

Our office offers a solution.

As a proud Member of the Neuropathy Treatment Centers of America our Certified Neuropathy Professionals have specific training that allows them to work with patients suffering from Peripheral Neuropathy Pain.

Members have trained with one of the leading Chiropractic Neurologists in the world, Dr. Joe DiDuro, a clinical researcher who has worked with patients suffering from PN for the last 10 years. He has published and presented papers in the US, Canada and Europe that document the discoveries that have helped thousands of people get their lives back. Along with this training Members of the Neuropathy Treatment Centers of America through their work with PN patients understands that Peripheral Neuropathy Patients have a very low quality of life. The pain of neuropathy touches every aspect of an affected persons existence.



*Why not
start getting
better balance
today?*

*A Patient's Guide to
Preventing Falls.*



Synsvoll Chiropractic
101 NW 12th Avenue
Suite 125
Battle Ground, WA 98604



**Falls Are
No
Accident**



*Saving a life is easier
than you think!*

Why should older adults perform balance training?

More than one-third of people over the age of 65 have at least one fall each year.

One-third of adults over 65 years of age suffer a fall each year.

With more than 35 million older adults in the USA, this equates to more than 10 million falls each year! Falls are the leading cause of injury-related deaths in older adults (National Safety Council, 2000).

Injuries sustained in a fall may range from trivial bruises to life-threatening trauma. Head injuries and fractures of long bones (for example, hip fractures) lead the list. It is important to realize there may be a delay in the onset of the effects of head injury.

Even falls that do not lead to injury can have a negative effect on older adults. After a fall, elderly patients often voluntarily restrict their activity because they fear another fall. This reduction in exercise leads to further weakness that, in turn, increases the risk of another fall — a vicious cycle.

In 2000, 1.8 million falls resulted in an emergency room visit for head trauma, soft tissue injuries, fractures and dislocations. These falls accounted for \$16.4 billion in direct medical expenses. Of these injuries, hip fracture in older adults is the most devastating. From 1988 to 1996, the estimated number of hospital admissions for hip fracture increased from 230,000 to 340,000.

Falls are often caused by a loss of balance. The ability to balance depends, in large part, on three sensory systems: the visual, vestibular, and somatosensory systems. With increasing age, however, sensory function decreases and negatively affects balance control (Era et al., 1996).

Preserving a Fundamental Sense: Balance

Peripheral Neuropathy is the leading cause of sensory loss in older patients. This 'silent' epidemic can come on so slowly that patients do not even recognize they have a problem- until its too late and they fall.

Decreased and slowed muscle response in the presence of diabetes may be responsible for some of the increased propensity to falling in such patients.

Altered contractile muscle properties, decreased stretch reflexes and reduced ankle stiffness has similarly been demonstrated in patients with diabetic motor neuropathy.

In addition to the three sensory systems, muscle strength plays a role in balance and mobility. Deficits in leg strength are related to diminished gait velocity, stride length, and balance. Hip extensor power is significantly related to the ability to rise from a chair, climb stairs, and walk. Increasing strength may offset some of the contraction speed-associated deficits in the elderly and may further modify other factors (i.e., postural control, proprioceptive input, range of motion, fear, etc.) that would reduce the risk for falls.

A little exercise every day can help improve your balance and increase your chances of staying independent and healthy longer. Performing this type of training can improve balance, postural stability and gait and reduce the risk and fear of falls.

What type of exercises should be performed?

Balance exercises that involve maintaining standing and postural stability under a variety of conditions become easier when sensation to the lower legs has

improved.

A basic premise of exercise science is that in order to improve the function of a system through exercise, the exercise must stimulate that system (i.e., the principle of specificity). Therefore, in order to improve balance, the exercise intervention must target the systems that control balance (i.e., sensory and motor systems, among others).

Challenging the sensory-motor systems can be accomplished with various exercise modalities. For example, several studies have shown that strengthening the lower extremity with elastic bands improves balance and prevents falls.

It is clear that certain exercise programs can improve balance by targeting the systems that control balance, specifically the visual, vestibular, somatosensory and musculoskeletal systems. It is also clear that the peripheral nervous systems input to maintaining and improving balance is an important factor in reducing the risk for falls.

About Strength and Balance Exercises

The exercises that patients perform at our office focus on lower-body exercises for strength which also focus on balance. We use your regularly scheduled strength exercises which will improve your balance at the same time. These exercises help you keep your balance by increasing muscle strength in your upper thighs.

Patients notice immediate changes like more ease getting out of chairs, walking up steps, and even getting dressed or taking a shower. These are activities that patients without training find difficult and where they usually fall.