MLITSD 2026-27 Ontario Noise Regulation and Ototoxics

Ina Chomyshyn

Occupational Hygiene Consultant

Northern Region

Ministry of Labour, Immigration, Training and Skills Development 2026 -2027

Ontario

Disclaimer

The purpose of today's presentation is to assist the workplace parties in understanding their obligations under the Occupational Health and Safety Act (OHSA) and its regulations. It is not intended to replace the OHSA or the regulations, and reference should always be made to the official versions of the legislation.

It is the responsibility of the workplace parties to ensure compliance with the legislation and this presentation does not constitute legal advice. If you require assistance with respect to the interpretation of the legislation and its potential application in specific circumstances, please contact your legal counsel.

Ministry of Labour, Immigration, Training and Skills Development (MLITSD) inspectors will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This presentation does not affect their enforcement discretion in any way.

FAIR, SAFE AND HEALTHY WORKPLACES DIVISION



Our Vision

We envision an Ontario that is the most attractive place to work in the world because every employee is treated fairly and comes home safely.

Our Mission

We set, communicate and enforce legislation to help make Ontario workplaces fair, safe and healthy. Through our professionalism, innovation and collaboration, we earn and maintain the public trust.

Outline

- Inspection Campaign 2026-27
- Ontario Regulation 381/15 “Noise”
- Occupational Illness Reporting
- Ototoxic agents
- Questions

Ontario Ontario Ministry of Labour, Immigration, Training and Skills Development MLITSD - 2026-27 Occupational Hygiene Campaign

WHAT: Proactive inspections to determine compliance with ***Ontario Regulation 381/15 Noise***

WHERE: **I**ndustrial, construction, mining, health care, and other workplaces where workers are exposed to noise

WHO: MLITSD Occupational Hygienists

WHEN: **April 1, 2026 – March 31, 2027**; education and enforcement phases are happening concurrent



WHY (data informed)

- Exposure to hazardous sound levels may cause noise-induced hearing loss (NIHL) which is a **preventable occupational illness**.
- Controlling workplace exposures to noise will help lower the risk of workers developing NIHL.
- Noise is one of the most common occupational health hazards and is the **most common cause of an occupational disease claim** to the WSIB.
- In recent years, NIHL represented nearly **50%** of non-Covid-19 occupational disease claims to the WSIB.
- Between 2012 and 2024, over 72,000 NIHL claims have been allowed by the WSIB.
- In 2024, the cost of NIHL claims represented **42% of occupational disease claim costs** paid by the WSIB.

The noise regulation came into force **10 years ago**, marking a milestone and an opportunity to assess its impact in workplaces.

WHY (human impact)

When unaddressed, hearing loss impacts many aspects of life at the individual level:

- Limits communication and speech
- Adversely affects cognition
- Increases social isolation, loneliness and stigma
- Increases risk of developing dementia and accelerated cognitive decline

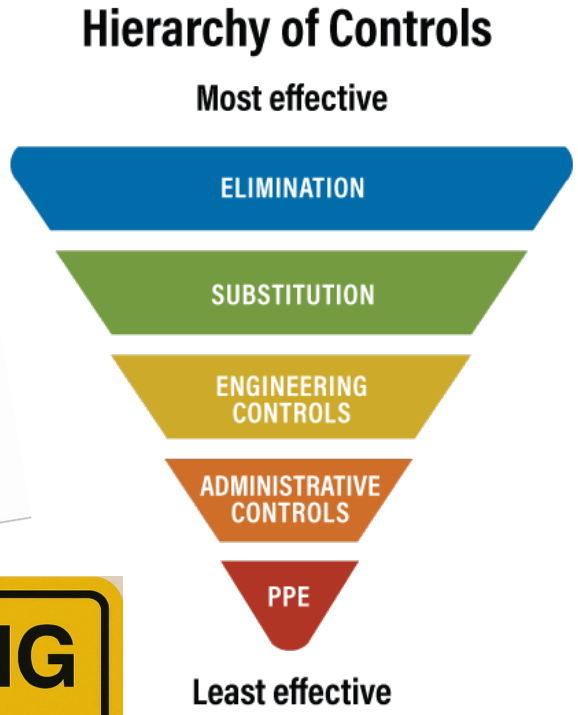


Campaign focus

The inspections will involve:

- assessing worker exposure to noise and ensuring that no worker is exposed to a sound level greater than 85 dBA, Lex,8
- emphasizing the hierarchy of controls, specifically engineering controls and work practices, in protecting workers from hazardous sound levels
- evaluating the selection, care, and use of hearing protection devices and ensuring that workers receive appropriate training on the devices
- ensuring that warning signs are posted at every approach to an area where sound levels regularly exceed 85 dBA







