

# TURN DOWN THE VOLUME: PREVENTING HEARING LOSS

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Life is loud.

Think back more than 150 years ago when the first pioneers staked their claims in the West. The silence of the land was probably deafening. Now fast-forward to life today. As we have covered the land with huge metropolitan cities, factories and highways, we have cranked up the volume of our lives.

Consider the sounds you hear throughout the day. From the motivating beat of the music at an early-morning aerobics class or the high-pitched hum of your hair dryer or electric shaver as you get ready for work, to the bass pulsating in the songs played on your iPod to block out noises at work or the whine of the leaf blower used to clean up the dirt and leaves around your home, you are surrounded by loud sounds all day long.

We tend to take our hearing for granted, but medical experts tell us that we are gradually damaging our hearing. Current research indicates that hearing loss afflicts more than 28 million Americans. For approximately 10 million individuals, these impairments are at least partially attributable to damage from exposure to loud sounds.

## A Delicate Hearing System

Our hearing sense is created through an amazing and complicated process. When sounds enter the ear, they are transmitted by the eardrum through the three middle ear bones, called the malleus, incus and staples, to the cochlea of the inner ear. The cochlea contains fluid that conducts vibrations into the membrane. Tiny hair cells line the membrane and transform the vibrations into electrical signals, which are passed to the brain where they are interpreted.

This hearing mechanism is delicate and the hair cells are fragile. The 30,000 hair cells that we are born with are the only ones we will ever have. Exposure to loud noises causes the cochlea to deteriorate and destroy the hair cells, affecting our ability to hear.

## The Impact of Noise

Sound is measured in decibels. According to medical professionals, noises above 75 decibels can cause hearing damage. They tell us that Noise Induced Hearing Loss (NIHL) can be caused by a one-time, intense impulse, such as an explosion, or by continuous exposure to noise, like that experienced by a lawn mowing crew or workers in a machine shop.

Here are some common noise levels for comparison: normal conversation is approximately 60 decibels, a refrigerator hum is 40 decibels, and city traffic noise can be 80 decibels.

The effect of a sudden burst or high-decibel sound may severely damage the structures of the inner ear and cause permanent hearing loss. Individuals may experience tinnitus, a continuous ringing, buzzing or roaring in their ears or heads. These symptoms may subside over time, but can also be intermittent or constant throughout the remainder of one's life.

For individuals exposed to continuous high levels of noise, the symptoms of NIHL may appear gradually. Sounds may become distorted or muffled, and it may be difficult to understand other people talking.

### **Hearing Loss at Work**

Hearing loss is one of the most common occupational injuries in the U.S. More than 30 million workers are regularly exposed to toxic noise, and another nine million are at risk for hearing loss from other materials in the workplace, such as solvents or metals. Hearing loss is the second most self-reported occupational illness or injury.

### **Consequences of Hearing Loss**

Hearing loss may also result in a variety of psychological, social or physical consequences for individuals, including depression, fear, anxiety, paranoia, emotional instability, concentration problems, vertigo, headaches and muscle pain, exhaustion and fatigue, stress and high blood pressure, and eating or sleep disorders.

According to the American Academy of Audiology, hearing loss is a significant, but treatable, health problem for aging Americans. Today's Baby Boomers have the most active and noisy lifestyle of any previous generation, which may lead to higher incidences of hearing loss.

### **Savor the Silence**

Hearing loss can be prevented or minimized by protecting this delicate and important function. Consider these recommendations:

- Turn down the volume when listening to personal music and DVD players and also use noise-cancelling earbuds or headphones
- Purchase disposable foam earplugs - available for about \$1.00 at most pharmacies – to protect your ears from loud noises, such as lawnmowers, power tools, leaf blowers, motorcycles, or fireworks
- Before attending a loud music concert, action movie or motor racing event, purchase high-fidelity earplugs. Standard options are available at many music stores, or order custom-fit earplugs from an audiologist (a health professional trained to identify, measure, and treat hearing loss)

Fortunately, there are treatment options for hearing loss. Individuals experiencing some type of hearing problem should seek medical assistance and treatment from an otolaryngologist, a physician who specializes in diseases of the ear, nose, throat, head and neck) or an audiologist.

## Proactive Hearing Protection

The increased volume of our world is raising awareness of the importance of preventing hearing loss. Employers are taking proactive steps to eliminate or reduce excessive noises in the work environment and remind employees to protect their hearing. They are also encouraging employees to seek routine hearing examinations to establish a benchmark for their hearing or treatment for hearing loss concerns. Many employers across the country are also providing hearing benefit options to employees.

Insurance carriers currently offer several hearing benefit choices, such as discount plans that employers can provide as a voluntary benefit or hearing examination procedures incorporated into existing medical plan benefits. Since hearing benefits feature high value at a relatively low-cost, many employers today are adding this option to their employee benefit packages.

## Responding to the Need

As Baby Boomer workers grow older and face hearing concerns, and younger employees turn up the volume, employers are increasingly becoming aware of the need to provide hearing benefits that will allow employees to evaluate and protect their hearing. Providers have an excellent opportunity to offer hearing benefits information and resources that will guide employers and employees in selecting plan options that will meet their individual needs.

## Common Noises That Can Impact Hearing

Noise Risk	Sound Level in Decibels	Hearing Loss After
Airplane Cabin	110	1 minute, 29 seconds
Ambulance	120	9 seconds
Chain Saw	110	1 minute, 29 seconds
Hand drill	98	23 minutes
Leaf Blower	110	1 minute, 29 seconds
Rock Concert	120	9 seconds
Smoke alarm	110	1 minute, 29 seconds
Snow mobile	100	15 minutes
Stadium football game	90	2 hours, 31 minutes
Tractor	96	37 minutes

Sources: Deafness Research Foundation, American Academy of Audiology, American Speech-Language-Hearing Association, American Auditory Society, National Institute of Deafness and Other Communication Disorders, The League for the Hard of Hearing, HearingHealth.net, Hear the World Initiative

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*For assistance in understanding insurance plans and carrier choices, or comparing coverage options, contact the Ameritas Group marketing department at 800-776-9446.*