



# **UNDERSTANDING BALANCE**

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## **Fall Risk & Prevention**

*If you find that you are dizzy or otherwise losing your balance, don't ignore it. It's important to seek help as soon as balance issues begin.*

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# FOREWORD



My name is Brian Werner, and I am a physical therapist and the National Director of Balance Services at FYZICAL. Five years ago, my father in law was trimming Cyprus trees outside his home and had a serious fall. He sustained a concussion and never was the same—the fall changed his life. Falling is a serious matter. In fact, it can mean a significant life change and even worse, death. I don't want to see what happened to my father happen to you.

The first thing you need to do is get a fall risk screen—any of the FYZICAL Therapy & Balance Centers across the United States offers it—which is unique to our business. If it is not for you, and you may be parenting your parent, get it done as well. FYZICAL Therapy & Balance Centers is the first physical therapy group dedicated across the United States on fall prevention and management of falls. I hope you think of FYZICAL FIRST when you have issues with balance or a loved one with balance and fall risk issues.

# WHAT YOU SHOULD KNOW ABOUT FALL RISK & PREVENTION

*Just about everyone has experienced a fall at some point after losing their balance or tripping over an object. Although common, falls can be dangerous and lead to many types of injuries, some of them long-term or even fatal. Fortunately, the most common causes of falling are also preventable.*

## *What happens in the body when we fall?*

Falling occurs because the body's balance has been disrupted. A person's body can maintain balance because the brain receives and interprets information from several different types of sources:<sup>1</sup>

- Vision (from the eyes)
- Proprioception (from the joints and muscles, which provide sense of touch)
- Vestibular system (from the inner ear, which senses motion, equilibrium, and where we are in a physical space)

Based on this input, the brain sends information to different parts of the body to help maintain balance. Sometimes the different sources may send conflicting information. For example, have you ever gotten off of a treadmill, boat, or out of a moving car only to feel like you are still moving?

Most of the time, the brain can correct conflicting information to keep a person steady on their feet. Occasionally, however, a person may become off-balance and fall.

## *Falling is both common and dangerous.*

The U.S. Centers for Disease Control and Prevention (CDC) reports that more than one out of four older people (those aged 65 and up) falls each year.<sup>2</sup> Twenty percent of falls lead to serious injuries, such as broken bones or a head injury

The CDC also has found:

- More than 3 million older people are injured in falls and receive treatment in emergency departments each year.
- At least 300,000 older people are hospitalized for hip fractures each year. Of these hip fractures, 95 percent are caused by falling.
- Falls are the most common cause of traumatic brain injuries.
- Medical costs for falls in 2015 were more than \$50 billion, with Medicare and Medicaid taking on 75 percent of these costs.
- A person who falls once becomes more likely to fall again, especially at an older age.
- People who have fallen in the past tend to become fearful of another fall, which can make them socially withdrawn or less physically active, which actually increases the risk of falls.

## What are the risks of falling?

The risk of falling increases with age, but falls can happen to anyone, at any time, for many different reasons. Most cases of falling involve several different causes or risk factors.<sup>3,4</sup> Some of the more common types include:

- Muscle weakness, especially in the legs
- Lack of vitamin D
- Trouble with walking or balance
- Side effects of medications like sedatives, antidepressants, or cold medicine that can cause drowsiness or dizziness
- Poor vision
- Loss of hearing
- Foot pain or improper footwear
- Uneven flooring or stairs
- Clutter in the home
- Consumption of alcohol
- Memory loss, difficulty concentrating, or confusion
- Fainting or loss of consciousness
- Poor balance
- Incontinence that causes frequent or urgent trips to the bathroom
- Drop in blood pressure
- Walking on ice or wet floors



Of People over 65 fall annually



Every 19 minutes an older adult dies due to a fall



Of adults discharged for fall related hip fractures will fall again within 6 months



Every 11 seconds an older adult is treated in the emergency room for a fall



A non-injury ER fall visit averages \$17,463

# HOW TO PREVENT FALLING

According to the National Institutes of Health, 6 out of every 10 falls happen at home.<sup>5</sup> This makes sense, since the home is where people spend most their time, particularly as they get older. Many falls, however, can be prevented in the home with a few simple changes.<sup>6</sup>

