

# MEDICAL MOMENTS

## Dizziness and Imbalance in the Elderly Age-related Decline in the Vestibular System

Dizziness and imbalance are often the most common complaints in older people, and are a growing public health concern since they put older people at a significantly higher risk of falling. In fact, falls are the leading cause of hospital admission and accidental death in older people. Although the causes of dizziness in older people are multifactorial, peripheral vestibular dysfunction is one of the most frequent causes.

What we learned from this Review was the following:

- Every factor associated with the maintenance of postural stability deteriorates during aging.
- Age-related deterioration of peripheral vestibular function has been demonstrated through quantitative measurements of the vestibulo-ocular reflex with rotational testing and of the vestibulo-collic reflex with testing of vestibular evoked myogenic potentials.
- Age-related decline of vestibular function has been shown to correlate with the age-related decrease in the number of vestibular hair cells and neurons.
- The mechanism of age-related cellular loss in the vestibular end organ is unclear, but it is thought that genetic predisposition and cumulative effect of oxidative stress may both play an important role.
- Since the causes of dizziness in older people are multi-factorial, management of this disease should be customized according to the etiologies of everyone.
- Vestibular rehabilitation is found to be effective in treating both unilateral and bilateral vestibular dysfunction.

Iwasaki, S and Yamasoba, T. (2015): Dizziness and imbalance in the elderly: age-related decline in the vestibular system. *Aging and Disease*, 6(1): 38-47.



Brian Werner, PT, MPT is the National Director of Balance and Vestibular Programs at FYZICAL Therapy and Balance Centers. In his role, Mr. Werner oversees the educational programs for FYZICAL- the world's fastest growing franchise in healthcare- comprised of over 350 Physical Therapy, Audiology, and ENT centers.

Brian graduated from Northern Arizona University in 1999. He opened the Balance Center of Las Vegas in 2001, and then the Werner Institute of Balance and Dizziness in 2005. He has presented at national conferences and teaches continuing education courses in concussion, fall prevention, balance, and vestibular rehabilitation.

He has extensive expertise in balance, vestibular, and fall prevention therapy. Brian has gained advanced knowledge and expertise in balance and vestibular therapy seeing over 45,000 patients in his career with balance and vestibular dysfunction.

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FYZICAL East Lansing | 517.333.8533 | 517.333.8539  
[FYZICAL.com/East-Lansing-Mi](https://www.fyzical.com/East-Lansing-Mi)