Ear Plugs Vs. Ear Muffs: Which Are Better?

by Adam Dawson

The Occupational Safety and Health Administration (OSHA) has official limits on the decibel level American workers can be exposed to during an 8-hour shift. OSHA's permissible exposure limit is 90 A-weighted decibels (dBA) over 8 hours. However, the organization also states that for every 5 dBA increased, the amount of time the worker can be exposed reduces by 50 percent.

To elaborate further, a worker can safely be exposed to 90 dBA for 8 hours, but if the noise level increases to 95 dBA, they can only be exposed for 4 hours before suffering hearing damage. That is, unless they are wearing adequate hearing protection.

Advantages and Disadvantages of Ear Muffs

One of the biggest advantages of ear muffs is that they don't need to be custom fit. Most models are designed as a one-size-fits-all solution, and some can be easily adjusted to fit snugly on the wearer's head. Because of their size, they're easy to see and hard to lose. In addition to protecting employees from loud noises, they also keep their ears warm, making them ideal for those whom have to brave cold temperatures on the job, such as construction workers and landscapers.

Battery-powered electronic ear muffs leverage microphones to allow ambient sounds in when loud noise isn't present. Once loudness is detected, the microphone instantly attenuates to protect the wearer. These types of ear muffs are particularly useful for shooting sports. More advanced electronic muffs leverage directional microphones to provide a more natural hearing experience and audio input jacks to allow the wearer to listen to music or have a phone conversation.

While they can do a lot of good, ear muffs do come with their fair share of disadvantages. For one, they can be extremely uncomfortable in hot and humid conditions. Because they fit snugly over the ears, they do a great job of trapping in heat, which isn't ideal when temperatures reach 80 degrees or higher. Also, people with glasses may have difficulties because the ear hooks may prevent the muffs from securely fitting. Additionally, since they don't directly block the ear canal, ear muffs may not provide as good of a seal against extreme noise in comparison to ear plugs.

Advantages and Disadvantages of Ear Plugs

Because they fit directly into the ear canal, ear plugs offer a higher level of protection from noise than ear muffs. Those employed in factories, foundries, or on the tarmacs at airports are suitable candidates for this type of ear protection. They are easy for a worker to carry with them in a sealable plastic baggie or a hard-shell case. And, for workers wearing glasses or a safety helmet, there is no discomfort or interference.

On the negative side, ear plugs are sometimes hard to fit in the ear. Some instructions require the wearer to pull their ear at a certain angle, ball up the ear plug, and then stick it in their ear canal. If done incorrectly, the ear plug will constantly slip out of the ear canal and not protect the wearer as well as it should. Additionally, their small size makes them easy to lose and hard to see when inside the wearer's ear.

What's the Answer?

It depends on the needs of the worker. Ear muffs will get the job done in most situations, but may cause discomfort in areas with higher temperatures. On the other hand, ear plugs fit directly into the ear canal and offer maximum protection from excessive noise. Their only downside is their size. They aren't the easiest to fit, and they are so small that they can easily be lost.

No matter which is chosen, it's wise to pay attention to the decibel (dB) rating. Both ear plugs and ear muffs come with a dB rating that tells the user how much noise reduction there will be when the product is worn. For example, if a set of ear muffs has a 30 dB rating, it means the noise level of the environment will be reduced by 30 dB when wearing. So if you're working with a jackhammer that belts out 120 dB of noise, the muffs would reduce that noise to 90 dB, allowing you to spend more time using the tool before any hearing damage occurred.

Keep in mind that there doesn't necessarily need to be a choice between one and the other. For those who work under extreme noise conditions and do not need to communicate much while working, it is okay to wear both ear plugs and ear muffs at the same time. In doing so, they are ensuring themselves maximum protection from the threat of hearing damage.

About the Author

Adam is the Digital Marketing Coordinator at e3 Diagnostics. His interest in hearing healthcare is driven by his passion for music because he feels everyone should be able to clearly listen to Pet Sounds at least once in their life. In his free time, he enjoys playing video games, digging through record stores for classic vinyl, shooting hoops, and writing stories.

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