



Hearing Conservation Program



Approximately 9 million US workers are exposed to noise levels high enough to cause hearing loss. Many others are exposed to noise levels that interfere with communication, increase fatigue, and make job execution more difficult. Loss of hearing is a compensable occupational disease in most states. It is becoming an increasingly frequent and costly source of loss. Individual claim payments can exceed USD100 000. The best way to protect employees' hearing and prevent hearing loss claims is to implement a hearing conservation program.

OSHA's Occupational Noise Standard, 29 CFR 1910.95, requires employers to implement a hearing conservation program whenever employee 8 hour noise exposures equal or exceed an average noise level of 85 dba. Employees should be notified if their noise exposure exceeds these limits. The OSHA standard outlines the minimum requirements for a hearing conservation program.

Program Development & Implementation

The responsibility of developing and implementing the hearing conservation program should be assigned to a suitably trained individual in the organization. Each part of the program should have written standard procedures. A qualified physician should supervise the medical aspects of the program. The program should be regularly reviewed and updated.

Program Organization

An effective Hearing Conservation Program must contain the following elements:

Exposure Monitoring – to identify those employees exposed at or above the action level (85 dba average for 8 hours).

Exposure monitoring must meet the following criteria:

1. Accomplished by an area-noise measurement technique with a sound level meter, or personal monitoring with an audio dosimeters;
2. Repeated when work conditions change;

3. Reported to affected employees and the employees given the opportunity to observe the monitoring;
4. Result in the posting of warning signs at entrances to or near the perimeter of areas where exposure exceeds 85 dba.

Employees should be given access to results of monitoring activities.

Audiometric Testing – to determine and reflect the effectiveness of the controls established to preserve employees' hearing. Details of the tests themselves are found in 29 CFR 1910.95 (h). Audiometric testing must conform to the following criteria:

1. Testing must be administered by a certified audiometric technician under the supervision of a qualified physician. Employees should not be exposed to excessive noise for 14 hours preceding the test. Hearing protection can be used to meet this requirement.

2. Audiometric test booths must meet ANSI S3.1 background noise requirements, and audiometers must meet ANSI SA3.6 requirements.
3. A baseline audiogram must be completed within six months of an employee's first exposure at or above 85 dba., with annual follow-up audiograms thereafter.
4. Follow-up audiograms must be compared with the baseline to determine if a standard threshold shift has occurred. If a standard threshold shift has occurred, the following steps should be taken:
 - The audiogram must be evaluated by a qualified physician, and the employee referred for clinical evaluation, if warranted.
 - The employee must be notified of the standard threshold shift within 21 days.
 - The employee must be fitted or refitted with a hearing protection device.
 - Hearing Protection – to reduce the employees' noise exposures to acceptable levels when engineering or administrative controls are not feasible. The hearing protection devices and use must meet the following criteria:
 1. A variety of hearing protection types should be available to insure proper fit and to aid in worker acceptability;
 2. Hearing protection should be made available to all employees with 8-hour TWA exposures equal to or greater than 85 dba;
 3. Hearing protection use is mandatory for workers with exposures equal to or greater than 90 dba and for workers having a standard threshold shift and an exposure equal to or greater than 85 dba; and
 4. Hearing protection devices should be evaluated to confirm adequate attenuation to reduce exposure to 85 dba for those exhibiting a standard threshold shift or to 90 dba for all other workers.

Training – to convey to the employees necessary information about the hearing conservation program. The employees should understand that the use of hearing protection and audiometric testing, where exposures warrant, is a condition of employment. The training must be conducted annually and the program must include information on:

1. The reasons for the program and how noise affects hearing;
2. How audiometric tests are conducted and what they show;
3. The purpose, advantages, disadvantages, and attenuation of the hearing protection devices offered for their use;
4. The fitting and use of hearing protection devices; and
5. The care and maintenance of hearing protection devices.

If requested, employees must be provided with copies of all materials related to training and education, including copies of the OSHA standard.

Recordkeeping – to document the completion of the program elements and the effectiveness of the program in reducing employees' noise exposures. The records should be maintained in the employees' personnel files and include:

1. Noise exposure monitoring records, kept for two years;
2. Audiometric testing results and consultation reports, maintained for the duration of the individual's employment;
3. Documentation of attendance at annual training; and
4. Hearing protection requirements and fitting records.

Program Effectiveness Assessment

A formal review and evaluation of the program should be done periodically. Review and analysis of the audiometric test data is the best measure for determining the overall effectiveness of the program.

Results of this analysis should be discussed with top management. If weaknesses are found, the program should be reinforced or modified.

References / Additional Resources

 [OSHA Publications – Noise and Hearing Conservation Occupational Safety and Health Administration](#)