

Noise Induced Hearing Loss

Noise induced hearing loss (NIHL) is caused by damage to the hair cells in the inner ears. We experience sound in our environment everyday. Normally, the sounds we hear are at safe levels that do not affect our hearing. However, when we are exposed to harmful noise - loud sounds that last a long time or extremely loud sounds – hair cells in our inner ear can be damaged. These small sensitive structures make hearing possible by converting sound energy into electrical signals that travel to the brain, where sound is interpreted. Once damaged, our hair cells cannot grow back, leading to hearing loss.

Sound is measured in units called decibels. On the decibel scale, an increase of 10 means that a sound is 10 times more intense, or powerful. To your ears, it sounds twice as loud. Loudness of common sounds include:

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| 30 decibels | whisper |
| 45 decibels | humming of a refrigerator |
| 60 – 70 decibels | normal conversation |
| 85 decibels | heavy city traffic |
| 90 – 105 decibels | subway train, I Am T-Pain iPhone application, Tonka motorized fire truck, Whac-A-Mole game, other toys |
| 120 – 150 decibels | motorcycles, firecrackers |

NIHL can be caused by a one-time exposure to an intense “impulse” sound, such as an explosion, or by continuous exposure to loud sounds over time, such as mp3 players or iPods. Sounds of less than 75 decibels, even after long exposure, do not cause hearing loss.

NIHL is preventable. Everyone needs to understand the hazards of noise and how to practice good hearing health in everyday life. Some ways to protect your hearing are:

- Know which noises can cause damage (those at or above 85 decibels);
- Wear earplugs or other hearing protective devices when involved in a loud activity (special earplugs and earmuffs are available at hardware and sporting goods stores);
- Be alert to hazardous noise in the environment;
- Protect the ears of children who are too young to protect their own; and
- Make family, friends and colleagues aware of the hazards of noise.

If you suspect hearing loss, get a hearing test by an audiologist (a health professional trained to measure and help people deal with hearing loss) and a medical exam by an otolaryngologist (a doctor who specializes in diseases of the ears, nose, throat, head, and neck).

May is Better Hearing and Speech Month!