- **Remove throw rugs.** Many people trip on the edges of these rugs.
- **Tidy up clutter.** Keep pet bowls, toys, books, magazine racks, potted plants, and other items out of the way of common walking areas. Be sure to secure electric cords and keep them out of the way.
- **Install grab bars.** These can help residents keep their balance at home, especially in the bathroom, hallways, and stairways.
- **Install non-skid flooring.** Special decals can help keep you from slipping in the tub or on a smooth, wet floor.
- **Keep your home well lit.** Place light switches within easy reach at the top and bottom of the stairs. Place lamps on bedside tables and keep night lights in bathrooms. Consider motion sensor lights for areas such as basements, garages, and entryways.
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- **Be prepared.** Keep emergency lights in case of a power outage, as well as flashlights and spare batteries.
- **Keep frequently used items in easy reach.** If you drop or otherwise can't reach something, keep a reacher or "grabber" on hand to take items out of cupboards or off the floor.



- **Check your medications.** Another common cause of dizziness is medications. Prescriptions, over-the-counter drugs, and supplements can all make you drowsy. Have your physician periodically check your medications. This is especially important for blood pressure and diabetes medications.
- **Stay physically active.** Exercise can strengthen bones and muscles, improve balance, and make you more mentally alert. Taking walks or lifting small weights can make a big difference.
- **Get enough sleep.** Sleepiness and fatigue can make you unsteady on your feet, increasing the risk of falls.
- **Talk to your doctor.** Many people who experience falls don't bother to tell their healthcare providers. Because a fall could indicate other health problems, it is important to let your primary-care provider know if you have fallen, feel unsteady on your feet, or are otherwise afraid of falling during normal activities.

If you find that you are dizzy or otherwise losing your balance, don't ignore it. It's important to seek help as soon as balance issues begin. A lot of people wait too long. But the longer you wait, the worse it can get.

## *How can physical therapy help prevent falls?*

Improving your walking skills — technically known as your “gait” — and your balance are interrelated challenges. At [FYZICAL Therapy & Balance Centers](#), we help you master these skills to decrease your risk of injury, while also increasing your confidence and independence.

Balance and gait are inextricably linked because they tend to impact one another. Therapy that improves gait and balance works to help keep the body's different balance and movement systems functioning in harmony.

Gait and balance training has a range of benefits:

- Avoiding injuries associated with falls or dizziness
- Increased confidence with your footing and movement
- Reduced pain from poor posture or gait

## *What happens in balance and gait training?*

First, we'll evaluate your gait to determine potential problems with strength and posture. Simple movements to test balance are also part of the assessment. Together, these basic evaluations help us know what to focus on in terms of therapy.

Hip and ankle weakness often leads to balance problems, as does poor posture. Strength and flexibility movements can help counteract these problems. These are often as simple as leg lifts while seated in a chair, or "knee marching." We may also practice standing on one leg, walking heel-to-toe, or tracking the movement of your thumb with your eyes as you move it in various positions.

The team at FYZICAL Therapy & Balance Centers knows how important balance and walking is for independent living, as well as for work activities, exercise, sports and enjoying life in general.

We offer the following programs and therapies to help reduce the risk of falls:

- Assessment and Evaluation Programs
- Difficulty Walking
- Gait Training and Balance Programs
- Fall Prevention and Balance Retraining
- Manual Therapy
- Fitness and Wellness Programs
- Vestibular Rehab
- Functional Training

## *Love Your Life!*

With our dedicated team of physical therapists behind you, you'll regain confidence in navigating challenging terrain and learning how to avoid dizzy spells. You may even be able to leave that cane or walker behind!



# 5

**BENEFITS OF ADDING BALANCE THERAPY  
TO YOUR FITNESS ROUTINE**

*Balance is an element of fitness that combines with strength, cardio, and flexibility to create a complete picture of overall health. Whether you are holding a yoga pose, looking to improve your agility, or increase strength, balance training improves performance in every aspect of life.*

### **Increased strength**

Any form of exercise challenges the muscles and the nervous to increase communication to these areas. With balance therapy, the nervous system communicates with muscles to increase in strength and take on more tasks, ultimately increasing muscle strength. As your nervous system becomes more efficient, it is more skilled at recruiting more muscular power to increase strength and maximize capabilities in everyday functions. Many of the muscles used retraining your vestibular system are unique to your typical training programs, and will really provide you with a challenge.

