

Hearing Loss Prevention: What You Should Consider

Make sure all employees are aware of the hazards of noise-induced hearing loss, so they can take steps to protect against them.

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Loud noises in the workplace can lead to permanent hearing loss among workers. Banging, drilling and other mechanical processes can produce loud noises that can damage a person's eardrum. The types of sounds, noise intensity and duration of exposure can all contribute to hearing loss.

Symptoms may take years to develop, but even brief exposure to loud noises can have a major effect on a person's life, limiting their ability to hear the world around them. Once noise-related hearing loss occurs, it is irreversible, so it's crucial to protect your hearing when on the job and off, including when attending concerts and using loud tools or equipment at home.

The Occupational Safety and Health Administration (OSHA) has set clear rules regarding noise pollution in the workplace. If these sounds pass a certain threshold, managers should implement what's known as a hearing conservation program to protect staff from permanent hearing loss.

Measuring Sound

Managers first need to understand how sound is measured in the workplace. Decibels (dB) are used to measure the intensity of sound. The higher the decibel, the louder the sound. For context, normal conversations occur at around 40 dB, while appliances like a hair dryer come in at around 70 dB. Meanwhile, a jetliner can be as loud as 140 dB.

Prolonged exposure to sound above 85 dB and any exposure to sounds above 135 dB can cause permanent hearing damage. In addition to hearing loss, these noises can cause damage to the inner ear, which can lead to long-term ringing in the ears or tinnitus.

Implementing a Hearing Conservation Program

According to current OSHA guidelines, employers must implement a hearing conservation program if noise exposure is at or above 85 decibels averaged over 8 working hours, or an 8-hour time-weighted average (TWA). This doesn't mean exposing workers to 85 dB for 8 hours straight. OSHA wants employers to average sound exposure over the 8-hour day. For example, if a worker is exposed to 100 dB of sound on and off for around two hours in an otherwise quiet workplace, they will likely still need a hearing conservation program during their shift if the average comes out to 85 dB or more.

To calculate the average, employers can add up the amount of time workers are exposed to different levels of noises. For example, a worker may be exposed to 50 dB for two hours, 70 dB for two hours, 90 dB for two hours and then another two hours of 50 dB. This comes out to an average of 65 dB over an 8-hour shift.

According to OSHA, hearing conservation programs should "strive to prevent initial occupational hearing loss, preserve and protect remaining hearing, and equip workers with the knowledge and hearing protection devices necessary to safeguard themselves."

These programs can take many forms as long as they all work toward the same goal, which is to prevent hearing loss. Creating a hearing conservation program all depends on the workplace in question and the source of the noise. However, most programs include the following:

- Workers should be aware of the risks of noise-induced hearing loss and other health risks that can occur due to noise exposure.
- If workers are potentially exposed to noise-induced hearing loss, they must be given a baseline audiogram within the first six months of work. Afterward, they should receive an annual audiogram performed by a certified audiologist, free of charge. They should then compare the results to those of the baseline audiogram to determine if noise exposure has caused hearing loss.
- Workers at risk of experiencing noise-induced hearing loss should be given various hearing protection options, including earplugs, earmuffs and headphones for reducing ambient sound.

- Employers must hold a hearing protection training program every year to make sure workers who will be exposed to more than 8 hours of 85-decibel noise know how to protect themselves on the job.
- Records must be kept of employees' varying noise exposure levels.

Hearing protection equipment comes in many different shapes and sizes. Managers should provide workers with a range of options, so they can choose the appropriate, securely-fitted equipment for the task at hand.

For example, electricians will often wear dielectric headphones to protect them from electrical hazards. This equipment is often inserted underneath or on top of other personal protective equipment. Workers may need to use bands or inserts underneath their helmets. In other cases, these devices may be mounted on the helmet or neck.

Some teams will use earplugs when it's too hot to wear earmuffs or to supplement their hearing protection equipment. Plugs can be molded, custom molded or unmolded. Some are corded, which may get in the way on the job. Some are disposable, while others are reusable. These devices should fit properly without making the worker uncomfortable. Managers should consider investing in custom-molded ear plugs for a better fit if their workers are continuously exposed to loud noises.

Creating a Hearing Conservation Program

Managers can use the following steps to implement a safe and effective hearing conservation program in the workplace:

1. Managers should first make a checklist of all the loud noises that occur in the workplace, including their respective decibel levels and how often they occur.
2. Once the source of the noise has been identified, the manager should look for ways to reduce the noise level. This may include using a different piece of equipment, setting up a sound barrier, running equipment during different times of the day or moving workers away from the source of the sound. Managers may also rotate their teams to limit their exposure to high noise levels. Preventing loud noises also means using materials and machinery with care. Workers should avoid slamming or dropping items that could put their colleagues' hearing at risk.
3. If the noise level can't be adjusted, managers should install high noise area signs around the site to alert staff.

4. They should also provide various types of hearing protection equipment to workers before they enter the high noise area.
5. Crew members should regularly inspect this equipment for damage, including cracks, tears or poor noise control, to make sure it will work as intended in the workplace.
6. In addition to baseline testing, managers should continue monitoring and testing their workers' hearing to make sure they aren't losing their hearing over time.

Even if some workers appear to have their hearing intact, they may see a noticeable decline down the line since these symptoms may take years to develop.

Workers have a right to earn a living without worrying about losing their hearing. If managers don't comply with the latest noise pollution guidelines, workers have a right to report their employer to OSHA. Workers may also receive compensation if their hearing is damaged in the workplace.

If managers aren't sure whether sound levels merit a hearing conservation program or they don't know how to implement such a program, they should consult with a workplace safety professional with a background in preventing hearing loss. This person can help managers identify potential hazards in the workplace while proposing a reasonable solution for limiting staff exposure to these sounds.

Preventing hearing loss is often a group effort. Everyone in the workplace should be aware of the hazards of noise-induced hearing loss, so they can take steps to protect against them. If employees have any questions about hearing protection, they should contact their employer directly for more information.

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