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Oregon

OSHA

FACT SHEET

Noise Exposure and Hearing Conser-

OAR 437

Division 2/G

Division 3/D

Division 4/G

Occupational Noise Exposure

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General Requirements

An employer must have in place an effective hearing conservation program whenever employee noise exposures equal or exceed an 8-hour Time Weighted Average (TWA) of 85 decibels measured on the A-scale (85 dBA). A TWA of 85 dBA corresponds to a noise dose of 50%, also called the action level.

Employers must provide protection against the harmful effects of noise when employees are exposed to excessive noise levels (exceeding a TWA of 85 dBA) on the job. If you must raise your voice or shout to be heard above the noise in the workplace, this rule may apply. The following is a summary of the major sections of the rules.

Noise Monitoring

Conduct noise monitoring; include all employees affected by noise exceeding 85 dBA, TWA. Noise dosimetry is a method used to measure noise exposure. Not all employees need to be sampled; however, the noise monitoring must be representative of each affected employee's job. The monitoring should be designed to identify employees for inclusion in a Hearing Conservation Program. All employees must be notified of noise monitoring results that exceed 85 dBA, TWA.

Noise Controls

If noise levels exceed a TWA of 90 dBA, all feasible measures must be taken to reduce the noise exposure of employees to below 90 dBA. Whenever feasible engineering, administrative, or work-practice controls can be instituted, although insufficient to reduce exposure below the PEL, they shall be required in conjunction with personal protective equipment (PPE) to reduce exposure to the lowest practical level.

A Hearing Conservation Program

Must be implemented for all employees exposed to noise levels above a TWA of 85 dBA. These five basic components comprise an effective Hearing Conservation Program:

- Exposure Monitoring
- Audiometric Testing
- Hearing Protection
- Employee Training
- Recordkeeping

Audiometric Testing

Establish and maintain an annual testing program if results from the initial monitoring equal or exceed a TWA of 85 dBA.

Baseline audiograms are required within six months from the date of an employee's first exposure to noise above 85 dBA. Subsequent audiograms are compared to the baseline audiogram to determine hearing loss. Audiometric tests must be performed and the audiogram evaluated by a licensed or certified audiologist, otolaryngologist, or other physician, or by a certified CAOHC technician.

Before testing employees, advise them to avoid activities that expose them to high levels of noise and to avoid non-occupational exposure (or use hearing protection) within the 14 hours prior to the test.

Compare the employee's annual audiogram to the baseline audiogram. If the comparison shows a standard threshold shift, the employer must either accept the results or retest the employee within 30 days.

Repeat the hearing test annually for all employee exposures over 85 dBA.

Follow-up Procedures

Within 21 days of receiving the report, notify, in writing, each employee whose audiogram shows a standard threshold shift. Employees with a documented hearing loss must be fitted with hearing protectors, trained in their use and care, and required to use them. Employees who were already using hearing protectors must be refitted and retrained. Some employees may need to be referred to a qualified specialist for additional evaluation.

Noise Exposure and Hearing Conservation

Standard Threshold Shift (STS)

A STS is a change in hearing, or loss, compared to the baseline of an average of 10 dB or more at 2000, 3000, and 4000 Hertz in either ear.

Employees who show an STS and are exposed to a TWA of 85 dBA or above, and employees exposed above 90 dBA, must wear protectors on the job.

Recordkeeping and Reporting

See **OAR 437-001-0700(11), Recordkeeping and Reporting**, for occupational hearing loss recording criteria (OSHA 300 log).

Hearing Protectors

Provide a variety of hearing protectors at no cost to the employees. Ensure proper initial fitting and correct use of all hearing-protection devices.

Hearing Protector Attenuation

Hearing protectors must attenuate (reduce) noise levels to a TWA of 90 dBA, or to 85 dBA for employees who have had a STS.

Appendix B to 1910.95

Requires employers to determine employee TWA exposure with the use of hearing protectors. A method approved by OSHA that is typically used in industry:

1. Determine the employee's noise exposure in dBA, then calculate the noise reduction.
2. Subtract 7 dBA from the noise reduction rating (NRR) of the hearing protector.
3. Subtract this difference from the TWA noise exposure. This remainder equals the TWA under the hearing protector.

Example

An employee is exposed to a TWA of 88 dBA. The NRR of an ear plug is 32 dB. Calculate the TWA under the protector.

1. Employee exposure = 88 dBA
2. 32 dB - 7 dB = 25 dB
3. 88 dBA - 25 dB = 63 dBA

Training Program

Annually train employees in the Hearing Conservation Program on the following:

1. The effects of noise on hearing.
2. The purpose of hearing protection.
3. The advantages and disadvantages of various types of hearing protection.
4. Selection, use, and care of hearing protection.
5. The purpose of audiometric testing.

OAR 437, Division 2/G, 1910.95, Occupational Noise Exposure requires a copy of 1910.95 made available to employees and their representatives and post it in the workplace.

Recordkeeping

Maintain all records, including employee exposure measurements and audiograms. Audiometric test records must include the following:

1. Name and job classification of the employee.
2. Date of the audiogram.
3. The examiner's name.
4. Date of the last calibration of the audiometer.
5. The employee's most recent noise exposure measurement.

Records must also include information on the background noise level of the audiometric test booth.

Maintain noise exposure measurements for at least two years and audiometric test records for the duration of the affected employee's employment. Provide access to these records to employees and their representatives upon request.

Resources

For the full text of the rules adopted by Oregon OSHA, refer to **OAR 437, Division 2/G, 1910.95, Occupational Noise Exposure. Division 3/D (Division 2/G, 1910.95 Occupational Noise Exposure applies), and Division 4/G, 437-004-0630, Noise Exposure.** www.oshareg.org (Rules/Laws).

Related resource links

www.osha.gov/SLTC/noisehearingconservation/index.html

www.cdc.gov/nceh/hsb/noise/

www.cbs.state.or.us/external/oshareg/pdf/pubs/3349.pdf

www.cbs.state.or.us/external/oshareg/reference/noise.html

www.cbs.state.or.us/external/oshareg/pdf/pubs/coursecatalog.pdf

www.acoem.org/pdfs/2002LaborDayChecklist.pdf

<http://depts.washington.edu/ocnoise/brochures.html>

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The Standards and Technical Resources Section of Oregon OSHA produced this fact sheet to highlight our programs, policies, or standards. The information is from the field staff, research by the technical resources staff, and published materials. We urge readers to also consult the actual rules as this fact sheet information is not as detailed.

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