### **Joint stability**

Joint stability is the ability to control and maintain the joint movement or position. This is achieved when related muscle groups and tissues surrounding the joints coordinate with the neuromuscular system to achieve smooth, controlled movements. Increased stability reduces the amount of stress to knees, ankles, hips, and shoulders whether you are recovering from an injury or looking to avoid further damage.

### **Greater coordination**

Coordination refers to your body's ability to use different parts of the body together smoothly and efficiently. Balance therapy increases your body's control over movement by nurturing a healthy mind and body connection. Many athletes suffering from a vestibular deficiency aren't even aware of it. Sometimes the brain is physically incapable of communicating to the arms, legs or body to move in a particular direction at a particular time, and advanced balance retraining can repair this challenge.

### **Improved agility**

Often related to reaction time, agility refers to your body's ability to change positions immediately to catch or brace yourself before a fall occurs. Improving agility increases your body's ability to make quick movements and change direction suddenly. This helps those at risk to fall gracefully to avoid injury or prevent falls all together. Balance therapy could be the difference between a couple hundredths of a second that may be the difference between making strides towards an elite level.

### **Body awareness**

Also known as proprioception, body awareness gives your nervous system a sense of how your body and limbs are oriented in space. With increased awareness, your body moves more seamlessly. Mobility, speed, and equilibrium are optimized greatly with balance training.

Each of these 5 benefits combine to create increased self-awareness, improved balance and overall decreased risk of falls. Taking steps to improve balance enhances overall health and plays an important role in performing activities at a high level.

*“We want nothing  
more than to help you  
Love Your Life”*

Morgan Hinds, PT, DPT, CMPT

Our passion as physical therapists is to make you as independent as possible and to help you strive to be the best version of yourself physically so that you can return to all the things you love. We want nothing more than to help you Love Your Life by breaking down the physical barriers that prevent you from living your life the way you want. Physical therapy should always be considered first as we provide more than just treatment to your symptoms, but rather find the cause of the symptoms and help to conservatively manage/eliminate the source. It is through physical therapy that not only can your pain be reduced, your body strengthened, your dizziness eliminated, and your balance improved, but can also include preventing injury that might occur while you are doing the things you love. Our passion to help you Love Your Life is greatly driven from your passion for doing the things you love.

# EVERY 11 SECONDS, AN OLDER ADULT IS TREATED IN AN EMERGENCY ROOM FOR A FALL-RELATED INJURY

## Take this FALL RISK Assessment Quiz

I have fallen in the last year.

Yes (2)

No

I use my arms to push myself up from a chair.

Yes (1)

No

I stumble often or look at the ground when I walk.

Yes(1)

No

I use or have been advised to use a cane or walker.

Yes (2)

No

I sometimes have trouble stepping up onto the curb.

Yes(1)

No

I frequently have to rush to the toilet.

Yes(1)

No

I sometimes lose my balance when walking.

Yes (1)

No

My body sways when standing stationary.

Yes (1)

No

I have lost some feeling in one or both of my feet.

Yes(1)

No

I worry about falling.

Yes (1)

No

I take short narrow steps.

Yes(1)

No

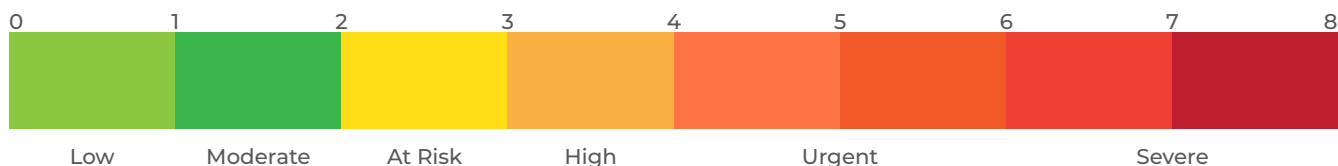
My Medication makes me feel light-headed or sleepy.

Yes (1)

No

## YOUR FALL RISK

If you scored **4 points** or more, schedule your free fall risk assessment evaluation today!





## Sources:

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FYZICAL eBook Series