

HEARING PROTECTION ADVISORY

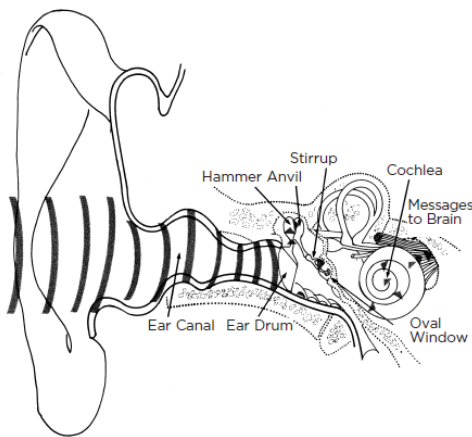
Earbuds vs. earplugs

Why is noise a hazard?

When workers are exposed to noise for too long or at levels that are too loud, this can cause irreversible damage that results in hearing loss known as noise induced hearing loss (NIHL).

How do we hear?

The hearing process begins when the outer ear directs sound waves into the ear canal. The eardrum vibrates as sound waves strike it, and this vibration is transmitted through the middle and inner ear. The inner ear contains fluid and highly sensitive hair cells that can feel the vibration. When exposed to noise, these hair cells move and bend. Excessive or very loud noise can damage these hair cells, which can cause hearing loss.



Hearing loss is permanent, and can have negative impacts on your professional and/or personal life. It can prevent you from hearing other hazards on the jobsite (e.g., reversing equipment or alarms), interferes with how you hear normal speech, and can even cause high blood pressure. Hearing protection devices (HPDs) are barriers that reduce the amount of noise reaching the sensitive inner ear. Fit, comfort, and sound reduction are important considerations when choosing an HPD.

The most common types of HPDs used are earplugs or earmuffs. Earplugs attenuate noise by plugging the ear canal. Earmuffs cover the external part of the ear, providing an “acoustical seal”

Are my earbuds protecting me?

No. It is frequently observed that ear buds (the ones which play music and/or are noise cancelling) are considered HPDs by workers. Sometimes, workers are under the wrongful impression that their earbuds will work in a similar manner to their employer-assigned HPD.

But earbuds are not HPDs. This includes noise cancelling earbuds. These devices may allow the user to listen to music and control volume, however the limits of volume are typically not controlled by the device. In addition, earbuds are not tested against acceptable standards for hearing protection. In some cases, music produced by earbuds can contribute levels up to 110 dBA to the user’s ear. If a worker is listening to music at full volume for their work-shift (8 hours), this would exceed the legislated noise exposure limits.

What is considered an effective earplug?

To be considered effective hearing protection, earplugs should:

- Conform to the latest issue of *CSA Standard Z94.2 - 14 (R2019)*.
- Fit snugly in the ear canal. This may cause some discomfort initially. In time (usually a period of two weeks), the discomfort should vanish. Seek professional advice if earplugs cause severe discomfort initially or mild discomfort for more than a few weeks.
- Be in good condition, without tears or damaged flanges.
- Be hygienic. Wash or sanitize your hands before

using earplugs.

- For reusable earplugs, wipe any dirt/debris with a clean cloth between uses.

How should I safely insert my earplugs?

As best practice, use the following method of insertion:



- Reach one hand around the back of the head
- Pull ear upwards to straighten S-shaped ear canal.
- Roll the plug up into a small, thin tube with your fingers.
- Insert the rolled-up plug into the ear canal and hold it in place until it expands to fill the ear canal. Sound should be muffled if the plug is inserted properly.
- Use according to manufacturer's instructions.

Questions?

For more information on hearing protection devices, review the following resources:

- [O. Reg 381/15: Noise](#)
- [A guide to the Noise Regulation under the Occupational Health and Safety Act](#)
- [Noise in construction \(Government of Ontario\)](#)
- [Hearing protection safety talk](#)
- ["Hearing protection" section of the Construction Health and Safety Manual \(M029\)](#)

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