



HEARING DOCTORS  
OF NEW JERSEY

Special Aging & Preventing Decline Series

# AGING AND FALLS

By Dr. Rhee Nesson, Au.D., CCC-A  
Doctor Of Audiology

## INTRODUCTORY LETTER FROM DR. NESSON

Dear Friend and Fellow Active Ager,

Balance is a cornerstone of independence, safety, and quality of life. For aging adults, however, maintaining balance becomes increasingly challenging. Everyday activities, such as walking across a room, climbing stairs, or getting out of bed, can suddenly feel precarious. This loss of confidence in mobility often leads to a heightened risk of falls, which are among the leading causes of injury and disability in older adults. Falls can result in serious consequences, including broken bones, head injuries, and prolonged hospital stays, often setting off a cascade of health complications.

What many people don't realize is that these balance issues are often rooted in the age-related neuropathy that occurs in the hearing, balance, and cognitive systems. Hearing loss, an inevitable part of aging, extends far beyond not being able to hear what other people say. It profoundly impacts the brain's ability to interpret and integrate sensory information, leaving you more prone to a traumatic fall.

As age-related neuropathy affects the ears and brain, the balance mechanisms within the inner ear also decline, leading to disruptions in equilibrium and a heightened risk of dizziness and falls. Alarmingly, falls are the leading cause of injury-related deaths among adults over 60, making this issue one of the most serious health risks in aging populations.

This whitepaper is part of the Aging and Preventing Decline Series. Visit [HearingAndBrainCenters.com/Aging](https://HearingAndBrainCenters.com/Aging) to learn more about staying independent and to take your next step towards preventing decline.

**“BALANCE IS NOT JUST ABOUT STAYING UPRIGHT—IT’S ABOUT PRESERVING YOUR INDEPENDENCE, STAYING IN YOUR HOME LONGER, AND MAINTAINING CONFIDENCE WITH EVERY STEP YOU TAKE.”**

Fortunately, advances in the medical treatment of hearing loss and tinnitus have provided proven solutions that can restore confidence and clarity, even in the most challenging listening environments. If you or a loved one struggles to hear in noise, now is the time to act. Visit [HearingAndBrainCenters.com](https://HearingAndBrainCenters.com) to learn more about treatments designed to help individuals regain control of their hearing and their lives.

Yours In Active-Aging,  
Dr. Rhee Nesson AU.D., CCC-A



## DR. RHEE NESSON AU.D., CCC-A

Dr. Rhee Rosenman-Nesson is the founder of Hearing Doctors of New Jersey and a Doctor of Audiology who helps patients to never say “what” again. She developed a proprietary H.E.A.R. Method™ Treatment Program that focuses on hearing goals, engagement with loved ones and analytics to deliver real, measurable results. She has almost 20 years of experience helping more than 4,250 people from 0-105 years old with their hearing.

Dr. Rhee also has developed countless educational videos and content on hearing loss and hearing aids. She has a passion for helping people struggling to hear their family and friends. Dr. Rhee has created a proprietary H.E.A.R. Method™ Treatment Program which standardizes the patient experience and takes the guesswork out of what the best hearing aid is, by providing extensive testing, validation, and fitting verification so her patients never say “what” again.



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## WHY BALANCE DECLINES WITH AGING

Maintaining balance is a complex process that relies on the integration of sensory information from multiple systems. While the eyes provide visual cues about the environment, and your proprioceptive system (i.e. your feet on the ground) offers feedback about body position; it's the balance and cognitive systems that keep you upright and help you prevent a fall. The brain integrates input from all these systems, making constant real-time adjustments to maintain stability. However, age-related neuropathy affecting the nervous system—particularly in the ears and brain—can increase the risk of falls, potentially altering the quality and trajectory of your aging journey forever.

As we age, these systems begin to weaken. One of the most significant contributors to balance decline is the deterioration of the hearing and cognitive systems. Located within the hearing system is the balance organ. This system's gravity and elevation detect motion and changes in head and body position. Over time, the nerves within this system that feed the brain degenerate, reducing our ability to detect our place in space and our ability to quickly respond to a change in position and posture. This often results in unsteadiness and an increased risk of falls.

In addition to the loss of balance and increased risk of a traumatic fall, age-related neuropathy also leads to tinnitus, difficulty hearing in background noise, a loss of hearing clarity (i.e. you can hear but don't understand everything), sensitivity to loud sounds and an increased risk of memory loss, cognitive decline and dementia. Each of these additional symptoms are covered in their own scientific report, that can be found at [www.HearingAndBrainCenters.com/Aging](http://www.HearingAndBrainCenters.com/Aging).

