

Noise News You Need Now

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Work-related noise-induced hearing loss is two things: a very long descriptive phrase; and something you should never have at your operations. Well, maybe that's not 100 percent true, for reasons you'll read in a bit. But certainly we can prevent almost all future work-related hearing loss.

There are three reasons to try and prevent work-related hearing loss:

- 1) There is the humanitarian aspect, in that you do not want people to go deaf;
- 2) There is the compliance aspect, in that US OSHA and other country agencies have noise exposure regulations; and
- 3) the potential of Worker's Compensation claims for hearing loss.

The first thing is to identify noise-exposed individuals. For US OSHA, that is everyone exposed over 85 decibels (dB) average, for an 8-hour day, any one day a year. At this level people need to be included in a Noise Program, above 90 dB average they must wear hearing protection.

And yes, unlike Lead or Asbestos regulations that need more than 30 days of exposure for the standard to apply, noise is any one day.

Also be aware this 85 dB applies to an 8-hour day or 40-hour week. For people working a 10-hour day, as an example, the 85 dB cutoff drops to 83.4 dB.

This evaluation can be done by noise dosimetry, or by an area "noise map". Dosimetry is nice because it gives you the persons average noise exposure for the day. Be aware if you are using a percent dose readout, at 50% dose you're at 85 dB.

However a noise map is useful as well, because you can get more data on more people by showing where the noisy areas are. And in many locations, if a person works all or most of the day in that noisy zone, they should be in your hearing conservation program.

As stated, OSHA's cutoff is 85 dB for an 8-hour day, however most sound level meters (SLM) have an accuracy of +/-2 dB so if you are measuring 83, it might really be 85 dB.

A measurement cutoff around 83 is recommended, to be sure you get all your exposed populations. We have seen reports where someone said that 84.9 dB was okay, as that's below 85; but that is thinking is silly.

Once the population is identified, ensure employees get annual hearing tests (audiograms), training on the hazards of noise, and a check on the hearing protection's fit and efficacy.

Audiograms are a fun topic because sometimes you get a very accurate hearing test that is 100% not in compliance with OSHA! If this information is not in the hearing test, or in the report somewhere, the data, for compliance purposes, is useless:

- name and job classification of employee;
- date of the audiogram;
- examiner's name;
- date of last acoustic or exhaustive calibration of the audiometer;
- employee's most recent noise exposure;
- records of the measurements of the background sound pressure levels in audiometric test rooms.

Continuing the topic "audiograms" or hearing tests: these should be done on any new employee,

not just those in noisy jobs. You want to be sure people can in fact hear, especially if their job requires it, like driving a forklift. Also a pre-existing loss can be documented, so there is less chance of any hearing loss Worker's Comp claim.

At each subsequent annual hearing test for noise-exposed employees, a loss of 10 dB or more in either ear is called a Standard Threshold Shift (STS). Employees must be told in writing if they have one, and it can be verified by a retesting. A person with an STS exposed above 85 dB (not 90) has to wear hearing protection. You also have to record an STS on the OSHA 300 Log.

You need the document that people wear hearing protection. Check to see if hearing protection is being used. If people still exhibit a hearing loss, and they're wearing hearing protection, there are two things that may be happening: and you have to document both.

The first is the hearing protection may be inadequate. Hearing protection has a Noise Reduction Rating. Subtract the NRR from the noise levels to ensure <85 dB reaches the eardrum (use 83 to be really sure).

It seems simple: an NRR of 25 should adequately protect from 107 dB, as $107 - 25 = 82$; and 82 is less than 85.

Of course it is never that simple, as noise is measured with an A-weighting scale, and NRR uses a C- weighting scale (There is a B-weighting scale, it's just that no one ever talks about it).

To properly evaluate the NRR, subtract 7 from the NRR. So in the example above the math becomes $(107 - (25-7)) = 89$ dBA; not effective.

Note you can double up (plugs and muffs) for extreme noise levels: but NRRs of 25 and 22 do not equal 47. The deciBel scale is logarithmic, and high noise can reach the eardrum via bone conduction. Double protection has an NRR of around 38.

The other reason people may still be experiencing hearing loss is due to **personal hobbies and activities outside the workplace**. Motorcycles, hunting, playing in a band can all result in hearing loss. Document non-work-related noise, and counsel folks to wear hearing protection outside of work. Note that age does cause hearing loss in and of itself, however hearing tests should correct for this factor using published reference tables.

Getting back to Worker's Compensation - if a claim is made today by an employee who worked at a noisy facility for three decades, it could be hard to defend. Frankly because you probably don't have the data: no baseline audiogram, no noise exposure data; and no records of a person wearing hearing protection. And be aware sometimes folks will file a Comp claim in one ear only, then file for the other ear in a month or two. If you get a "one ear claim" try and have both ears tested and filed together, as it will be far less costly.

However if your records going forward document all these things we've covered, any Worker's Comp claim in 5 or 10 years for hearing loss will most likely not be valid. And at the same time you have protected someone's hearing, which was the original intention of the OSHA regulation.

<p>Upcoming Deadlines</p>	<p>5/26 - Sites subject to OSHA PSM must update and revalidate hazard analyses 6/30 - DOT registration due for those shipping Hazmat above certain quantities 6/30 - Quarterly discharge monitoring reports for facilities under EPA</p>	<p>Check out www.envaa.com for previous bulletins and more!</p>
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