



PERSONAL MESSAGE

The facts about FALLS & FALL PREVENTION

by Steve Ryan, PT, MPT and Debbie Ryan, PT, MPT.

IN THIS ISSUE



FALLS

2 POSITION YOURSELF TO STAY WELL

3 TIPS & TRICKS

Exercises for improved balance and stability.

4 FAQ

Most frequently asked questions about Falls and prevention.

FALLS AND FALL PREVENTION — SIMPLE TEST

5 FEATURED PHYSICAL THERAPIST

SUCCESSSES

6 CONTACT US

FALLS AND FALL PREVENTION: BEST EVIDENCE.

The fastest growing segment of the population in the United States is the 65 and older group of citizens. The baby boomer generation has now joined the ranks of the aging population and while they are probably the best educated generation in the history of this country and have more access to health information than ever before, they will still need to deal with issues like falls and their aftermath. Falls are a leading cause of injury at any age, but the effects are especially devastating to the older population. It is calculated that one third of community-dwelling older adults aged 65 years or older fall at least once annually. For those over 80, one half of that population falls at last once annually. Fall related mortality is significantly greater among those older than 70, especially women. Many of these fall injuries seriously compromise the mobility and independence of older adults. People who are 75 years or older who fall are 4 to 5 times more likely to be admitted to a long term care facility for a year or longer. In general, the severity of fall complications increases with age.

Falls and their aftermath create subsequent significant health problems as approximately 1/4 of all falls result in injury. In the older population, this increases the risk of hip fracture and the morbidity associated with that injury. There is an increased risk of hypothermia, dehydration and pressure sores if prolonged lying accompanies the fall. Once a person has had a fall or multiple falls, a fear of falling becomes an issue and this can subsequently decrease the activity level of that person. Decreased activity level leads to



Steve Ryan, M.P.T.—Owner, Ryan Physical Therapy

decreased overall strength and endurance, and decreased aerobic capacity.

Falls have a unique set of risk factors. Once you have one fall your risk of subsequent falls is much greater. Falls that occur indoors are considered a risk factor, particularly if the person is elderly. A person that falls and is unable to get themselves back up is at immediate risk for injury and at high risk for subsequent injurious fall. It has also been established that persons taking 4 or more regularly prescribed medications are at significantly increased risk. Other risk factors for falls are visual deficits and difficulty with ambulation and balance problems. Chronic diseases such as Parkinson's, CVA's, Diabetic Peripheral Neuropathies can severely impact gait and balance thereby making falls as big a problem as the disease itself. What follows is a discussion of fall risk assessment and fall risk interventions.

Positioning

YOURSELF to STAY WELL

(STRATEGIES FOR STAYING ON YOUR FEET)

Many medications have side effects such as dizziness and orthostatic hypotension, not to mention the many interactions between the medications themselves, which can have deleterious effects on balance.

If you are an older adult or if you are the significant other or caregiver for an older adult, you may have experienced a fall yourself or have had to help someone get off the floor as a result of a fall. You may have had to call 911 for assistance.

While falls are a significant health risk for people of all ages, they are the #1 cause of injury in older adults. Frequently, it's the injuries associated with a fall or repeated falls that ultimately cost older adults their independence. Their mobility can be severely compromised and their living situation may have to change out of necessity. If they are no longer able to care for themselves or be cared for by family or significant others; a long term care facility may become the only viable alternative. While the great majority of these facilities are caring and compassionate places, many senior citizens find themselves there prematurely due to injuries from falls.

There are several predisposing factors, which place older adults at increased risk for falls. One has to consider medical conditions like diabetes where one of the consequences of the disease is diabetic neuropathy. This is a tingling, or burning pain or numbness of the feet. Imagine your sensation stopping at about the ankle. Navigating around the supermarket becomes a whole different type of challenge when you are not sure where your feet are. If you have been

recently diagnosed as a type II diabetic, take it seriously and follow your doctor's advice. This is something you do not want to progress. Older adults with diabetic neuropathy have 4 times as many falls as adults who do not have this condition.



