

Safety Bugle

Today's Topic: Hearing Conservation



Protect Your Hearing

Your job shouldn't cause you to lose your hearing. Yet for many people, such as construction workers, farmers, mechanics and factory workers, with years of exposure to excessive noises on the job has led to permanent hearing loss.

According to NIOSH, 30 million Americans are exposed to hazardous noise at work. This has resulted in a permanent hearing loss for about 10 million workers. If you are one of these people, you don't have to suffer hearing loss. Your supervisors can make changes to the equipment to eliminate or reduce noise. In many cases you can adjust your work schedule and job to avoid being around noisy equipment. Finally, when engineering or administrative controls can't eliminate your exposure to hazardous noise, you can wear hearing protection devices, such as ear plugs or ear muffs.

Now Hear This

Loud noises can cause hearing loss by damaging the delicate hair cells in the inner ear. Most of the time, this damage happens gradually when prolonged exposure to loud sounds exhausts these hair cells. As noise levels increase, the tiny cilia at the top of the hair cells can be injured or broken off. Entire groups of these hair cells can be torn away. Hair cells don't repair themselves. So when enough hair cells are damaged, a hearing loss results.

Sound is measured in decibels. A normal conversation takes place at about 60 decibels. A woodshop noise level is about 100 decibels, and a chainsaw noise measures about 110 decibels. Prolonged exposure to noise above 85 decibels can cause hearing loss.

A short, intense sound—an explosion, for example— may cause immediate hearing loss. But usually hearing loss occurs gradually after prolonged exposure to loud noise. It may occur so gradually you may not even realize you are losing your hearing.



Over time, sounds may simply become muffled or distorted. Tinnitus, a ringing or roaring sound, can accompany both immediate and gradual hearing loss. Tinnitus occurs when the damage to hair cells hasn't gotten to the point where they produce nothing. Rather, the hairs produce ongoing sounds because they are partially damaged.

Hearing loss can be progressive if you continue exposing yourself to the same noise. Today you may have a minor or moderate hearing loss, but after further exposure, the loss may become more severe. However, once you stop the exposure, the hearing loss won't get worse.

Muffle the Roar

The Occupational Safety and Health Administration (OSHA) requires employers to develop and implement a noise monitoring program when "information indicates that any employee's exposure may equal or exceed an 8-hour average exposure of 85 decibels." When this occurs, OSHA requires employers to notify employees, to establish and maintain a hearing test program, and to train workers how to prevent occupational hearing loss. When engineering controls have not yet eliminated hazardous noise, OSHA also requires employers to



provide hearing protectors and ensure workers wear them. Not every type of hearing protection is useful for every type of noise.



Disposable foam earplugs may be fine for some noise exposure while earmuff-type protection may be suitable for another.

But hearing protection doesn't work if you don't use it. So wear it every day and wear it right!

Remember, it is your responsibility to wear hearing protection, not wearing hearing protection in noisy environments will cause hearing loss.