Simple Tips for Better Balance

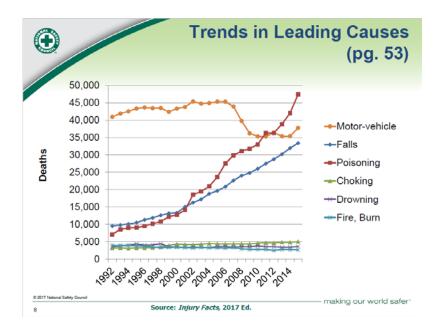


As we age, our balance and coordination begin to diminish, leading to a higher risk of falls.

As professionals and, in many cases, as caregivers ourselves, many of us have known someone whose balance is impaired. Difficulties with balance stem from injury, joint replacements, or a slip and fall, to name just a few causes. The balance impairment could be long-term in nature and associated with a disease state such as Parkinson's, a neurological disorder involving the nervous system that causes movement impairments. Whatever the case, balance can be improved, albeit on a relative level for each person.

Good balance is essential. Recent studies point to balance as an indicator for longevity. As we age, our balance and coordination begin to diminish, leading to a higher risk of falls. In fact, falls are the leading cause of injury among Americans over age 65. In 2014, the CDC cited fall-related injuries were responsible for \$31 billion in Medicare costs.

More recently, the National Safety Council's 2017 Injury Facts publication indicates in the 65-and-older population there has been a 182% increase in slip, trip, and fall deaths since 1999. This trends with aging populations, where the faster growing age segment in the United States is 90 years of age and older. The following chart depicts fall trends.



What is Balance?

Simply put, balance is the ability to maintain our position in space, otherwise known as equilibrium, as forces (internal and external) act upon us. Gravity is a common external force, while low blood pressure (i.e. hypotension) can cause acute bouts of dizziness stemming from internal changes. Performing balance-centric exercises daily, even in small amounts, improves the body's ability to maintain a sense of equilibrium, thus preventing a fall or similar balance-related accident.

However, balance is more than equilibrium. Balance training needs to be "functional", meaning the benefits can be easily transferred to your activities of daily living (known as ADLs). For example, home health professionals can observe their clients and customers in their home, work, and social settings to see if balance training strategies are improving balance. Exercises should combine elements of mobility and stability. Mobility is associated with flexibility and pain-free range of motion, for example through a joint. Stability is thought of in terms of strength. Exercises that combine mobility and stability, coupled with a baseline sense of equilibrium, form the foundation of a great balance enhancement program.

Physical Factors That Affect Balance—We control many physical factors affecting our balance, some of which are more obvious than others. Below is a Better Balance Checklist highlighting pertinent factors to consider related to balance:

- Lack of physical activity: Are you getting daily movement?
- Medications: Have you started a new medication and experienced any dizziness or lethargy? These symptoms can decrease reflexes and response time.
- Impaired vision
- Dehydration
- Ear problems
- Insufficient sleep
- Surgical procedures
- Diseases

Taking a holistic view of movement quality as it relates to balance can provide insight not seen upon first glance!

Functional Assessment: Assessing Your Balance

Advances in the ability to assess balance have come a long way. The Johns Hopkins Fall Risk Assessment tool is one approach. The assessment affords a scoring system based upon various categories. For more practical movement=based approaches, the Functional Movement Screen (FMS) has become popular in recent years and is practical for community-based settings. While the FMS was originally used with athletic populations, various components such as the hurdle step and inline lunge represent movements similar to those performed during activities of daily living.

For the purposes of a simple movement assessment that requires no equipment or special apparatus, perform the following body weight assessments and see where you have difficulties:

- Standing Calf Raise: Screens balance and ankle flexibility.
- Stair Walking (up and down a set of stairs, with and without a railing): Tests lower body strength and balance.
- Sitting to Standing from a Chair (with eyes open and with eyes closed, with a partner if needed): Screens ability to transfer weight from a sitting to standing position. Strength in your hips and legs is challenged during this assessment.
- Weight Shifting (moving side to side, pause on one leg and shift to the opposite side): Assesses lateral weight transfer, similar to sitting and standing, yet through a different plane of movement. Core and hip control are challenged as well.
- Heel to Toe Walking (forward and backwards): Assesses balance and coordination by decreasing your base of support (with your feet closer together). Core muscles including those in the torso and lower back are recruited at an increased level.

Note: It's always a good idea to perform these assessments with help from a spotter.

If you can complete the above self-assessments with little or no difficulty, that's great! A good sense of balance is indicative of strong core muscles, responsive reflexes, and the ability to perform activities of daily living with relative ease.

Your Better Balance Routine: 4 Simple Exercises

First off, you will find a million different opinions from health experts on best approaches to balance training. No one person is wrong or right, yet there is general logic that fitness experts utilize. For example, if you cannot perform a standard squat without pain, why would you attempt to perform such an exercise on an unstable surface such as a balance ball? Furthermore, is a squat on a balance ball (also known as a Bosu Ball) truly functional if you spend most of your time on stable surfaces? These are questions to answer with your care providers.

