

Ear-plugs

An ear-plug is a device that is inserted into an individual’s ear canal to protect them from exposure to loud noises. Ear-plugs come in wide variety of forms, mostly manufactured from soft plastic, PVC, silicone and Polyurethane. They provide good sound attenuation when fitted correctly. The type of ear-plug chosen will depend on each individual’s needs and personal preference.

Custom-moulded ear-plugs



There are also some specialist ear-plugs for individuals working in certain occupational settings. For example musicians require protection from exposure to loud noises but still allow them to hear the music.



✓ **Advantages**

- small and easily carried
- easy to use and store
- more protection at lower frequencies than ear-muffs
- various noise reduction ratings available
- inexpensive, therefore cheap to buy and replace
- can be custom-moulded for individual workers
- convenient to use with other personal protective equipment such as safety glasses
- comfortable to wear for longer periods, especially in hot and humid work environments.

✗ **Disadvantages**

- improper insertion reduces noise reduction rating value
- can be difficult to insert and remove (e.g., for individuals with small ear canals)
- requires good personal hygiene practice (can introduce dirt into ear canal)
- may irritate the ear canal
- more difficult to monitor usage.

The main types of hearing protection are:

Ear-plugs | **Ear-muffs** | Canal caps/semi-insert earplugs

Ear-muffs

Ear-muffs, also known as ear defenders, are hard plastic cups that fit over and surround the individual's ears and are sealed to the head by cushion seals. These are usually manufactured from plastic materials with a metal or plastic head band and foam or liquid ear cushion. Depending on the material used, the ear-muffs can irritate skin around the ears, particularly in warm weather.



✓ Advantages

- more protection at higher frequencies than ear-plugs
- designed to fit most people
- less time and effort required to apply
- easy to supervise and monitor
- not easily misplaced or lost
- various noise reduction ratings available
- can be worn with minor ear infections
- re-useable, durable and longer lasting than ear-plugs.

✗ Disadvantages

- rather less portable and relatively heavier than ear-plugs
- requires adequate storage facilities
- can be uncomfortable in hot and humid environments
- rather expensive to buy or to replace
- can be inconvenient to use with other personal protective equipment.

The main types of hearing protection are: Ear-plugs | Ear-muffs | Canal caps/semi-insert earplugs

Canal caps/semi-insert earplugs

Canal caps have rounded heads that cover the entrance to the ear canal, while semi-insert plugs generally have conical tips that are pushed into the ear canal. Both types are convenient for situations where the hearing protection has to be taken on and off frequently. Firm pressure from the head band is required to maintain an effective seal, which can be uncomfortable over longer use. These are normally recommended for use in areas of intermittent noise.



✓ Advantages

- various noise reduction ratings available
- easy to insert
- may be used several times
- ideal for people going in and out of noisy areas.

✗ Disadvantages

- correct size may be required
- improper insertion reduces effectiveness
- more expensive than ear plugs
- typically have lower noise reduction ratings than plugs or muffs.