

# Hearing Protection



## What is noise-induced hearing loss?

Sounds can be harmful when they are too loud, even for a brief time, or when they are both loud and longlasting. Sounds that are 85 decibels and up (think heavy traffic) can damage sensitive structures in the inner ear and cause noise-induced hearing loss (NIHL). Some personal music players and headphones can deliver sound to the ear at 105 decibels, which quickly causes damage!

The loss can be immediate or it can take a long time to be noticeable. It can be temporary or permanent, and it can affect one ear or both ears. The louder the sound, the shorter the time before damage can occur.

## Who is at risk for NIHL?

Children and teens who participate in or attend concerts or sporting events, ride BART often, listen to personal music players at loud volumes, or work with power tools or lawn equipment are all at risk for NIHL. Some are more likely to develop NIHL if other family members have had it as well.

Approximately 16 percent of teens (ages 12 to 19) already have hearing loss that may have been caused by exposure to noise at work or during leisure activities!

## How can I prevent NIHL?

- Educate yourself and your child about which noises are harmful
- Use noise isolating, tight earbuds or tight fitting over the ear headphones to eliminate background noise when using personal listening devices
- Have your child wear hearing protection when in noisy, risky environments! Earmuffs are best for children age 0-3 years because foam or wax earplugs can be a choking hazard. Custom earplugs are a fun solution for older children and teens, and contain special filters to let in music and speech.
- Have your child's hearing regularly tested to monitor for any changes.

## What about my child who already has a hearing loss?

A child with a hearing loss does not automatically have hearing protection. They are at risk for damage, and sometimes at the most risk! If your child uses hearing aids, they can safely listen to and enjoy music or any audio input with a hearing aid streaming device (ask your audiologist).

## White noise machines

White noise machines are popular for use in baby's rooms to help babies sleep. A recent study (<http://pediatrics.aappublications.org/content/early/2014/02/25/peds.2013-3617.full.pdf>) showed that standard commercial white noise machines routinely produce sound levels that are above recommended safe listening levels for babies, and some even produce noise levels that are above occupational limits for noise exposure in adults in the workplace. White noise machines should be 1) played at a low volume; 2) be placed as far away as possible from the infant and never in the crib or on a crib rail; and 3) be used for short durations of time.