



Best Practices in Implementing a Successful Hearing Conservation Program

OSHA 29 CFR 1910.95

Though the language of OSHA's Occupational Noise Standard (29 CFR 1910.95) may appear convoluted, its dictates are rather straightforward: employers who have work areas with noise levels above 85 dBA TWA (Time Weighted Average) must implement a Hearing Conservation Program. Workers exposed to those levels must undergo annual audiograms; hearing protectors must be made available when noise reaches 85 dBA and are required to be worn at 90 dBA. And while implementing an OSHA-approved Hearing Conservation Program may appear complicated, it is not as daunting as it seems. There are a number of "best practices" safety managers can employ that not only help ensure compliance with regulations, but also promote positive employee hearing safety.

Table of Contents

Noise Monitoring	1
Audiometry	2
Hearing Protectors	3
Training	4
Recordkeeping	5

NOISE MONITORING

OSHA requires employers to perform noise monitoring when employee noise exposure “may equal or exceed an 8-hour time-weighted average (TWA) of 85 dB.” OSHA defines two methods for monitoring noise levels.

OSHA Requirement

- ◉ **Area Noise Sampling** – Utilizing a *sound level meter*, take a general measurement of each section of your facility. These measurements can be documented in a noise map or a table showing the exposures in each area. This method is most accurate when noise levels are fairly steady.
- ◉ **Personal Noise Sampling** – Also called *dosimetry*, workers don a device with a microphone mounted near the ear. The dosimeter records a worker’s complete noise exposure over an extended time, and determines the Time-Weighted Average. Not all employees are required to participate in dosimetry, though a representation of employees from every area and shift should be included. This method is most accurate when noise levels are intermittent or fluctuating.

Best Practices

- ◉ **Document Changing Conditions** – Noise levels should be re-monitored and updated whenever a change in equipment or work processes affects noise exposures.
- ◉ **Notify Employees** – As employees must be notified of any changes in noise level, post a noise map of your facility in common areas, such as your break room or safety stations.
- ◉ **Track Worker Exposure** – Document each employee’s TWA noise exposure in his/her safety profile or personnel file. This can help an audiologist better understand the employee’s audiogram.



AUDIOMETRY

Annual audiometric testing (hearing tests) must be made available to all employees exposed to 85 dBA TWA. Testing must be performed by a professional or qualified technician.

OSHA Requirement

- ◉ **Baseline Audiogram** – All employees exposed to 85 dBA TWA must undergo a baseline audiogram within six months of first exposure to determine current hearing levels. This includes both new hires and existing employees.
- ◉ **Audiogram Evaluation** – Problem audiograms must be reviewed by an audiologist, otolaryngologist or physician.
- ◉ **Standard Threshold Shift (STS)** – If the annual audiogram demonstrates a shift in hearing of 10 dB average or more at 2000, 3000 and 4000 Hz in either ear compared to baseline, the employee must be notified in writing within 21 days. If the loss is determined to be occupational, the employer must evaluate the employee's current hearing protectors, and retrain the employee on use and fit.

Best Practices

- ◉ **Retain Records** – Noise damage can only be determined when audiograms are compared serially. Make certain your testing service provides the required comparison to baseline, with understandable follow-up reports.
- ◉ **Review Results With Employees** – Research has documented a positive impact on employees who receive detailed feedback regarding audiometric results immediately after testing. This helps the employees understand the effectiveness of their hearing protection device (HPD) fit and provides another opportunity to promote a healthy hearing culture.

HEARING PROTECTORS

OSHA mandates that “a variety of suitable hearing protectors” – earplugs and/or earmuffs – be made available at no cost to workers exposed to an “8-hour time-weighted noise level of 85 dB,” known as the “Action Level.”

OSHA Requirement

- **Action Level 85 dBA** – If your facility has an area with a noise level of 85 dBA or above, hearing protectors must be made available at no cost to your employees.
- **Permissible Exposure Limit 90 dBA** – Hearing protectors are required to be worn by employees who work in areas where noise levels exceed 90 dBA TWA.
- **Standard Threshold Shift (STS)** – Employees who have a significant shift in hearing (STS) shall be retrained and refitted with hearing protectors, and are required to use them for noise exposures above the 85 dB Action Level.
- **New Employees** – New employees must wear hearing protectors prior to taking their baseline audiogram.

