

## Types of hearing protectors:

**Ear plugs** are made from foam or soft plastic. They are inserted into your ear canal and work by blocking the sound from going in. The foam kind are disposable. The soft plastic kind (pre-molded plugs) can be cleaned and reused. Both give good protection.



**Semi-inserts/canal caps** are mounted on a headband and so are easy to take on and off. They are good for noise that comes and goes, but they do not provide as much protection as plugs or earmuffs.



**Earmuffs** are like headphones that make a seal over your ears. They are generally easy to use and wear, and are effective if worn properly.

## When you are wearing hearing protectors correctly:

- ✓ Your voice will sound deeper and louder
- ✓ You will not hear a difference in the loudness of the noise when you cover your ears.

## Other resources:

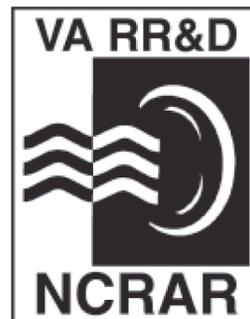
Hearing Loss Association of America:  
[hearingloss.org](http://hearingloss.org)

American Tinnitus Association:  
[www.ata.org](http://www.ata.org)

Better Hearing Institute:  
[www.betterhearing.org](http://www.betterhearing.org)

American Speech-Language-Hearing Association: [www.asha.org/public/](http://www.asha.org/public/)

National Institute on Deafness and Other Communication Disorders:  
[www.nidcd.nih.gov/health/hearing](http://www.nidcd.nih.gov/health/hearing)



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# Hearing Conservation

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At least 30 million people in the US have hearing loss. About 1/3 of all hearing loss is caused in part by exposure to loud noise. Hearing loss caused by exposure to loud sounds is called “Noise-Induced Hearing Loss” or NIHL for short. NIHL can occur after one extremely loud sound, such as a gunshot or explosion. More often it happens gradually, after repeated exposure to fairly loud sounds, such as loud music or power tools.

## NIHL is almost always PREVENTABLE.

### How does noise damage my hearing?

When you hear a sound, the sound waves move down your ear canal to your eardrum. This makes the eardrum vibrate. The vibration pushes on three tiny bones in the middle ear. This sends a signal to the “organ of hearing” – the cochlea. The cochlea has thousands of little “hair cells” that move. When these cells move, they send a signal to the brain. Loud sounds damage the hair cells. When the hair cells are damaged, you won’t be able to hear properly.

### What are the symptoms of noise damage?

Have you ever experienced ringing in your ears or noticed that sounds are muffled after you’ve been in a noisy place? These are symptoms of noise damage. At first, these symptoms go away, but with more noise exposure they do not. Speech will become difficult to understand and the ringing sound (tinnitus) may become constant.

### How can I tell if a sound is too loud?

- ✓ The loudness or intensity of a sound is measured in decibels (dB).
- ✓ The louder the sound, the less time it takes to damage your hearing. In general, you can safely listen to an 85 dB sound for about 8 hours before causing damage.
- ✓ In general, if you cannot hear someone three feet away from you, or you need to shout for them to hear you, it is very likely that the noise is too loud.
- ✓ Remember that even pleasant sounds cause damage to your hearing if they are too loud.

### How loud is too loud?



Courtesy of Lynn Kitagawa, Portland VA Medical Center

### What can I do to protect my hearing?

- ✓ Wear hearing protection when around loud sounds. Many of us are exposed to a lot of loud sounds every day, from loud music, to power tools, to our workplace.
- ✓ Try to spend less time in noisy places. Take a break and find a quiet place.
- ✓ Be aware of loud sounds and move as far away from them as you can.
- ✓ Make sure that your music system and television are not turned up too loud.
- ✓ If your ears ring or your hearing is muffled, have your hearing tested.



### Why should I care?

- Once your hearing is damaged, you cannot get it back.
- Noise damage affects the high pitches so you won’t be able to hear female and children’s voices, birds singing, and music as well.
- Noise damage can cause your ears to ring constantly. This is permanent and annoying.
- Hearing loss affects how well you can communicate with others.