Hearing loss, a hallmark of aging, further compromises balance. The brain relies on hearing cues, such as changes in location of sounds, to maintain spatial awareness. When hearing is impaired from aging, the brain struggles to integrate this sensory input, leaving the body more vulnerable to balance disruptions. Vision changes, another symptom of age-related neuropathy, only exacerbate the issue by reducing the visual input critical for stability, especially in low-light environments. Aging muscles and joints, which lose strength and flexibility, also make it harder to recover from trips or slips. Together, these factors create a “perfect storm” that increases the likelihood of a traumatic falls.



## How Aging and Hearing Loss Contribute to Balance Issues

The link between age-related neuropathy, hearing loss and balance problems lies in the shared structures and neural pathways of the hearing, balance, and cognitive systems. Both hearing and balance systems are housed within the inner ear and work together to provide critical information about the body's position and movement. When hearing loss occurs, it signals broader dysfunction in the inner ear, including the balance organs.

Hearing loss isn't just about 'do I or don't I hear others', it's about the brain's loss of clarity, inability to follow a conversation in background noise, difficulty detecting where sound is located – these are each essential functions for spatial awareness. For instance, in a noisy room, the ability to discern where a voice or sound originates helps the brain create a mental map of the environment. When auditory input is compromised, the brain must work harder to maintain balance, increasing cognitive strain.

This additional strain, known as “cognitive overload,” further exacerbates balance problems. As the brain allocates more resources to compensate for hearing loss, fewer resources remain available for tasks such as maintaining posture and equilibrium. This is particularly evident in older adults, who may already experience slower reaction times and reduced cognitive resilience. The result is a heightened risk of falls, particularly in challenging environments such as uneven terrain or dimly lit spaces.

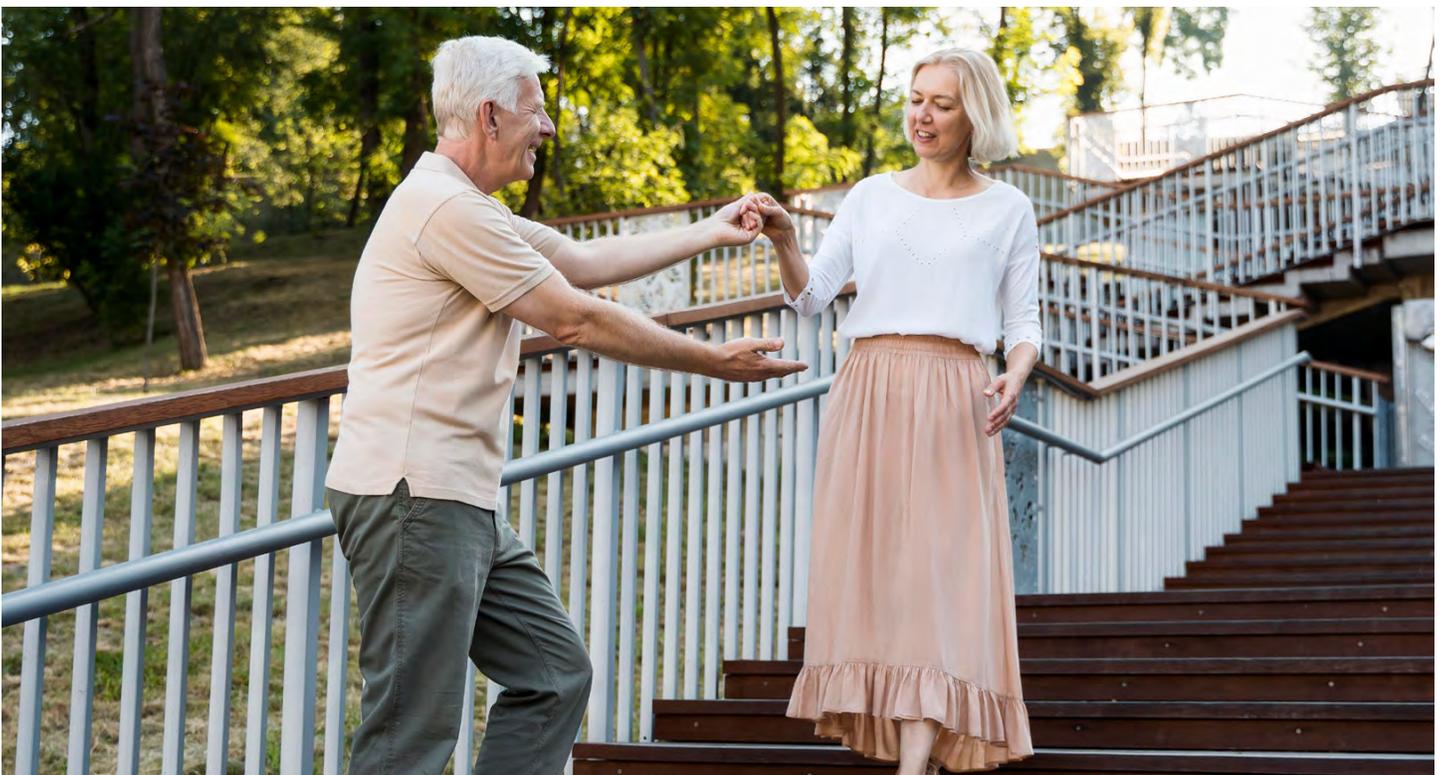
Hearing loss can also indirectly contribute to balance issues by leading to social withdrawal and reduced physical activity. Many older adults avoid noisy or crowded places where they struggle to hear, resulting in a more sedentary lifestyle. Over time, this inactivity weakens the muscles and reflexes needed for balance, creating a cycle of decline that further increases the risk of a traumatic fall.

