

Noise and hearing loss



Noise is a common workplace hazard. It can cause hearing loss and affect overall health.

Many CUPE members are exposed to noise in the workplace. Workers at higher risk include first responders, transportation workers and those who work with heavy machinery.

Hearing loss is preventable. Employers have a duty to control noise and protect workers.

Effects of noise

Noise can damage or destroy the cells in the inner ear that send sound signals to the brain. This can lead to problems like ringing in the ears. Repeated or very loud exposure can even lead to permanent hearing loss.

Noise can also increase stress and muscle tension, affect mental health and make it harder to concentrate.

Measuring noise in the workplace

Sound is usually measured in decibels (dB). The higher the number, the louder the sound. The human ear doesn't hear all sounds equally, so workplaces measure sound in dB(A). dB(A) reflects what the ear actually hears and gives a more accurate measure of harmful noise.

Exposure limits

Most Canadian jurisdictions use a limit of 85 dB(A) average over an eight-hour workday. Noise levels can exceed this level for short periods.

Very loud noise, around 140 dB(A), can cause immediate damage and should not occur without protection.

Employers must measure noise using proper equipment. Phone apps can give rough estimates but are unreliable.

dB(A)	Maximum daily exposure without protection
85	8 hours
88	4 hours
91	2 hours
94	1 hour
97	30 minutes
100	15 minutes

Hearing conservation programs

One way to prevent hearing loss in the workplace is a hearing conservation program. These programs are required in some jurisdictions and are best practice in all workplaces with noise hazards. A hearing conservation program should:

- Identify and measure noise hazards
- Assess worker exposure
- Eliminate or reduce noise through controls
- Provide hearing protection where needed
- Train workers
- Conduct regular hearing tests
- Contain provisions for monitoring and updating the program

Controlling noise

When noise is too high, employers must reduce it using the hierarchy of controls. The most effective controls remove the noise at the source. The least effective rely on personal protection.

Elimination

- Design workplaces to prevent noise and vibration
- Repair malfunctioning equipment

Substitution

- Replace noisy equipment with equipment that has sound-dampening or silencers or new equipment that is less noisy

Engineering controls

- Add insulating material to equipment to dampen noise
- Add enclosures and sound-deadening materials to noisy rooms to absorb sound and prevent it from bouncing off walls and equipment
- Modify ventilation systems to reduce ambient noise

Administrative controls

- Restrict noisy areas to workers who have received training
- Rotate jobs to limit exposure
- Schedule noisy work when few workers are present
- Develop a hearing conservation program

Personal protective equipment (PPE)

Hearing protection should only be used to supplement other controls. It should:

- Be approved by [CSA Group](#)
- Fit the worker
- Allow the worker to communicate and hear alarms
- Not interfere with other PPE

Take action

Workers can:

- Report concerns around noise in the workplace
- Identify noise hazards during inspections
- Push for controls that reduce noise at the source
- Demand regularly scheduled equipment maintenance
- Request a noise survey
- Ensure union involvement in reviewing survey results and control measures
- Keep unresolved noise issues on the health and safety committee agenda
- Ensure employers follow health and safety laws
- Use the right to refuse unsafe work
- Take CUPE education on noise
- Negotiate stronger noise protections in your collective agreement

FOR MORE INFORMATION, CONTACT:

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