

# Safety Facts: Hearing Protection Devices\*



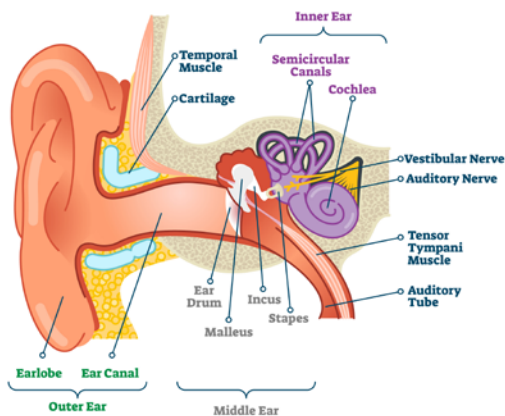
Hearing Protection Devices (HPD), also known as hearing protectors, are devices worn as a barrier to reduce sound levels entering the ears to diminish the harmful effects of sound. Examples of HPD can include earplugs and earmuffs. With each of these HPD, there is a large variety of examples to choose from.

## Why is it important?

Your body's auditory system makes it possible to hear. This includes all the components found in the outer, middle, and inner ear.

Sound is measured in decibels. Sound levels at 85 decibels or higher can be dangerous to the auditory system. Sometimes the sound level (120-140 decibels) can cause instant hearing loss e.g., gunshot. In many cases, continuous exposure to sound can cause noise induced hearing loss that may take years to notice.

## ANATOMY OF THE EAR



## Key characteristics

Earplugs are designed to be installed inside your ear canal. Earmuffs are designed to be installed over top of your ear. Each of these HPD have both advantages and disadvantages. For example, ear plugs are comfortable for long-term use but require more time to fit; earmuffs are designed as "one size fits all" but can be easily moved or knocked off from time to time. This can potentially break the seal between the earmuff and the skin, resulting in decreased hearing protection.

## Associated risks/hazards

If HPD are worn incorrectly they will not provide the necessary hearing protection.

Not all HPD offer the same amount of hearing protection. The Canadian Standards Association (CSA) standard Z94.2-14 outlines the various classes of HPD, and the associated hearing protection provided. Information on the Noise Reduction Rating (NRR) can be found on the HPD packaging.

## Preventive next steps

- Get the appropriate training on the selection, care, and use of HPD.

- Recognize when the noise level is becoming hazardous. If you must shout at a person one arms-length from you then, the noise level is hazardous. The employer is required by the Occupational Health and Safety Regulation (OHSR) to ensure you are not exposed to noise above a specified level, see OHSR 7.2 for more information.
- Have a variety of HPD available so you can use the HPD that is appropriate to the hazard and working conditions e.g., when noise levels exceed 100-105 decibels, you will need dual protection, e.g., earplugs and earmuffs.
- Get a hearing test as required by OHSR 7.8.



## For additional resources visit:

[CSA Standard Z94.2-14 \(R2019\)](#) Hearing Protection Devices – Performance, selection, care, and use  
[OHSR Part 7](#) Noise, Vibration, Radiation, and Temperature  
[Sound Advice](#): A Guide to Hearing Conservation Programs, WorkSafeBC

