Hearing and Noise Prevention – By the Numbers



HEARING & NOISE PREVENTION

DID YOU KNOW?

Occupational Hearing Loss (OHL)

- The National Institute for Occupational Safety and Health (NIOSH) recommends that workers are not exposed to noise at a level that amounts to more than 85 decibels (dBA) over 8 continuous hours.
- NIOSH estimates that 30 million U.S. workers are exposed to noise levels high enough to cause irreversible hearing loss.

- According to the U.S. Bureau of Labor Statistics, more than 20,000 workplace hearing loss cases occur annually, many resulting in permanent hearing loss.
- An estimated 24% of hearing loss in the United States has been attributed to workplace exposure, according to the Centers for Disease Control.
- In the U.S., hearing loss is the third most common chronic physical condition among adults after hypertension and arthritis.
- About 12 % of the U.S working population has hearing difficulty.
- About 8% of the U.S working population has Tinnitus (ringing in the ears) and 4% has both hearing difficulty and Tinnitus.

Employment and Economic Costs

- 48% of people who have hearing loss were employed in 2014, but about the same amount (47%) are not in the labor force.
- Adults with hearing loss are more likely to have lower education, lower income, and be unemployment or underemployment, compared with their typical-hearing peers.
- Individuals with hearing loss also experience greater difficulties in employment transition and career development, compared with those with typical hearing.
- Untreated hearing loss can decrease one’s annual income by as much as $30,000. The yearly cost to society is estimated to be as high as $26 billion in unrealized federal taxes; and an estimated aggregate yearly income loss of $176 billion due to underemployment.

Exposed Workers

- About 22 million workers are exposed to hazardous noise each year.
- About 10 million workers are exposed to solvents and an unknown number are exposed to other ototoxicants.

KEEP IN MIND

Most industrial and plant operations in our modern industrial society emit and produce noise, some more than others. All this noise has an impact on the hearing of its workers.

Noise Exposure Hazards

Over time, exposure to noise can cause the following problems:

- Noise-induced hearing loss (NIHL)
- Tinnitus (ringing in the ears)
- High blood pressure
- Fatigue.

Noise-induced hearing loss is the most common occupational disease suffered by worker. It often happens gradually, so workers may not realize that loud noise from their job is damaging their hearing. By the time they do realize it, it’s too late—the damage is permanent and can’t be reversed.

Hearing Loss

Any reduction in the normal ability to hear is referred to as a loss of hearing. A hearing loss can be either temporary or permanent.

Other prime causes of permanent hearing loss are age, traumatic injuries (such as from explosions or gunfire), and infection. Noise, however, is the major identifiable cause of hearing loss.

Causes a host of health problems, with painless symptoms that progress unnoticed until it is too late. Even more disturbing is that the ears become accustomed to noise and the brain accepts it as normal, after a short while. Do not be fooled though, noise-induced hearing loss cannot be reversed!

The Dangers

Loss of hearing from high noise makes it hard to hear warnings and directions and this can lead to accidents. Though most employers make great effort to protect workers from noise hazards, sometimes, the problem is not what is done but how it is done.

Some workplaces might not understand what level of noise is harmful and this creates room for error while implementing controls. But safety regulations require employers to protect workers from excessive noise; this means, having a program that regulates noise exposure through noise level assessments, hearing protection, employee training and hearing tests. Without this program and its annual reviews, control measures are useless and may even become hazardous.

The best way to prevent hearing damage is by avoiding exposure to excessive noise. Noisy jobs should be identified, and control measures put in place.

Control measures might include:

- Installing sound-dampening or sound-proofing materials.
- Enclosing a noisy process or equipment.
- Regular maintenance.
- Job rotation – to lessen exposure time.
- Putting up signage to warn workers hearing protection is required.

Workers can prevent hearing loss by:

- Staying informed and watching for warning signs, such as ringing or humming in your ears and temporary loss of hearing when you leave work.
- Wearing and maintaining all hearing protection provided by your employer.
- Using the right hearing protection for the job, task, or area.
- Participating in your employer's audiometric program and understanding the results of your hearing tests.
- Asking questions about noise levels, hearing protection, and other noise and hearing related issues, as soon as you have a concern.

Fit, Care, and Use

An employer who provides a worker with an HPD must provide adequate **training and instruction** to the worker in the care and use of the device.

Summary

Control of noise in workplaces is of growing importance as a result of increasing hearing loss claims.

This is a convenient way of understanding the overall problem and a useful approach for putting control measures in place. The three components can usually be treated in isolation, although sometimes all three must be considered together in order to control unacceptable noise levels.

1. At the source, measures are aimed at reducing or eliminating the noise being generated.
2. Along the path, barriers can be introduced to reduce the amount of noise reaching the worker.
3. At the worker, measures involve personal protective equipment being properly selected, fitted, and worn. This PPE must be used in high noise environments all the time.

Failure to provide preventive or control measures will result in temporary and ultimately permanent hearing losses.