

Hearing Loss Prevention

Submitted by Dr. Mary Maddock Au.D.

On average, an other-wise healthy person will typically have essentially normal hearing at least up to age 60 if there has not been exposure to high levels of noise. Unfortunately noise is one of the most common causes of hearing loss and preventable in many cases. Repeated exposure to loud machinery, listening to loud music, even playing with loud toys can cause a gradual but permanent hearing loss.

- 10 million Americans have already suffered irreversible hearing damage from noise
- 30 million are exposed to dangerous noise levels each day
- The effects of noise, recreational and occupational, are underestimated because the damage takes place so gradually.

High noise levels damage the delicate hair cells of the inner ear. The damage results in sensori-neural hearing loss and tinnitus (ringing in the ear). The two elements of noise induced hearing loss are the loudness level and the duration of exposure. If the duration of a typical loud household product is short it is not considered a risk. However, as the loudness level increases such as a gunshot, the acceptable duration is shorter. Experts agree that continued exposure to noise above 85 dBA (approximately the level of a city street), over time, will eventually harm your hearing.

- Recreational activities that may have dangerous noise levels: fire crackers, music concerts, shooting a gun, sporting events, motorcycles, some children's toys, i – Pods and MP3s played to high levels
- Occupations under risk for hearing loss due to exposure to noise include: firefighters, police officers, factory workers, farmers, construction, musicians and heavy industry workers.

The general rule is that if you need to raise your voice to have a normal conversation with someone who is within arm's length, then noise is probably in the dangerous range.

Statistics show that the incidence of hearing loss related to noise exposure is occurring at younger and younger ages than was seen previously. Parents should be advised to look at the noise levels of the toys they purchase for their young children. Teenagers and young adults can be aware of recreational activities that expose them to high levels of noise. Working adults should protect their ears when working in noisy environments.

Some warning signs of the presence of hazardous noise are as follows:

- You have difficulty hearing someone three feet away without raising your voice
- You have pain in your ears after leaving an area of extreme noise
- You hear ringing or buzzing in your ears immediately after exposure to noise

- You have difficulty understanding speech after exposure to noise ie: you can hear them but have difficulty understanding them.

Noise exposure damages high frequency hearing first. This causes the individual to be able to perceive speech but will have difficulty understanding others. This leads them to believe that others are mumbling when in fact their hearing is preventing them from hearing the critical consonant sounds. Noise induced hearing loss typically occurs gradually and without pain.

What you can do to protect your hearing from noise:

- If you work in an “at-risk” occupation, check with your employer to make sure you have adequately protected your hearing according to OSHA regulations
- Limit exposure to noisy activities
- Look for personal music systems that have an Automatic Volume Limiter. Do not turn it up when you are in a noisy setting to “block out” the noise. This will only add to the noise and increase your risk to your hearing.
- Wear appropriate hearing protection when you are being exposed to noise. Non custom foam plugs are very reasonable but only appropriate if they are correctly placed in the ears. Ear muffs are highly effective but are bulky. Custom earplugs can be made to fit your ear comfortably and provide effective protection.
- Turn the volume down on televisions, radios, stereos and MP3 players
- Wear hearing protection when using loud equipment such as lawn mowers, power saws and leaf blowers.

Examples of Dangerously Loud Recreational Activities:

- Live music concerts have been measured at 120 dB and above
- The noise level of a gun shot is measured above 140 dB
- Sound levels in health clubs have been measured at 120 dB
- Outboard motors on boats and jet skis are between 85 dB and 115 dB
- Some children’s toys emit sounds at 135 dB
- Volume levels in some movie theaters are up to 118 dB

If you believe that you have been exposed to a loud noise that has affected your hearing have your hearing checked by an audiologist. In fact, if you are in a noisy environment on a daily basis you should have your hearing tested every year. The audiologist can advise you regarding the noise and the best type of protection for your hearing.

**Be Alert To Hazardous Noise:
Prevention is critical.**

Information for this article was provided by the Better Hearing Institute and the League for the Hard of Hearing.

For more information on hearing loss prevention and appropriate hearing protection while in noise call Dr. Mary Maddock Au.D., Board Certified in Audiology, American Board of Audiology