



# Hearing Conservation Program Guide

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As per Section 68 of The Occupational Health and Safety Regulations, when a worker is required to work in an area in which noise levels exceed the criteria for permissible noise exposure established by the ACGIH Noise Threshold Limit Values (TLVs) an employer shall establish and maintain a hearing conservation program.

The ACGIH TLV for noise is 85 dBA for an 8 hour work day. This is the level which it is believed that nearly all workers may be repeatedly exposed without adverse effects on their ability to hear and understand normal speech. A 3-decibel exchange rate must be used to calculate the duration allowed at varying noise levels (for example, a worker may be exposed to 88 dBA for 4 hours, 91 dBA for 2 hours and so on).

In general, where the use of hearing protection is required as a condition of employment, and/or the hazards present in the workplace necessitate the use of hearing protection for personal protection, a hearing conservation program (HCP) is required by the employer. The purpose of this guidance document is to assist employers in developing and implementing a HCP that complies with OHS legislation and applicable CSA standards.

- 1) The first step an employer shall take prior to implementing a HCP is to assess the workplace to determine if control measures can be implemented to reduce noise to acceptable levels. Personal Protective Equipment (PPE) is considered the last line of defense. Prior to relying on hearing protection, employers shall evaluate the potential for engineering and administrative controls to reduce noise to acceptable levels. These controls include:
  - i. Engineering Controls – substituting equipment or processes; minimizing noise at the source by modifying equipment or structures; reducing noise along the path which may include shielding or enclosing the source or by placing a shield between the source and receiver. Additional engineering controls may include reducing sound transmission through various mediums (surfaces, solids, gases, air) or isolation of the operator.
  - ii. Administrative – limiting workers exposure time in a given location by job rotation or increasing the distance of the receiver to the source.
- 2) The hearing conservation program shall identify any high noise activities or areas where hearing protection is required. This shall include the specific type of hearing protection (including make and model) for that task or area. The information required for this is obtained through noise level surveys and noise dosimetry measured as part of the noise assessment.



## Hearing Conservation Program Guide

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- 3) The requirements for the noise assessment are not covered in detail as part of this document. The assessment shall be performed by a qualified person and adhere to the requirements of CSA Z107.56 “*Procedures for the Measurement of Occupational Noise Exposure.*” The assessment shall include the following information:
  - A. A facility wide noise level survey using appropriate sound level measuring equipment. The intent of this is to locate areas or operations where workers may be exposed to hazardous noise levels. This shall be carried out where it is difficult to communicate in normal tones. The general rule of thumb is if you have to shout to communicate at a distance of three feet the noise may be excessive. Another indicator is if workers experience muffled speech or sounds for several hours, or a ringing in the ears, after working in a particular area or performing a certain task.
  - B. If the initial noise survey shows potential over exposures then a detailed noise survey is required. This shall be completed in all areas where potential over exposures exist to determine employees Time Weighted Average (TWA) exposure. The purpose of the detailed survey is to ascertain:
    - Specific information on noise levels at each employee’s station and work tasks.
    - Recommendations for engineering or administrative controls based upon measured sound levels.
    - Locations or job tasks where hearing protection is required, including the specific type of hearing protection required for the noise levels encountered.
    - Which workers must be included in the audiometric testing program.
    - Which workers must be given training and education in the effects of noise on hearing as well as in the proper fit, care, use and maintenance of hearing protection devices.
- 4) Where it is not practicable to reduce the noise to acceptable levels or to isolate workers, hearing protection must be selected in accordance with CSA Z94.2 “*Hearing Protection Devices – Performances, Selection, Care and Use.*”



# Hearing Conservation Program Guide

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- 5) When selecting hearing protection the employer must ensure that the protection provided is adequate for the noise levels in the work place. The following guidance information is taken from CSA Z94.2
- <90dBA requires Grade 1 or Class C
  - <95dBA requires Grade 2 or Class B
  - <100dBA requires Grade 3 or Class A
  - <105dBA requires Grade 4 or Class A
  - <110dBA requires dual hearing protection and must include a minimum of a Grade 2 or Class B earmuff and a Grade 3 or Class A earplug.
  - >110dBA requires that in addition to dual hearing protection exposure durations must be limited and audiometric testing should be completed twice a year.
- 6) When selecting hearing protection it is also important to ensure that the protection being utilized also considers communication and audibility needs, user preferences, compatibility with other PPE, as well as temperature and humidity. Please note it is also important not to over protect workers as they may not be able to hear important safety information and thus will reduce the overall compliance by workers.
- 7) The document must contain a statement that hearing tests will be conducted for all workers over-exposed to noise within 3 months of commencement of employment and annually thereafter or where recommended by an audiologist or occupational physician.
- 8) The results of the audiometric testing must be reviewed by the worker and the employer. This is completed to ensure that the worker is aware of any hearing loss and that employers are informed of any trends so that remedial action can be taken to prevent further hearing loss. The employers information is typically obtained through a summary report which includes the following:
- i. A copy of the individual audiograms for all employees tested in addition to the previous audiograms for comparison purposes. It is important to identify any hearing shifts in employees from year to year to prevent future hearing loss.
  - ii. Identification of which employees require a repeat audiogram.
  - iii. Work location or job title of any workers showing a hearing shift.



# Hearing Conservation Program Guide

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- iv. Any relevant recommendations.
- 9) The audiogram summary shall be reviewed to determine if the hearing conservation program is effective or if changes can be made to improve hearing protection devices, training and education, engineering controls or compliance with the program.
- 10) Training and education shall be provided for all employees who are included in the hearing conservation program and must include the following:
  - i. Health hazards of noise
  - ii. Fitting, maintenance, care and use of hearing protection.
- 11) The hearing conservation program shall be documented and records shall be kept while the worker remains employed by the employer.
- 12) The employer shall post signs in areas where noise exceeds the TLV. The sign shall clearly state that a noise hazard exists and shall describe the personal protective equipment required.
- 13) Upon termination of employment, a worker may request a record of noise exposure during the term of employment.
- 14) The implementation of an effective Hearing Conservation Program is everyone's responsibility. Under the NL Occupational Health and Safety Act all parties from the employer to the supervisor are responsible for ensuring the program is implemented throughout the workplace. In addition workers are required to wear any PPE that is mandatory during the course of their duties.

Further information can be found by viewing the NL and Labrador *Occupational Health and Safety Act* and Regulations at:

<http://assembly.nl.ca/legislation/sr/statutes/o03.htm>

<http://www.assembly.nl.ca/legislation/sr/regulations/rc120005.htm>

CSA Standards referenced in the Occupational Health and Safety Regulations can be viewed on line at:

<https://community.csagroup.org/login.jspa?referer=%252Findex.jspa>