

There's More than Meets the Eye — or the Ear!

Double Hearing Protection (earmuffs over earplugs) may be used in very noisy areas for daily average exposures greater than about 105 dB(A). The rule of thumb is that properly fit double protection adds about **5 dB to the protection rating of the higher rated HPD**. Using plugs with a nominal protection of 20dB and muffs with a protection of 20 dB does NOT give 40 dB, but something closer to 25 dB.

Hearing aids are NOT hearing protectors.

Most hearing aids are vented, making them useless as hearing protectors whether they are turned on or off. Do not use hearing aids in high noise areas; they can significantly aggravate noise exposure conditions.

Electronic HPDs come in two basic varieties. The communication/limiter headset consists of earmuffs with electronics built in to take either outside sounds or radio communication and electronically limit the level on the inside of the muff cup to a safe value. This can be used for highly mobile people, like fork lift drivers, who frequently go in and out of noisy areas.

Active HPDs use sound sensors, amplifiers, and speakers to generate "anti noise" or cancellation wave patterns to reduce the noise inside the earcup. The active technology, available in either an open-back-headset (like a Walkman™) or regular closed-cup earmuffs, is primarily effective for low-frequency (below 500 Hz) noise and for specialized applications, such as when combined with electronic communication systems. The open-back versions, which provide less than 10 dB of attenuation at and above 1000 Hz, are intended primarily for reducing annoyance rather than protecting from noise hazard.

Hearing Protection Can Save Hearing

Hearing Protection Devices (HPDs) are one component of an effective hearing conservation programs. HPDs can protect the delicate hearing system from the effects of noise on the job and off.

HPDs come in various shapes, sizes, and protection levels. While there is an HPD to suit nearly every person and situation, no single HPD is right for every job, every person, or every noise environment.

HPDs must be selected and properly fitted based on the noise environment where they will be used. Too little protection does no good; too much can interfere with communication and result in employees feeling isolated from their surroundings.

This pamphlet is intended to show the various types of HPDs available and give some guidelines where each might be appropriate. NHCA endorses no specific manufacturer or distributor of HPDs.

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A practical guide to:

Selecting Hearing Protection



National Hearing Conservation Association

The mission of the
National Hearing Conservation Association
is to prevent hearing loss due to noise
and other environmental factors
in all sectors of society.

