PPE: Hearing – Checklist



PREAMBLE

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!

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.

Most damage due to noise is gradual and over time. Because of this, many people ignore or do not realize that their hearing is being damaged. It becomes noticeable to an individual when it is harder to understand someone talking or needing to turn the TV volume up.

Damage can also occur from a single loud impulse noise such as a gunshot or explosion. These types of noises can rupture the eardrum or damage the bones in the middle ear. This kind of NIHL can be immediate and permanent. Loud noise exposure can also cause tinnitus—a ringing, buzzing, or roaring in the ears or head. Tinnitus may subside over time, but can sometimes continue constantly or occasionally throughout a person’s life. Hearing loss and tinnitus can occur in one or both ears. Sometimes temporary hearing loss can subside however the event

that caused it can still cause long term damage to your hearing.

How the Ear is damaged from Noise

Hearing depends on a series of events that change sound waves in the air into electrical signals. Our auditory nerve then carries these signals to the brain through a complex series of steps. To breakdown the process simply- the sound waves travel through the ear and eventually move hair cells up and down in the ear that cause channels to open up. This allows chemicals to rush into a cell that creates an electrical signal that translates the sound into something we can understand.

Most noise-induced hearing loss is caused by the damage and eventual death of these hair cells. Unlike bird and amphibian hair cells, human hair cells don’t grow back. They are gone for good.

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

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…