With that said, let's move on to four exercises that I've seen provide great benefit to numerous clients over the years.

Exercise #1: Alphabet W's

Set-up: Sit upright on a sturdy surface. Squeeze your shoulder blades black and down. Draw your elbows down and back into your middle spine. Hold, then release.

Feel it Here: Middle Back

Benefit: Strengthens the posture muscles that keep the body upright during static positions (such as standing) and dynamic positions (such as walking). These muscles work collaboratively with the shoulders and hips to assist in balance, respiration/breathing, and decreased incidence of chronic musculoskeletal conditions including back pain.

Exercise #2: Weight Shifting

Set-up: It is recommended to perform this exercise with a partner or while standing near a wall for added stability. Begin in a normal standing position. As you walk forward, your partner should spot from the left to the right leg, as you balance momentarily on each leg. You should feel the hips and legs working to stabilize your body during the momentary pause phase.

Feel it Here: Hips, Legs

Benefit: During movements such as walking and stair climbing (two very common daily activities), weight shifting is a crucial part of keeping your balance. Distributing your weight back and forth between the left and right sides occurs hundreds of times per day.

Exercise #3: Single Leg Deadlift

Set-up: Draw one leg straight back while keeping your hips square. Perform the deadlift while keeping the leg off the floor. Use a wall or chair for assistance in balancing.

Feel it Here: Glutes, Hamstrings

Benefit: This exercise accomplishes two primary objectives: it strengthens the back of your lower body and teaches hip hinging. The latter benefit trains the body to hinge at the hips, not the lower back.

Exercise #4: Toe Taps

Set-up: Sit comfortably on the front of a chair. Make fists and keep them over your knees. Begin to tap you toes together at a rapid rate for 20-30 seconds.

Feel it Here: Shins, Top of Feet

Benefit: This exercise strengthens the front of the shins, specifically a muscle call the Anterior Tibialis. This area of the shin works with the foot, knee, and hip during walking and hip lifting. Improved awareness of lifting the foot may occur, enhancing proprioception during walking.

Fitness Equipment: Common Tools of the Trade

All the fancy equipment won't make a difference unless applied in a logical, systematic method with regular assessment along the way. Thus, the goal should not only be to get the client well, but to also teach them skills to facilitate a level of post-care independent maintenance. The following are common tools of the trade that may help in improving balance.

Foam rollers are commonly seen in most therapeutic and fitness-based centers. The rollers come in a variety of presentations including soft to dense, or long to half length. They are generally used as a method to release trigger points or tight points in fascial or connective tissue, which is the most common substance in the human body. Connective tissue is found in cartilage, blood, and nerves. A less common benefit (and arguably more important) is that foam rollers can re-hydrate tissue by bringing fluid to dry, restricted tissue such as the IT band on the outside of your hip. You can easily find examples of foam roller use on the internet, with the best source of education being www.MeltMethod.com

Therabands are great training tools. They are portable, easy to transport, and have multi-functional capabilities. The darker colored bands represent greater resistance while the lighter colored bands offer less resistance, yet the inherent stretch properties of the band can make any color challenging. The body can perform all kinds of movements with bands including pulling, pushing, pressing, rotating, and extending. Multiple joints and muscles are worked without having to change weight plates or seat positions as is common with selectorized machines. You can find examples of band exercises on websites such as YouTube.

Tennis balls are a cost-effective tool to use on the feet. Why the feet? The feet, specifically the arch and big toe, are vital to stability during walking. In fact, it can be argued that the big toe is the most important joint in the body when it comes to balance. You can roll the ball on the arch or squeeze the ball between the toe mounds.

Conclusion

The good news is that balance can be worked on with daily exercises in short bouts designed to improve stability and mobility. For those lacking adequate balance capabilities, their quality of life can be negatively affected due to the lack of independence that comes with freedom of pain-free movement. By performing the exercises listed in this article, my hope is that you will see improvements over time in your daily functions.

Additional Resources:

- National Safety Council
- Johns Hopkins Fall Risk Assessment Tool
- Centers for Disease Control
- Exercises for Better Balance, William Smith (Hatherleigh Press, 2015)
- Simple Tips to Better Balance, Homecare Magazine: excerpts from William Smith's Balance Article, November 2015



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William Smith, MS, NSCA-CSCS, MEPD, currently works for a nationally recognized healthcare system in the New York metropolitan area providing health and wellness services to the community. His interest is in special populations, and how healthcare providers and fitness professionals can work more closely together.

Having lost a grandparent to a fall, Will became interested in using movement training and lifestyle modification to help mitigate falls.

Will is an author with Hatherleigh Press having published 14 books. Contact Will at wstrength@aol.com

Sources

"Distracted Driving, Falls, Opioids Cause Spike in Unintentional Death Rate," National Safety Council.

"Simple Tips to Better Balance," Homecare Magazine: excerpts from William Smith's Balance Article, November 2015