



What's That You Say? Noise, Noise Induced Hearing Loss, and Hearing Protection

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How noisy is your shop? Do you ever have to wait for an employee to put down a tool before you talk to him? Ever want to cover your ears when someone's using a pneumatic grinder or wrench? If you need to raise your voice to talk to someone an arm's length away, it's loud enough to damage hearing.

Noise induced hearing loss is cumulative. Both the intensity and the duration of the noise damage hearing. Your ears can usually tolerate a few minutes of firecrackers on the Fourth of July, because that's a rare, short-duration event. But repeated exposure damages the specialized nerve cells deep in your inner ear, the cells that transmit sound waves to your brain.



People repairing cars don't do the same task over and over. They might use an air wrench to loosen some bolts, or do some sanding, or apply body filler. Unlike folks who work in a factory, their tasks vary from minute to minute, and their noise exposure does likewise. We know that they do some jobs that are loud enough to damage their hearing. But do they do those jobs for long enough to damage their hearing?

Probably, yes. Not every day. But often enough that you shouldn't ignore the noise hazard.

Not convinced that your shop is loud? There are two quick and cheap ways to check. That rule of thumb mentioned above, that it's over 85 dBA if you need to shout from arm's length to talk to someone, is a proven way to tell. And there are lots of smart phone apps for sound level meters. They're not all that accurate, but they should give you a ballpark idea of how loud your shop is.

So what do you need to do about the noise? More than just provide a box of ear plugs. The best action would be to reduce noise levels. Require employees to keep their tools in good working condition. Reward employees for choosing tools that have built-in noise controls. If you purchase equipment (vacuums, for instance), choose quieter ones. Put up noise-absorbing panels. Those measures will help, but we doubt that they will be enough to keep exposure below 85 dBA every day.

OSHA says that if employees are exposed to more than 85 dBA averaged over eight hours, the employer needs to take steps to try to control the noise exposure: provide hearing protection, train on the hazards of noise, provide hearing tests each year. There's a good chance your employees are not exposed to that much noise every day. But there's also a good chance that they're sometimes exposed to that much noise.

You need to provide hearing protection – ear plugs or ear muffs. You can choose what types, but you need to provide more than one option. We recommend a choice of ear muffs, push-in plugs, and roll-up plugs. No one type of ear plug will fit everyone comfortably.

Hearing protection devices are assigned Noise Reduction Ratings (NRR), laboratory measurements of how much they'll reduce noise. In real life, no muffs or plugs will always achieve that much reduction. Use the NRR as a rough guide, but don't rely on the NRR alone to choose what hearing protection you'll stock. Whether the devices are worn correctly and when needed is much more important than the NRR.

Employees need to be trained on the hazards of noise and on how to wear hearing protection correctly. Don't underestimate the need to train people on how to wear ear plugs or ear muffs. Ear plugs are often not inserted deeply enough to effectively block noise. Ear muffs don't do a good job if they can't form a seal around the ear. We've seen many with damaged cushions; those won't be as effective.

You should be providing annual hearing tests (audiometric exams) to employees whose eight-hour work exposure may go above 85 dBA. Employees should get a baseline test, within six months of being hired. And then they should be retested each year. The hearing tests will help you determine if your employees are being adequately protected from noise. They'll also alert both you and the employee if the employee's hearing is beginning to deteriorate. That allows both of you to take corrective action before the hearing loss becomes worse.

Hearing tests can be done by occupational health clinics or by mobile services, facilities that come to your workplace to test employee hearing. If you use the same testing service each year, the company can interpret the results and let you know if any employee shows significant changes in hearing ability.

Most of us have some noise-induced hearing loss, the result of work as well as the rock concerts, snowmobiling, car races, or night clubs we've enjoyed. Noise doesn't seem like a big deal when you're young. But as hearing gets worse, you start missing out on conversations, because you can't hear clearly. Music doesn't sound the same. As an employer, you can't protect your employees from loud noise outside of work. But you can protect them from hearing loss because of work.

If you have questions about evaluating your shop's noise exposure, use of hearing protection, hearing conservation programs, audiometric testing, or other safety or environmental issues, contact CHESS at 651-481-9787; toll free at 877-482-4377, or carkey@chess-safety.com. CHESS specializes in helping small to medium sized business with occupational health and safety issues. We have been providing services to the automotive industry for over 20 years.

<p>This article is intended to provide general information (not advice) about current safety topics. To discuss your specific concerns and how CHESS may help, please contact CHESS at 651-481-9787 or chess@chess-safety.com.</p>
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