Ontario Regulation 381/15 - Noise

Section 1 - Interpretation

Section 2 – Duty to Protect Workers

Section 3 – Training & Instruction

Section 4 – Hearing Protection Devices

A guide to the Noise Regulation under the Occupational Health and Safety Act

Section 1 – Interpretation

Decibel (dB)

Unit of measure for sound pressure

Logarithmic value

A unit of measurement of sound pressure level that is equal to 20 times the logarithm to the base 10 of the ratio of the pressure of a sound, divided by the reference pressure of 20 micropascals

Attenuation

Reduction in sound pressure level upon the ear

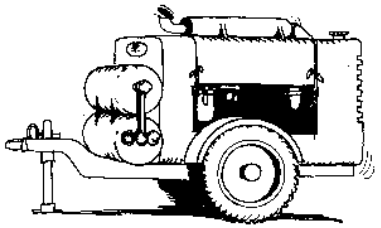
dBA

Reading of a sound pressure level on a sound level meter (A-weighted network)

Closest measurement to represent the normal hearing attenuation

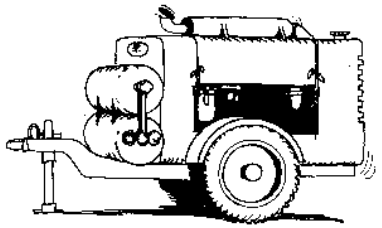
Decibels look like numbers,…..but

- Decibels are based on a logarithmic scale
- Cannot add, subtract or average



90 dBA

+

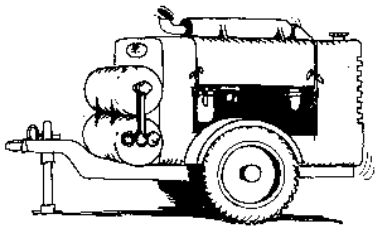


90 dBA

= ?

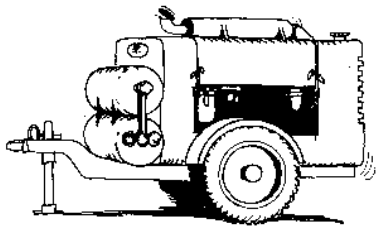
Decibels look like numbers,…..but

- Decibels are based on a logarithmic scale
- Cannot add, subtract or average



90 dBA

+



90 dBA

= 93 dBA

Section 1 – Interpretation

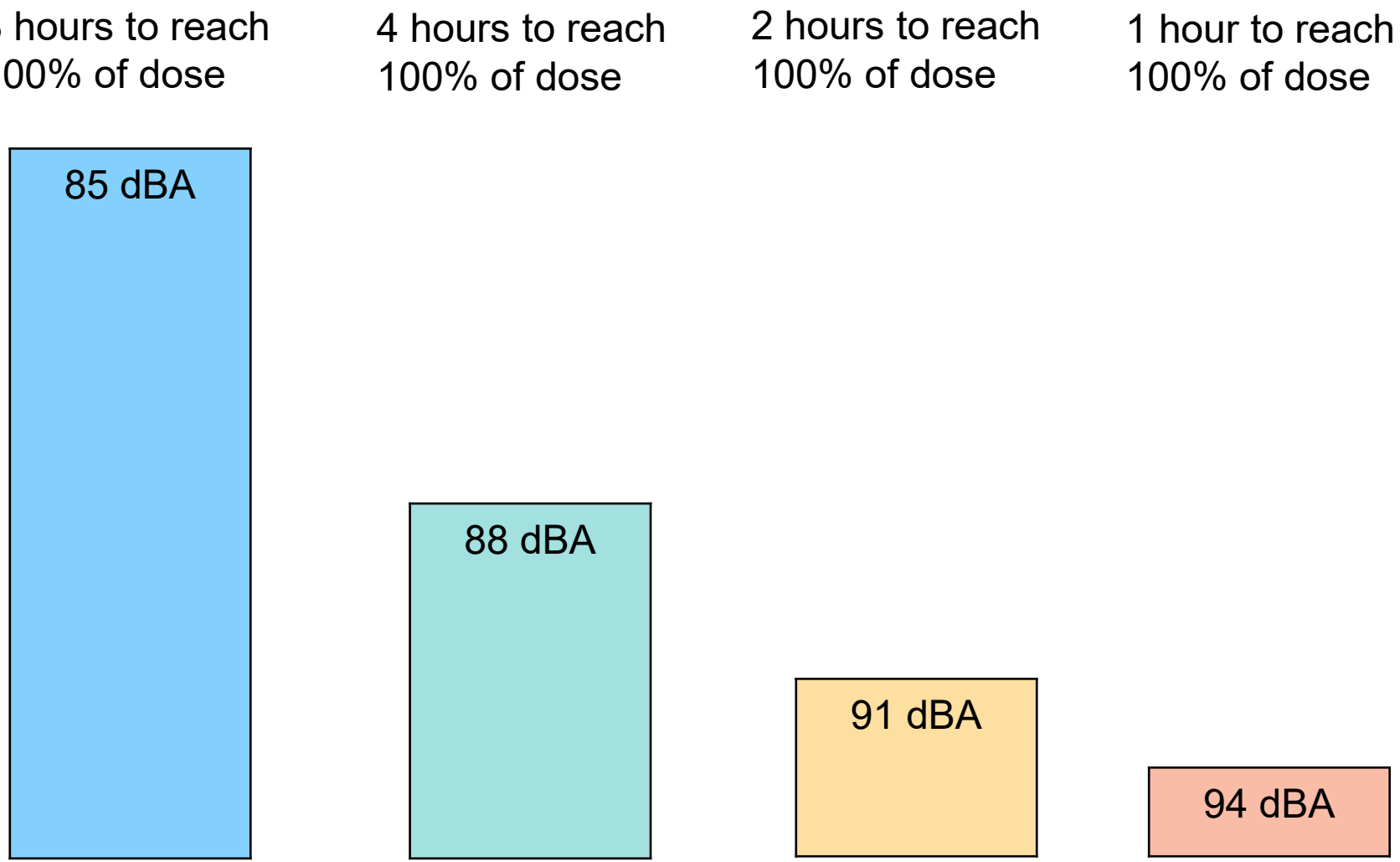
Equivalent Sound Exposure Level (Lex,8)

