

Rehab News



Submitted By: Therapy Department at Healthcare Therapy Services, Inc.

Better Balance

Maintaining good physical balance is important, especially to those over 55. We know that when our balance is jeopardized, even slightly, we lose confidence in our abilities. This fear of falling and general loss of balance are likely to result in a fall that causes minor/major injuries. So, what exactly is balance and how does it work?

Balance is "the ability to maintain the body's center of mass over its base of support". Balance is a complicated network within your body maintained by a set of sensorimotor control systems, including three main areas:

Vision (sight) – Your sensory receptors are located in the retina called rods and cones. Rods are believed to help with low light situations such a night time whereas cones help with color and the finer details. The rods and cones provide visual cues and send signals to the brain on how a person is in relationship to the world around them. Shadows, lighting, depth perception, all factor in to your vision's job to maintain balance.

Proprioception (touch, spatial awareness) – Sensors all over your body allows your brain to know its position in "space". For example, how your feet/legs are positioned compared to the ground and your head compared to shoulders/chest due to sensors sensitive to stretch/pressure in muscles, tendons and joints. Without these "proprioceptive sensors" one wouldn't know if a surface was uneven or slippery and would not be able to multi-task, such as driving or eating as we would be too focused on using one body part at a time.

Vestibular System (equilibrium, motion) – Components in the inner ear tell the brain about the movements and position of your head. The inner ear detects gravity as well sends signals to the brain when there is movement, such as head rotation, etc. When the systems are both working properly, they send symmetrical impulses to the brain to maintain balance. Sometimes if someone has a virus or ear infection, it can cause vertigo due to the improper functioning of that particular ear.

How These Systems Work Together:

With balance, it's sometimes difficult to know if there is an issue with one of these three systems, because they work together, and sometimes compensate for each other, to give you maximum support.

Example 1: If you are unable to successfully lift your leg to go up a 6" step without looking down, there may be a proprioception issue that needs to be addressed.

Example 2: If you can stand still with your eyes open, but seem dizzy or off balance when they're closed, there could be a vestibular system issue that needs to be addressed.

Common Risk Factors of Poor Balance:

- Medications Causing Dizziness
- Foot Pain/Poor Footwear
- Lower Body Weakness
- Hypertension/Cardiac Conditions
- Vision Issues
- Difficulty Walking & Balancing
- Hazards in Your Home

Therapy Can Help Reduce Falls & Improve Balance

Maintaining proper balance and sense of body position is critical to preventing falls. Therapy performs an individualized assessment to determine the root cause of a balance deficit. A physical therapist identifies risk factors and designs a customized program of exercises/activities with emphasis on strength, flexibility and proper gait. Balance may be improved with exercises that strengthen the core, back, ankle, knee and hip muscles along with improving the balance system. Occupational therapists will discuss changes/modifications around the home to help prevent falls from occurring. Some therapists are also certified in Vestibular Rehabilitation which can alleviate symptoms and treat the inner ear/vestibular system. There are signs and symptoms to balance loss that lead up to a fall. Recognize the signs and symptoms and contact your doctor to request an appointment with therapy to assess your balance. You can benefit from therapy to improve and maintain your balance.