Toolbox Talk: Hearing Conservation

Hearing Protection Devices versus Noise Cancelling Headphones

Listening to music during work may make time go by faster, but this could be damaging your hearing. Using ear buds and headphones, can leave your hearing unprotected from occupational noise and will cause impairment due to playing the music louder to drown out the occupational noise. The utilization of earbuds and headphones can cause distraction that could potentially cause harm to others or yourself. Many departments have banned the use of ear buds while working, due to these examples.

**Hearing Protection Devices:**

An accredited laboratory conducts testing of hearing protection devices such as earmuffs and earplugs. From testing, each model receives a noise reduction rating (NRR). The package of the hearing protection must display the NRR with the following label:

![Image of hearing protection devices]

There are earplugs on the market, which allow an employee to listen to music when they are working. This style of earplugs provides a seal in the ear canal to block outside noise and most prevent the music volume level from going above 85dBA. However many of these earplugs have a very low noise reduction rating (NRR) and most of the time do not provide the needed level of hearing protection for an occupational setting.

**Noise-Cancelling Headphones:**

There are Noise-Cancelling headphones on the market, these products are not the same as hearing protection devices because they do not have an assigned an NRR number. The design of Noise-Cancelling headphones is to block unwanted ambient sounds using active noise control for low frequency sound and soundproofing for higher frequency sound. These headphones allow someone to listen to music at lower and safer volumes without outside low and high frequency disturbances.

Noise-Cancelling Headphones are not effective for industrial noises such as industrial machinery and mechanical spaces, which exceed the capabilities of active noise control and the soundproofing.

Many MP3 players and music playing phones are capable of amplifying music to 110 dBA and over. Noise-Cancelling Headphones have no controls to limit noise levels, therefore allowing users to max out the noise levels at greater than 85dBA. An exposure of 100dBA for 15 minutes is capable of damaging your hearing.
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See the following diagram of different noise levels and time when levels can start causing damage to your hearing.