

Hearing Conservation Program

Unwanted noise is not only an irritation, it is often a source of miscommunication, worker discomfort and fatigue. Long term exposure to high noise levels can result in hearing loss and permanent impairment.

- Factors that affect hearing loss include:
- Intensity or loudness of the noise
- Frequency of noise
- Exposure duration
- Individual susceptibility
- Worker age
- Ear disease
- Distance to noise source

The most effective method to correct excessive noise is to eliminate or reduce the noise at its source through engineering controls. When engineering controls are not possible, injuries and the associated financial loss can be controlled by the implementation of a Hearing Conservation Program.

A Hearing Conservation Program should be an organized effort. Responsibilities should be assigned to designated management personnel and written procedures should be developed, addressing each major element of the program. A Hearing Conservation Program should contain the following elements:

Exposure monitoring

Exposure monitoring can be accomplished by measuring area noise levels with a sound level meter, or by personal monitoring with an audio dosimeter. Those employees exposed at or above the action level of 85 dBA (eight-hour time-weighted average) or 50% dose, should be included in the Hearing Conservation Program. Noise exposure measurements should be completed annually.

Once exposure monitoring has been completed, warning signs should be posted at entrances to, or near the perimeter of noise hazard areas. As conditions or processes change in the work place, noise levels should be reevaluated. Each employee exposed to noise should be notified of the results of the monitoring.

Audiometric testing

All employees included in the Hearing Conservation Program should participate in an audiometric evaluation administered by a certified audiometric technician or doctor. Employees being evaluated should not be exposed to excessive noise for at least fourteen hours prior to tests.

The initial audiometric test will produce a baseline audiogram, to which annual follow-up audiograms can be compared for determining whether a standard threshold shift (hearing loss) has occurred. If a standard threshold shift is identified, the following steps should be taken:

- Administrative controls should be considered, to reduce the employee's exposure to noise hazards (i.e., job rotation).

- The employee should be fitted or refitted with hearing protection.
- The audiogram should be submitted to qualified medical personnel for further evaluation, if warranted.
- Employees should be informed of their individual audiometric test results.

Hearing protection

The effectiveness of hearing protection is greatly reduced if the hearing protectors do not fit properly, or if they are not worn at all times in noisy areas.

Each employee should understand that a condition of their employment includes the use of hearing protection and participation in audiometric testing where exposures warrant. A variety of hearing protectors should be available to facilitate worker acceptance and to ensure proper fit. Fitting records should be retained for reference when issuing replacements.

Hearing protection is recommended for all employees with an eight-hour time-weighted average exposure above 85 dBA, and is essential for those exposed to noise levels above 90 dBA. If a standard threshold shift has occurred, use of hearing protection devices should be mandatory.

Hearing protection devices should have adequate attenuation capabilities to reduce exposures to 85 dBA or less. Noise reduction ratings (NRR) on hearing protection devices indicate only approximate effectiveness, and should be regarded conservatively when selections of protective equipment are made.

Training

At annual intervals, affected employees must be trained in the elements of the Hearing Conservation Program. Training objectives should include:

- The reasons for the program and how noise affects hearing
- The purpose of audiometric testing and the test procedures
- The purpose, advantages/disadvantages and attenuation of the hearing protection devices offered.
- Fitting and use of hearing protection devices.
- Care and maintenance of hearing protection devices.

Recordkeeping

Documentation of exposure monitoring, hearing protection utilized and training should be maintained in each employee's personnel file. Audiometric test results must also be kept in this file and should include test dates, results, retest dates, physical examination resulting from testing, and consultation documents. All records should be retained indefinitely.

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