## Symptoms of Balance Issues in Aging Adults

Balance issues in aging adults often develop gradually, making them even harder to anticipate or recognize early. Early symptoms may seem mild but signal deeper changes in the vestibular and auditory systems. Many individuals first notice a sense of unsteadiness or dizziness, especially when standing up quickly or navigating uneven surfaces. These subtle symptoms often precede more pronounced difficulties.

As balance issues progress, individuals may experience a feeling of unsteadiness, or even vertigo, a spinning sensation that can be debilitating. Tasks like climbing stairs or bending down to pick up an object may feel risky or even dangerous. Frequent falls or near-falls become more common, often resulting in injuries such as bruises, fractures, or head trauma. These physical consequences are compounded by emotional impacts, including fear of falling and a loss of confidence in mobility.

Socially, balance issues can lead to withdrawal from activities perceived as risky, such as group exercise classes or public transportation. This avoidance not only reduces physical activity but also fosters feelings of loneliness and depression, both of which are significant risk factors for cognitive decline and dementia. Early recognition and treatment are key to managing these symptoms effectively.





## Anatomy and Pathology of Balance Loss

The ability to maintain balance relies on several interconnected neural systems, all of which experience neuropathy and decline with age. In the inner ear, deterioration of the balance organs reduce movement sensitivity and impair the body's ability to maintain posture. This decline is a key factor in falls issues for older adults.

Hearing loss, only further exacerbates these challenges. Difficulty hearing sound cues as hearing diminishes, causes the brain to struggle to integrate hearing and balance information, further increasing the likelihood of a fall.

Our proprioceptive system, which provides feedback about body position through sensors in muscles and joints, also suffers with age-related changes in the brain that slow reaction times and compromise coordination, compounding balance difficulties.

Vision, another critical factor in balance, becomes less effective with age due to conditions like cataracts or macular degeneration. These changes limit the brain's ability to compensate for deficits in other systems, making balance even more difficult.

These age-related changes compromise the brain's ability to accurately process our position in space, increasing the risk of a traumatic fall—an event that can trigger further declines in emotional, social, physical, and cognitive health.

## Anatomy and Pathology of Balance Loss

The consequences of balance loss extend far beyond physical unsteadiness. Falls are the leading cause of injury among older adults, often resulting in fractures, head injuries, and hospitalizations. Recovery is often prolonged, and many individuals never fully regain their previous level of mobility. For some, a single fall can lead to a cascade of health challenges, including a loss of independence and the need for long-term care. Falls are also the #1 cause of injury related deaths in adults.

Emotionally, the fear of falling can be just as debilitating as the falls themselves. This fear often leads to avoidance of physical activity and social engagement, resulting in reduced fitness, increased isolation, and diminished quality of life. Cognitively, the mental effort required to maintain balance in the face of sensory decline can contribute to memory issues and overall mental fatigue.

The financial burden of balance-related challenges is also significant, with medical costs for fall-related injuries and home modifications placing a strain on families and healthcare systems. Addressing balance issues early can mitigate these risks and preserve independence.