Many older adults have multiple medical problems and they are at increased risk for falls because they must take multiple medications. Many medications have side effects such as dizziness and orthostatic hypotension, not to mention the many interactions between the medications themselves, which can have deleterious effects on balance. Some of the heart and blood pressure medications have fairly narrow therapeutic ranges so they must be monitored closely for side effects. Prescription sedatives, antidepressants, and psychotropic drugs have all been associated with increased risk of falls. It is important, particularly if you take 4 or more medications

on a daily basis, to review your medicine with your primary care practitioner at appropriate times.

Visual deficits such as cataracts, glaucoma, and macular degeneration can increase risk. You are going to trip or miss a step if you cannot see where you are going. If your visual acuity is lacking, see what you can do to improve it. Likewise, make sure the lighting in your home is adequate, particularly in areas you frequently traverse. Arrange your furniture so that you have room to walk around freely. Install grab bars in the bathroom and shower to prevent slipping and install a non slip rubber mat on the floor of the tub or shower. Remove any loose throw rugs or secure them firmly to the floor.



Staying as active as you can as long as you can is an excellent preventive measure. Losing mobility is one of the greatest, if not the greatest risk. Activities like walking and swimming help maintain overall mobility. Movement activities like Tai Chi have been shown to be effective in maintaining balance. Older adults tend to lose muscle mass unless they do resistance training. Maintaining strength is critical, particularly in the legs and core musculature in preventing falls. If you do fall, you need to have the strength to get yourself up. Finally, know your limitations. If it is a task you cannot complete with ease, do not risk a fall by trying to complete it. Get help, or let it go for the time being.

Tips and Tricks

EXERCISES FOR IMPROVED BALANCE AND STABILITY

1) Stand next to a wall or beam. Place your nearest hand on the wall for stability. Lift the leg closest to the wall, by bending the knee to 90 degrees. Hold ten seconds. Repeat 10 times. Rest in between if you need to. Turn around, place your other hand on the wall, lift the other leg up and hold 10 seconds. Repeat 10 times.



2) Stand with your feet slightly apart. Bend both knees slightly to about 30 degrees (1/4 squat). Hold 1-2 seconds and straighten up. 3 sets of 10.

3) Stand with your feet slightly apart. Rest your hand lightly on the wall or on a nearby table or desk if you need to. Rise up on the balls of your feet together. Hold 1-2 seconds. 2 sets of 10.

4) Sitting in a chair, place your arms out in front of you, interlock your fingers and stand up without using your hands. Concentrate on using your abdominal, thigh and buttock muscles to stand up. 2 sets of 5.



5) Lying on your side, with your hips and knees flexed together. Ankles touching each other. The trick to making this work is keeping the hip forward while you lift the top knee up about 6 inches off the bottom one. You should feel it in the muscles right behind the hip joint. A great exercise for the hip rotators, which we tend to forget about. 3 sets of 10 on each side.



6) Get on all fours with knees and hands 12 inches apart. Keep your back flat and your head straight. Lift each arm forward by itself and hold 5-10 seconds. Lift each leg backward behind you, straightening it but keeping it close to the ground. Lift the opposite arm and leg (right arm, left leg) at the same time and hold for 5-10 seconds. Then repeat on the opposite side.

7) Stand 12-18 inches behind a chair. Slowly bring one leg straight backwards. Do not bend the waist. Hold this position for 2 seconds. Return leg to the starting position. Alternate legs and do 10 reps with each leg.

FAQ

What can I do in the home to help prevent falls?

Be sure that you always have adequate lighting throughout your house. Use a nightlight when getting out of bed at night. Remove any obstacles lying on the floor and secure any throw rugs firmly to the floor. Install grab bars in the tub or shower and handrails along hallways. In the tub itself, install nonslip strips or a rubber mat on the floor. Always wear appropriate footwear.

What medical conditions increase fall risk?

