

Noise Hazards Safety & Compliance Game Plan



According to HealthCanada, roughly 9,000 Canadian workers experience some form of hearing impairment due to overexposure to noise in the workplace each year. Occupational Health and Safety (OHS) laws require employers to [safeguard workers against hazardous noise levels](#). While specific [OHS hearing conservation requirements](#) vary by jurisdiction and work setting, there are nine essential steps necessary to comply.

Step 1. Perform Noise Hazard Assessment

Identify jobs and activities that may produce hazardous noise. Designate a [competent](#) person to conduct a [noise survey](#) to monitor the sound levels to which workers are exposed as if they weren't wearing hearing protection. Noise measurements must use scientifically reliable instruments and methods. Alberta, British Columbia, Manitoba, Newfoundland, Prince Edward Island, and Québec specifically require noise monitoring to be done in accordance with CSA Z107.56, *Procedure for Measurement of Occupational Noise*.

Step 2. Calculate Noise Exposure

Levels

OHS regulations dictate not just how you collect but also analyze data to assess if workers are exposed to hazardous noise levels. You must calculate noise levels in A-weighted decibel units called “dBA” that measure sound pressure to account for the ear’s different levels of sensitivities to sounds of different frequencies. To perform the required assessment, you must consider not just sound intensity but how long workers are exposed to it.

Step 3. Determine Need for Hearing Conservation Program

General Rule: The occupational exposure limit (OEL) to which a worker may be exposed in a 24-hour period is 85 dBA over an 8-hour work shift. Exposure above 85 dBA must be reduced in duration; the higher the sound level, the shorter the duration. British Columbia, New Brunswick, Québec, and Yukon also have a separate peak OEL of 140 decibels for “impulse” or “impact” noise, that is, two or more periods of exposure different levels during the shift, as opposed to continuous exposure at the same level throughout the shift.

Strategic Pointer: The required measures for control noise hazards are pretty much the same across the country. The big difference is that in Alberta, British Columbia, Newfoundland, Prince Edward Island, Saskatchewan, Northwest Territories, and Nunavut employers must implement these measures as part of an integrated [‘noise control and hearing conservation’ ‘program’ or ‘plan.’](#)

Step 4. Use ‘Hierarchy of Controls’

to Minimize Hazardous Noise Exposure

If you determine that workers are exposed to hazardous noise above the OEL, you must implement measures to protect them following the hierarchy of controls approach:

- If '[practicable](#),' eliminate the hazardous tools, equipment, or machinery and substituting quieter alternatives.
- If elimination isn't practicable, implement engineering controls such as enclosures, physical barriers, mufflers, sound-absorbing materials, isolation, and other physical methods or materials that muffle the noise.
- If engineering controls alone don't eliminate the danger, implement work and administrative controls to minimize worker exposure to hazardous noise levels such as modified work schedules and rotating workers in and out of noise hazard areas.
- The lowest level of the hierarchy, to be used as a last resort, is to make workers exposed to noise hazards use personal hearing protection.

Step 5. Don't Rely on Hearing Protection Alone

While perfectly okay as a complementary measure, personal hearing protection is generally not allowed as the primary method of protection except in narrow circumstances where engineering controls are unavailable, ineffective, or otherwise impracticable. You must furnish required PPE to workers exposed to noise at levels exceeding the OEL at no cost to them. In Saskatchewan, Northwest Territories, and Nunavut, employers must also furnish hearing protection to workers exposed to noise above 80 dBA and below 85 dBA if they

request it.

Step 6. Post Noise Hazard Warning Signs

Employers must post clearly worded noise hazard warning signs, although there are [slight differences](#) as to when signs are required (with regard to whether noise must be above or near the OEL) and what they must say.

Step 7. Provide Exposed Workers Proper Hearing Protection Training

Workers required to use hearing protection or otherwise exposed to hazardous noise levels must receive education and training from a competent trainer covering, at a minimum:

- The hazards of exposure to excessive noise.
- How hearing protection protects against hazardous exposure.
- The capabilities and limitations of the particular types of hearing protection devices used.
- The importance of ensuring a tight and comfortable fit.
- How to effect a tight seal between earplugs and the ear canal.
- How to effect a tight seal between earmuffs and the side of head.
- How to inspect the equipment.
- How to clean, disinfect and maintain the equipment.
- Why it's important not to modify the equipment, such as by drilling holes in earcups.
- Key details about the audiometric testing you provide, how it works, and what workers must do to avail themselves of testing.

Step 8. Provide Exposed Workers Required Audiometric Testing

Occupational hearing loss tends to be gradual and cumulative. By the time workers notice a problem, it's often too late to reverse the damage. That's why most jurisdictions require employers to provide workers exposed above the OEL audiometric testing performed by medical professionals using scientifically reliable methods. To detect hearing damage **before** symptoms are perceived, workers must get a baseline test within a specific period of time, typically six months, after initial exposure and then get retested every year (or two years) after that.

Step 9. Monitor Effectiveness of Your Noise Control Measures

The final step is to [monitor](#) the validity of your noise assessment and effectiveness of your noise control program and/or non-program measures at least once a year and immediately in response to:

- Worker complaints or symptoms indicating ringing in the ears or hearing loss.
- Changes to equipment, machinery, tools, or work conditions that increase or have the potential to increase either how much noise the worker is exposed to or the exposure's duration.
- Before the construction of significant additions or alterations to a work site that have the potential to create noise hazards.
- Any other indications suggesting that your assessment and safety measures might be ineffective or unresponsive to current work site conditions and noise hazards.