

# Keeping your balance – How hearing loss increases risk of falling

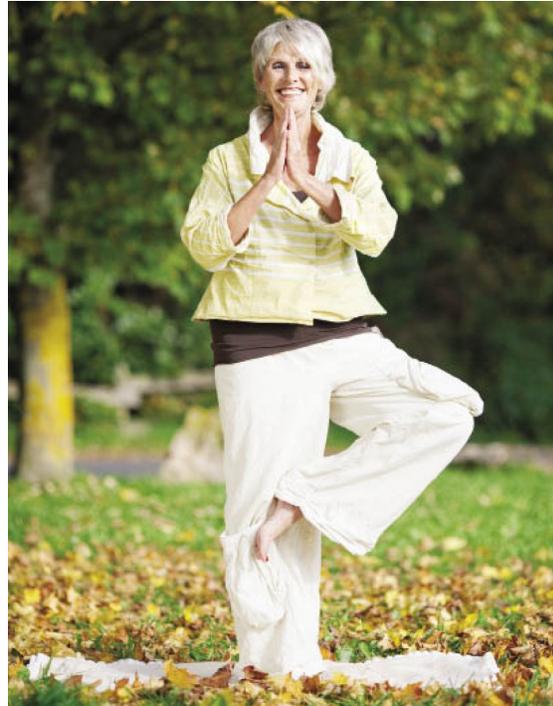
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Keeping your balance Falling is a serious problem. Injuries from falls can result in severe and sometimes life-altering complications including, but not limited to, concussions and bone fractures. For many reasons, these outcomes occur more frequently as we grow older.

To help reduce the incidence of falls, physicians rightly suggest having patients exercise and also have their vision checked regularly. Both preventative measures assist in maintaining healthy balance. Many medications can cause patients to become dizzy, therefore causing a fall. Prescription medications with dizziness as a known side effect will usually have a warning on the label. It is imperative that patients are aware of these labels and follow the suggested precautions.

Talking to your physician and pharmacist to check the ototoxicity of medications to determine if this may be contributing to any balance concerns is important as well. Ototoxicity is, in simple terms, ear poisoning (*oto means "ear," toxicity means "poisoning"*) that occurs as the result of exposure to drugs or chemicals that cause damage to the nerves of the inner ear. Those nerves are responsible for sending both balance and hearing information to the brain for processing.

In addition to environmental chemicals, many common over-the-counter medications as well as several prescribed medications (*diuretics, chemotherapies used to treat cancer, antibiotics, etc.*) are considered to be ototoxic. The degree and duration of ototoxicity depends on many factors. Patients should evaluate their treatment choices with their physician/health care team before stopping or starting any medications. The effect of certain drugs is often temporary, while others may result in permanent changes. However, while taking a known ototoxic drug, patients should be aware of the potential for balance and/or hearing impairment and talk with their prescribing physician if they experience these side effects.



Another lesser-known contributing factor with increased falls is untreated hearing loss. Research has shown that even individuals with a “mild” (25-decibel) hearing loss showed an increased risk of falling that was three times greater than those without hearing loss. This correlation is astonishing and something we all need to be aware of.

Additionally, the more hearing loss a person experiences, the greater the risk of falling. Specifically, each additional 10-decibel hearing loss increases fall risk by 1.4 fold. Knowing that other factors can cause people to be dizzy, the study carefully controlled for this by removing people with other health issues, such as cardiovascular disease or known vestibular issues (*other balance problems associated with the inner ear*).

**So why does this happen?** At first glance it does not seem that hearing changes and falling would be related. However, delving deeper into the subject, research undeniably shows a significant correlation. One reason is thought to be that the people who cannot hear well have less overall awareness of their environment. Additionally, it is widely accepted that any degree of hearing loss requires more effort for listening than for those without hearing loss. This load overwhelms the brain with demands on its resources. While straining to hear and process the auditory input around them — conversations, sounds of the street, sounds of nature — those with even slightly impaired hearing will be more likely to miss a step and fall because their attention was on the sounds around them, rather than on gait and balance. In contrast, those with normal hearing can listen passively without effort and do not have this added challenge.

Although everyone is likely to experience changes in their hearing as they age, those with the greatest risk are individuals who have worked in noisy settings, such as paper mills, factories, farms or in the military. Also, individuals with diabetes are at great risk for hearing loss as are those who have any cardiovascular disease. If any of these working environments or health issues pertain to you or a loved one, it is best to see an audiologist for a baseline hearing screening.

Fortunately, hearing loss of all degrees can be treated through amplification. Hearing aids provide the brain with the missing auditory information and decrease your likelihood of falling.

As the old saying goes, “*An ounce of prevention is worth a pound of cure.*” Making regular visits to your hearing specialist is one of the most important things you can do to ensure your overall health and happiness. Taking the necessary precautions to reduce the risk of falls and the life-changing consequences that can take place as a result is well worth the conversation.

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