- Is a measure of equivalent energy from the varying sound levels a worker is exposed to during their workday
- Because decibels are logarithms, cannot average them at face value

$$L_{ex,8} = 10\ \mathrm{Log}_{10}\left(\frac{\left[\sum_{i=1}^{n}\left(t_i \times 10^{0.1\ SPL_i}\right)\right]}{8}\right)$$

Section 1 – Interpretation

85 dBA (Lex,8) = 100% of allowable noise dose



Ontario

Section 2 – Duty to Protect Workers

2. (1) Every employer shall take all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels.

(2) The protective measures shall include the provision and use of engineering controls, work practices and, *subject to subsection (5),* hearing protection devices.

(3) Any measurement of sound levels in the workplace that is done in order to determine what protective measures are appropriate shall be done without regard to the use of hearing protection devices.

(4) Every employer shall ensure that **no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, $L_{ex,8}$.**

(5) The employer shall protect workers from exposure to a sound level greater than 85 dBA without requiring them to use and wear hearing protection devices.

Section 2 – Duty to Protect Workers

(6) Workers shall wear and use hearing protection devices appropriate in the circumstances to protect them from exposure to a sound level greater than the limit described in subsection (4) if engineering controls are required by subsections (1) and (2) and,

- are not in existence or are not obtainable;
- are not reasonable or not practical to adopt, install or provide because of the duration or frequency of the exposures or because of the nature of the process, operation or work;
- are rendered ineffective because of a temporary breakdown of such controls; or
- are ineffective to prevent, control or limit exposure because of an emergency

Section 2 – Duty to Protect Workers

2. (7) Where practicable, a clearly visible warning sign shall be posted at every approach to an area in the workplace where the sound level regularly exceeds 85 dBA.









Section 3 - Training

3. An employer who provides a worker with a hearing protection device shall provide adequate training and instruction to the worker in the:

- care and use of the device, including its limitations,
- proper fitting,
- inspection and maintenance and,
- if applicable, the cleaning and disinfection of the device



Section 4 – Hearing Protection Devices

4. (1) A hearing protection device shall be selected having regard to,

(a) sound levels to which a worker is exposed;

(b) the attenuation provided by the device; and

(c) the manufacturer's information about the use and limitations of the device.

(2) A hearing protection device shall be used and maintained in accordance with the manufacturer's instructions.









Common orders

O. Reg. 381/15, s. 2(4) – to ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, Lex,8

s. 2(6) – use of hearing protection devices subject to limitations

s. 2(7) – visible warning signs to every approach to areas that regularly exceed 85 dBA

s. 3 – training on the use, fitting, limitations, cleaning, maintenance of hearing protection

s. 4 – proper selection of hearing protection devices and following manufacturer's instructions

OHSA s. 25(1)(b) – maintain noise engineering controls or personal protective equipment in good condition

OHSA s. 54(1)(f) – require an employer to conduct a noise survey



Noise induced hearing loss is an occupational illness

Definition “a condition that results from exposure in a workplace to a physical, chemical or biological agent to the extent that the normal physiological mechanisms are affected and the health of the worker is impaired thereby, and includes an occupational disease for which a worker is entitled to benefits under the Workplace Safety and Insurance Act, 1997.”

Examples

- Noise induced hearing loss NIHL
- Silicosis
- Dermatitis



Noise induced hearing loss is an occupational illness

Reporting requirements under Occupational Health and Safety Act subsection 52 (2).

