

### What to do if I'm at risk for falling?

The previously mentioned functional outcome measures evaluate an individual's ability to balance while completing different functional activities. The tests listed have been confirmed to be valid and reliable (**sensitive and specific**) at predicting the risk of falling in the elderly population.

Exercise has been known to decrease the chance of falling in elderly adults in numerous trials and systematic reviews. An individualized exercise regimen can be provided by a physical therapist to incorporate necessary activities that will improve balance deficiencies. This may include stretching, strength training, and static and dynamic balance training. **Balance training typically involves challenging our different sensory systems.** Balance training activities can be accomplished with eyes open or closed, standing or sitting on a soft or unstable surface or any combination of these conditions.

It is necessary to acknowledge the prevention of falling is a long term commitment. Just like one brushes their teeth daily to prevent cavities, one has to exercise on a regular, consistent basis to maintain a level of fitness that will reduce the chances of falling.

### What to do if I'm at risk for falling continued...

Physical Therapists are qualified health care professionals who can complete a screening examination as well as administer the listed functional outcomes measures to determine your risk of falling. An examination screening would be comprised of a past medical history, strength, flexibility, and range of motion assessment.



#### R E S O U R C E S / D I S C L A I M E R

A copy of all resources can be furnished upon request, as well as a copy of the cited pamphlet information.

Please follow up with a physician as needed; as this pamphlet is not intended to replace full medical treatment.

**KAH Premium Physical Therapy**  
97F Main Street  
Stony Brook, NY 11790  
Phone: (631) 751-6680  
E-mail: kahppt@gmail.com  
Website: <http://www.kahppt.com/>  
Made by: Danielle Quarello



# Fall Prevention and Balance: What you need to know



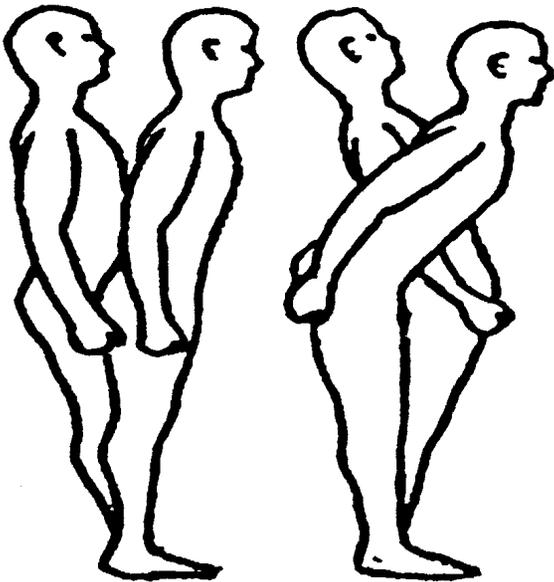
**You can decrease  
your chances of  
falling**

## Balance is...

..the state of distributing your weight

appropriately allowing you to move or remain in a position that prevents you from falling.

...a state of equilibrium.



## How do we prevent ourselves from falling?

Postural muscles are continually firing at a low rate to maintain an individual's center of mass within their base of support. Base of support is being able to move your upper body safely without moving your lower body. For example, being able to reach for a glass in a cabinet without falling.

There are strategies the nervous system (brain and spinal cord) use to send signals to one's postural muscles. One of the body's main defenses against an unexpected, outside force is the reactive mechanism. The reactive mechanism quickly allows for one's postural reaction, a simultaneous activation of the lower extremity and trunk muscles. This reaction can occur either in the ankle, hip, or by taking a step. For example if one was standing on a subway train and it quickly came to a stop, the individual might be required to take a small step to prevent themselves from falling. This can be thought of as reactive control, as first there was a force then the body responded.

Anticipatory control or the anticipatory mechanism is utilized to maintain an upright position. The additional postural stability occurs via multiple muscles contracting together to stiffen the joints and by widening one's base of support. For example, an individual standing on a subway waiting for the car to come to a stop will widen their stance, slightly bend their knees, and possibly lean to offset the force they will experience from the car stopping.

Postural adjustments are constantly occurring with or prior to the initiation of movement. This requires numerous areas of the nervous system to work together and with each other to allow and/or prevent unwanted movement.

## Are you concerned you might fall?

A study by Hatch in 2003 found individuals who are concerned with falling may have true balance deficits versus individuals with low self-assurance. Low self-assurance individuals have poor confidence in their ability to balance. Typically these individuals have had a prior history of falling or poor health conditions.

Major risk factors for falling include impaired balance and gait, prior history of falls, and taking more than three (3) medications daily. Other risk factors include age (greater than 65 years old), visual impairments/**deficits**, cognitive decline and environmental factors (ice, stairs).

*Below is a list of functional outcome measures that can predict if you're at risk for falling. Ask our office, KAH Premium Physical Therapy, for a free balance screening by one of the physical therapists.*

- ⇒ Timed up and go (TUG)
- ⇒ Berg Balance Scale (BBS)
- ⇒ Balance subscale of the Tinetti Performance-Oriented Mobility Assessment (POMA)
- ⇒ Dynamic Standing Balance Assessment (DBA)