Best Practices

- **Offer a True Variety** – While the OSHA regulation does not state a firm quantity, as a best practices, employers should offer at least one style of single-use, multiple-use and banded earplugs, and an earmuff. Everyone’s ears are different, and one earplug or earmuff style may not be comfortable for an entire workforce.
- **Verify the Training** – Effective fit of hearing protectors can be measured in the field. Verify the protection your employees obtain, and recheck their Personal Attenuation Rating (PAR) at least annually to ensure proper protection.
- **Make Hearing Protectors Accessible** – One of the most frequent complaints by workers required to wear HPD is “I’d wear them if we had them.” Compliance begins with access. Simple actions, such as placing single-use earplug dispensers by the time clock, in the cafeteria, in the locker room or at a supervisor’s station, facilitate worker protection and compliance. Also, keep Purchasing in the loop to ensure an adequate supply.
- **Set a Positive Safety Culture** – Simple acts – such as praising workers who wear their HPDs properly – make a difference. Workers who are publicly recognized on the job are more likely to wear their earplugs/earmuffs and set a standard for other employees.



TRAINING

Employers must provide annual hearing conservation training to all workers exposed to noise levels at or above the Action Level (85 dBA TWA).

OSHA Requirement

- ⦿ **Effects of Noise Exposure –** Annual training must include the effects of noise on hearing.
- ⦿ **Use, Selection and Fitting of HPDs –** All employees in the Hearing Conservation Program must be educated on different types of earplugs and earmuffs, how to select the most appropriate protector and how to properly fit that HPD.
- ⦿ **Audiometric Testing Procedure –** Annual training shall also include an explanation of the purpose of audiometric testing, and an explanation of the test procedures.
- ⦿ **Acceptable Materials –** Group and one-on-one presentations, videos, brochures, computerized training modules and outside speakers are acceptable Hearing Conservation Program training aids.

Best Practices

- ⦿ **One-on-One Training –** Research has documented that one-on-one training, coupled with a worker's annual audiogram, have a positive impact and are more effective than group training. According to one study, workers who demonstrated a poor fit with their earplugs showed a 14 dB improvement in protection after brief one-on-one training.
- ⦿ **Provide Ongoing Education –** Hang motivational and informational posters in common areas or near hearing protection sources. These can include fitting instructions, noise thermometers and posters visually showing the effects of hearing loss. Howard Leight offers several motivational posters in both English and Spanish for Hearing Conservation.

RECORDKEEPING

Employers must retain all employee records, including exposure measurements and audiometric tests.

OSHA Requirement

- ◉ **Exposure Measurements** – Area and personal sound measurements must be kept on file for at least two years.
- ◉ **Audiometric Tests** – Employers must maintain audiometric records of their employees for the duration of their employment.
- ◉ **OSHA Form 300** – As of January 1, 2004, employers must record all employees who 1) demonstrate a Standard Threshold Shift (STS) in hearing in one or both ears and 2) demonstrate average hearing levels over 25 dB above audiometric zero (also averaged at 2000, 3000, and 4000 Hz) in the same ear(s) as the STS. The OSHA Form 300 can be found at:
<http://www.osha.gov/recordkeeping/new-osa300form1-1-04.pdf>.
- ◉ **Access to Records** – All records may be accessed upon request by “employees, former employees, representatives designated by the individual employee,” and by OSHA representatives.
- ◉ **Transfer of Records** – If the employer closes business or is acquired by a new organization, all records must be transferred to the subsequent organization for the required periods of time.

Best Practices

- ◉ **Track Employee Exposures** – Noise damage can only be determined when audiograms are compared serially. Make certain your testing service provides understandable follow-up reports.
- ◉ **Post OSHA Hearing Conservation Amendment** – Employers are required to post a copy of OSHA 29 CFR 1910.95 in a visible location within a facility. A PDF of the amendment is available at www.howardleight.com under “Best Practices” menu. Posters are available through Sperian Protection Customer Care or Territory Sales Manager.





Sperian Hearing Protection, LLC
7828 Waterville Road, San Diego, CA 92154
ph. 800/430-5490 fax 401/232-3110
www.howardleight.com

FOR MORE INFORMATION

- OSHA Hearing Conservation Amendment 29 CFR 1910.95
– www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9735
- National Institute of Occupational Safety & Health (NIOSH) Hearing Loss Prevention Program – www.cdc.gov/niosh/topics/noise
- Council for the Accreditation in Occupational Hearing Conservation (CAOHC)
– www.caohc.org
- National Hearing Conservation Association (NHCA) – www.hearingconservation.org

From our beginnings as a one-man operation more than 30 years ago, Howard Leight® has grown into one of the largest global manufacturers of hearing protection in the industrial market and the recognized innovator in protection and people-oriented fit. Utilizing Bilsom® Technology, Howard Leight earmuffs raise the bar on innovative design, performance and comfort, with features like padded wire headbands, unique sound management technologies and multi-level attenuation options. Howard Leight is a brand of Sperian Protection, a world leader in personal protection equipment. Visit us online at www.howardleight.com.