

An informative series on health and wellness

Presented by Active Solutions Physical Therapy, a leading physical and manual therapy center located in Boulder, Colorado

Maintaining Proper Balance Normal Function Plays Tricks as We Age



Most people, especially those under 40, can sit, stand and move without fear of falling. But as we age, many people experience problems with balance, including unexpected or sudden dizziness (vertigo). Dangerous falls among the elderly are common and can diminish their ability to lead active, independent lives.

The following **symptoms** are possible **indicators** of a less-than-optimal-functioning balance system:

- difficulty walking in the dark
- staying close to a wall while walking
- staggered walking
- dizziness
- lightheadedness
- swimming sensation
- sensation of the world spinning around you
- feeling like you are on a boat
- nausea and/or vomiting from movement

Through innovative treatment, **Active Solutions Physical Therapy** can help you to improve balance, prevent common falls and eliminate risk of dizziness. Let's take a closer look at the relationship among these three factors.

What You Should Know about Balance, Falls and Dizziness

Three body systems actively coordinate equilibrium.

The visual system includes our eyes and the information they provide to the brain about the environment, the body's position as well as

movement within the environment. Most people know by experience that standing with the eyes closed is harder than standing with them open. Unfortunately, as people age we lose the ability to use visual cues to control balance. When something is out of equilibrium in the vestibular system people can experience sudden dizziness, or vertigo.

The vestibular system is located in the inner ear and provides information about head movements independent of visual cues. Children sometimes experiment with vestibular abilities by spinning in circles until the world begins to spin around them. After the age of 40, however, the vestibular function progressively decreases, mainly due to physical inactivity and underuse of this organ.

The somato-sensory system informs the brain about the joints' position, as well as movement and speed of movement. This system lets the brain know about skin sensations and what the muscles are doing. To appreciate how this works, try an experiment: close the eyes, move both arms out to the sides and then touch the tips of your two index fingers in front of your nose.

All the information generated by the visual, vestibular and somato-sensory systems is processed in the brain, and the body constantly makes corrections to maintain balance. When somebody bumps into you, your brain, through these systems, senses a loss of balance and signals for you to take a quick step to catch yourself. If one or more of these systems are not doing their job, it is harder to maintain balance. That is when people are most at risk for falls and injury.

How We Can Help: Vestibular and Balance Rehabilitation

If you feel at risk, we recommend that you visit your family physician or internist first to determine if your dizziness is caused by a problem unrelated to the inner ear. At that time we can begin to help you to gain complete recovery.

One of the most common conditions is **benign paroxysmal positional vertigo (BPPV)**. People experiencing this disorder complain of dizziness or spinning when moving their head. Although the dizziness is typically brief, lasting less than a minute, it can be very strong and cause disorientation, nausea and disequilibrium. Through specific head maneuvers offered by our physical therapists, most of our patients at Active Solutions gain complete recovery from BPPV.

Patients who enter the **Vestibular and Balance Rehabilitation Program** at Active Solutions Physical Therapy undergo a comprehensive assessment of dynamic balance skills, tolerance to movement, eye function, strength and body coordination. Our evaluation will identify any problem in the visual, vestibular and somato-sensory systems, including any combination of these. Once we have reviewed your medical history and performed a thorough exam, we will design an individualized program of exercises, activities, hands-on treatment and Feldenkrais™

movement reeducation. Each program is custom-fit to your balance needs to deliver improvement in functionality across all indications.

The Active Solutions program is run by two experienced practitioners. **Petra Landfester**, PT, is a balance and vestibular specialist from Emory University. **Antoinette Vastenburg**, PT, GCFP, is a certified Feldenkrais practitioner. Petra and Antoinette offer 20+ years of experience in treating these sorts of conditions.

If you have any balance-related questions, we encourage you to contact one of our practitioners at Active Solutions Physical Therapy. **We are now offering complementary 15 minutes physical therapy consultations. Please call (303) 4944100**