industrial workplaces. We also know it’s hard to minimize. Depending on the type of work and equipment needed to do the job, noise can be unavoidable. It may be constant or intermittent—and sometimes unpredictable—and can come from a wide range of sources.

What are the risks?

Excessive noise can damage cells in the cochlea—part of the inner ear that plays a key role in the ability to hear. This damage worsens with frequent exposure (i.e., the more cells that die, the greater the potential hearing loss). **Regular exposure to sounds measured at or above 85 decibels (dBA) will damage unprotected ears.** But hearing loss can also result from a single exposure to a very loud noise such as an explosion.

Workers with NIHL commonly experience symptoms such as:

- The inability to hear high-pitched sounds, such as children’s laughter
- Difficulty understanding other people when they’re speaking, especially if there’s background noise
- Tinnitus—a ringing or buzzing sound in the ear
- A feeling of pressure or fullness in the ear

“Noise-induced hearing loss is painless, progressive, and permanent,” Dr. Rajaram says. Fortunately, he adds, it’s also preventable.

What are the controls?

Employers must control hazardous noise at the source or along the path—by using quieter equipment, for example, or restricting access to noisy work areas. If these measures are not feasible, workers can use hearing protection devices such as earmuffs or earplugs to limit their exposure.

However, St. Pierre notes that to be effective, you must insert foam earplugs fully into the ear canal: “Pull up and back on the top part of your ear while you insert the earplug.”

Likewise, avoid removing hearing protection to communicate with others on a noisy jobsite. You may hear your colleague better, but you’re also being exposed to potentially damaging noise from ongoing work.

How is a diagnosis made?

Some employers now guard against NIHL with audiometric testing, which measures your ability to hear sounds at different frequencies. Workers take a baseline test at the start of their employment, and then are re-tested at least once a year. If a change in hearing is identified, steps can then be taken to prevent further loss.

Workers who are concerned about their hearing should consult a doctor for additional testing and medical imaging—to rule out other potential causes of hearing loss. Providing your occupational history also plays an important role in determining whether hearing loss is work-related.



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