According to the CDC, falls among adults are quite costly. Each year, approximately \$50 billion is spent on medical care for non-fatal fall injuries, while fatal falls account for an additional \$754 million in costs. Even more concerning, a single fall resulting in hospitalization can cost a family an average of \$38,000 per incident.





## Evidence-Based Treatments for Balance Issues

Effectively reducing the risk of falls begins with a comprehensive medical approach that prioritizes the treatment of hearing loss and tinnitus. Addressing these conditions is crucial for managing balance challenges and significantly lowering the likelihood of experiencing a traumatic fall.

- **Treatment of Hearing Loss & Tinnitus:** Treating hearing loss as part of a comprehensive medical program goes beyond improving sound perception—it enhances spatial awareness, reduces cognitive strain, and supports overall brain health. Prescription hearing technology is a critical component of this treatment, providing the brain with the auditory input it needs to better process environmental cues, such as speech and sound location. This improved input reduces the brain’s cognitive load, making it easier to focus, engage in conversations, and maintain balance in complex settings.

Research has demonstrated that treating hearing loss is associated with delayed diagnosis of Alzheimer’s disease, dementia, depression, anxiety, and injurious falls in older adults. By restoring the brain’s ability to process critical auditory information, prescription hearing technology helps mitigate the risks associated with untreated hearing loss, including reduced spatial awareness and increased vulnerability to falls.



Incorporating prescription hearing treatment into your life not only improves communication and social engagement but also strengthens cognitive resilience and reduces the risk of life-altering falls. Proactively addressing hearing loss is an essential step toward maintaining independence, staying active, and preserving emotional, physical, and cognitive health.

Additional treatments to reduce the risk of falls include:

- **Vestibular Rehabilitation Therapy (VRT):** VRT is a highly effective treatment to reduce falls risk. This specialized form of physical therapy uses targeted exercises to retrain the brain's balance centers, improving coordination and reducing dizziness. Through regular practice, VRT helps individuals restore stability and adapt to changes in their sensory systems.
- **Fall Prevention Programs:** Fall prevention programs, such as tai chi or yoga, focus on building strength, flexibility, and balance. These structured programs are designed to help older adults develop the physical resilience needed to avoid falls. Lifestyle modifications, including maintaining regular physical activity, eating a nutrient-rich diet, and managing chronic conditions such as diabetes and hypertension, also play a critical role in supporting overall balance and mobility.
- **Lifestyle Modifications:** Regular physical activity, a balanced diet, and management of chronic conditions such as diabetes and hypertension support overall mobility and balance.

- **Environmental Adjustments:** Simple environmental adjustments are essential for reducing fall risks. Simple modifications, such as removing tripping hazards, installing handrails, and improving lighting, create safer living spaces and significantly decrease the likelihood of falls. Regular consultations with hearing and balance specialists ensure that treatment plans are tailored to the individual's needs and adjusted as necessary to maintain effectiveness.

Treating balance issues requires a multifaceted approach that addresses both the underlying causes and practical challenges of maintaining stability. Medical treatment of hearing loss and tinnitus is often the first step and can improve auditory input while increasing spatial awareness. By reducing the cognitive load associated with hearing loss, individuals can regain confidence in their movements and interactions.



## CONCLUSION

Balance is more than just physical stability—it is a foundation of independence, confidence, and quality of life. As we age, the interconnected systems responsible for maintaining balance, including the hearing, vestibular, and cognitive pathways, begin to decline, increasing the risk of falls and their associated consequences. However, these challenges are not insurmountable. By addressing the root causes of balance issues, particularly those linked to hearing loss and tinnitus, it is possible to significantly reduce the risk of falls and maintain an active, fulfilling lifestyle.

Proactive treatment of hearing loss as part of a comprehensive medical program not only improves spatial awareness and auditory clarity but also strengthens the brain's ability to process and integrate sensory input. Combined with evidence-based therapies like vestibular rehabilitation, fall prevention programs, and lifestyle modifications, these interventions empower aging adults to regain control of their balance and their lives.

Falls are not an inevitable part of aging. Through early intervention, targeted treatments, and ongoing care, individuals can prevent falls, preserve their independence, and continue to engage fully with their families, communities, and passions.

**Take the first step toward safeguarding your health and well-being by visiting [HearingAndBrainCenters.com](https://HearingAndBrainCenters.com) to learn more about treatments designed to address balance**



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