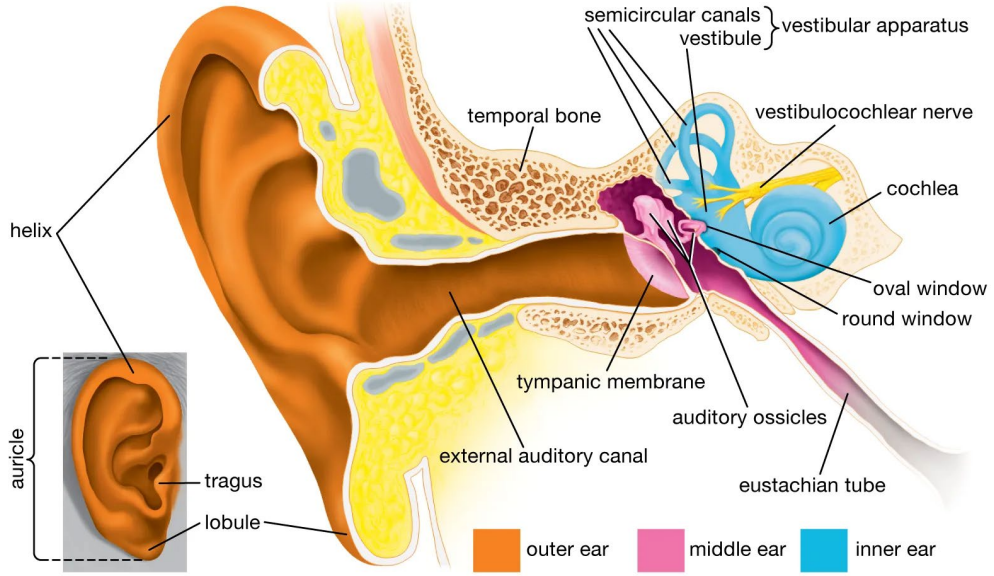
An employer advised, by or on behalf of a worker, that the worker has an occupational illness, or that a claim in respect of an occupational disease has been filed with the WSIB, must give notice in writing within 4 days to:

- MLITSD
- joint health and safety committee or health and safety representative if any
- trade union, if any

Workplace exposure and illnesses | ontario.ca

Ototoxic Agents = Ototoxicants

Otoxicity is damage to the middle or inner ear - the vestibular system (balance center) the cochlea (hearing organ), the auditory nerves or neural pathways—caused by certain medications, chemicals, or substances.



© Encyclopædia Britannica, Inc.

Ototoxic Agents = Ototoxicants

Examples of ototoxicants, chemical agents that can cause hearing loss or increase the risk of hearing loss due to noise when there is co-exposure:

- Some organic solvents, including toluene
- Halogenated hydrocarbons
- Nitriles
- Metals and compounds
- Asphyxiants
- Tobacco smoke
- Some metals and their compounds, including lead and cadmium
- Some Pharmaceuticals
- Some pesticides

Ototoxic Agents = Ototoxicants

How to identify ototoxics in the workplace?

- Safety data sheets SDS
- American Conference of Governmental Industrial Hygienists (ACGIH) adopted “ototoxicant” notation as of 2019 Threshold Limit Values.



Ototoxic Agents = Ototoxicants

How to protect workers?

Under 381/1 section 2, employers must shall take all measures reasonably necessary in the circumstances to protect workers from hazardous sound levels.

In the circumstances where a workplace has exposure to ototoxicants as well as to noise, reasonable measures might include:

- Review information about the potential health effects of chemical agents used in the workplace, for example on SDS and in the ACGIH TLVs, to see if ototoxicity or ‘hearing impairment’ are identified
- Inform workers about what ototoxics are, which ones are present in the workplace, which medications (over the counter and prescribed) have been identified as ototoxics, suggest that they discuss with their health care provider topics such as workplace noise exposure and ototoxicity of prescribed medications (OSHA 25 2 a)

Ototoxic Agents = Ototoxicants

How to protect workers? (continued)

- Accommodate workers with health conditions in accordance with the Ontario Human Rights Code, for example, if a worker's medication is ototoxic
- Ensure that chemical exposures are below the occupational exposure limits laid out in Ontario Regulation 833/90 Controlling Exposure to Biological and Chemical Agents
- Protect workers from noise exposure using engineering and administrative controls and hearing protection, as appropriate

Resources

- A guide to the Noise Regulation under the Occupational Health and Safety Act | ontario.ca
- OHCOW: Noise
- OHCOW: Noise-Induced Hearing Loss (NIHL)
- CCOHS Occupational Hygiene - Ototoxic Chemicals
- Ontario Ministry of Labour, Immigration, Training and Skills Development - "What's New" Newsletter

Questions?

Ina.Chomyshyn@ontario.ca

Ontario