

# Hearing health for teenagers

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Hearing health for teenagers It is a well-known fact that noise exposure causes irreversible hearing loss. The military and other industries that utilize noisy equipment provide ear protection for their employees.

There are very specific guidelines set by the Occupational Safety and Health Administration (*OSHA*) that determine when ear protection is recommended and when it is required. These guidelines include how long the exposure can be and how loud the sound can be and are designed to protect us from damaging our hearing. The rule of thumb is that the louder the sound, the shorter the duration of exposure required before damage occurs to hearing. The tricky thing about hearing changes resulting from over-exposure to noise is it often does not hurt at the time and occurs so slowly that before you know it, there is a problem.

When a person has tremendous noise exposure, like at a rock concert, he or she experiences a feeling of fullness or pressure in the ears. This is a sign that a very significant noise exposure has occurred and some hearing will not return. Although there is often a temporary shift in hearing sometimes accompanied by tinnitus (*ringing or buzzing in the ears*) that does go away with time, the hearing never returns completely.

Teenagers are a great risk of noise exposure and often do not even know they are damaging their hearing. When I was a kid, we would listen to music with headphones but the batteries would die so quickly that it was unlikely to damage my hearing. Now, it is not uncommon for teenagers (*and adults*) to listen to music or podcasts for hours on iPod at levels that are known to cause permanent and irreversible hearing changes. An iPod can produce sounds up to 110 decibels.

If you or your family members enjoy listening this way, enjoy! However, follow some simple precautions to prevent hearing loss. First, use the iPod at only 70 percent of the volume. At this level you can listen for a long time without causing hearing loss.

You also may want to consider noise-canceling head phones, or custom-made musician monitors. Although these head phones can be expensive, they prevent a person from turning the volume up to hear what they want to hear (*what is coming from the iPod*) over the sounds around them. The perception is that the music is just as loud but it isn't. If your iPod/MP3 player has a volume limiter in the settings, use it.

Remember to take a break if you have been listening for more than an hour to give your ears a rest. Ears that have a break are less likely to develop permanent hearing changes. Another obvious source of noise exposure in teenagers is stereos that are too loud in the car, rock concerts and even some sporting events.

Although not all noise exposure can be prevented, cheap and disposable ear plugs do work! Having some on hand for mowing the lawn or for when the chance comes up for a concert is well worth it. Ear plugs do come in different sizes and styles; finding one that fits you or your child's ear is important or the ear protection will not work effectively. Custom-made earmolds are also an option if the options typically found in hardware store are not comfortable for you.

## Examples of Excessive Noise: Max Time Allowed Without Earplugs

Event	Decibel Level	Time
Rock Concert	120 dB	7.5 minutes
Stereo Headphones	110 dB	30 minutes
Lawn Mower	90 dB	8 hours
Snowmobile	115 dB	15 minutes
Guns	120+ dB	7.5 minutes
Boom Box	110 dB	30 minutes

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Reference: "Noise Induced Hearing Loss (NIHL): What Teenagers Need to Know!" Minnesota Department of Health. <http://bit.ly/1okjw7C>