People with Parkinsonism have an increased risk due to rigidity of the trunk and limbs. These people have difficulty initiating movement, such as standing and walking. The effort that it requires affects their balance so they are likely to fall particularly when first standing up. People with diabetic neuropathy have decreased sensation or numbness of their feet, so they cannot feel the ground. This creates a great deal of uncertainty when standing and walking. Any medical condition that causes vision deficits also increases risk. People who have painful joints, recent surgery, and depression are all associated with increased fall risk.

I have had a couple of near falls, and now I am very afraid of falling. What can I do about it?

First make your home environment as risk free as possible. Stay within your limits as far as household tasks go. If you cannot do it easily, get help or leave it rather than risk a fall. You can build your confidence by exercising and staying active. Strengthening and balance exercises along with mobility regimens like tai chi have been shown to be effective in preventing falls. You can test yourself by lying on the floor and seeing if you can get up yourself (make sure you have someone to help you if you find you can't). This is actually a good exercise to practice as part of your routine. Part of the fear of falling is also the fear of the inability to get back up.

How can Physical Therapy help?

Preventing falls effectively requires a multidisciplinary approach. Physical therapy can effectively address the loss of mobility and strength, as well as the gait and balance issues. There is good evidence that integration of therapeutic exercise and balance regimens along with proprioceptive activities improves overall functional mobility and thus reduces the risk of falls.

Important questions to ask about Falls and Falls Prevention Take this simple test...

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Have I had one or more falls indoors over the last six months?
<input type="checkbox"/>	<input type="checkbox"/>	Am I able to get myself up from the floor from a lying position?
<input type="checkbox"/>	<input type="checkbox"/>	Have I developed a fear or anxiety about falling?
<input type="checkbox"/>	<input type="checkbox"/>	Do I take 4 or more medications on a daily basis?
<input type="checkbox"/>	<input type="checkbox"/>	Do I feel dizzy or unsteady when I first sit up from a lying position?
<input type="checkbox"/>	<input type="checkbox"/>	Do I feel dizzy or unsteady when I first stand up from a sitting position?
<input type="checkbox"/>	<input type="checkbox"/>	Do I have numbness or tingling in my feet?
<input type="checkbox"/>	<input type="checkbox"/>	Do I regularly need an assistive device (cane, walker) for walking?
<input type="checkbox"/>	<input type="checkbox"/>	Do I need assistance with any of my activities of daily living?
<input type="checkbox"/>	<input type="checkbox"/>	Do I have significant pain in my hips, knees, or ankles when I walk?
<input type="checkbox"/>	<input type="checkbox"/>	Do I have difficulty moving from sitting to standing due to pain in my hips, knees and ankles?
<input type="checkbox"/>	<input type="checkbox"/>	Do I exercise or perform some type of sustained physical activity fewer than 3 times a week?
<input type="checkbox"/>	<input type="checkbox"/>	Do I feel like I am off -balance when I have to lift or carry an object?
<input type="checkbox"/>	<input type="checkbox"/>	Has there been any deterioration of my gait that I (or others) have noticed in the last 6 months?
<input type="checkbox"/>	<input type="checkbox"/>	Am I older than 80?

Simply place a check mark in the appropriate box. If you answered yes to 2 or more questions you may need to see a Physical therapist



Allison Palank, MPT



Allison Palank graduated from St. Louis University with her Bachelor's degree in Exercise Science in May of 2003. She received her Master of Physical Therapy Degree from St. Louis University in January 2005. Allison has been a staff member at Ryan Physical Therapy since September of 2007. Her previous work experience includes orthopedic and geriatric physical therapy. She has a strong interest in manual therapy and continues to further her clinical skills and knowledge through continuing education and mentoring programs with other therapists.

Allison is an active member of her professional organization as well as a volunteer at her church with the religious education program. In her free time she enjoys running, playing soccer, golfing and spending time with her daughter, Madelyn.

What patients are saying . . .

SUCCESSSES

I began therapy several months ago. I had no balance, had trouble walking and would fall a lot. When I began therapy here I was thinking about being in a wheelchair. This place here is a miracle. I am progressing every time I come. I have seen a 75% progression. I now just use a walker in crowds. I would refer anyone here- it works!

- A.H.

This is the first time I have had PT and did not know what to expect. When I first started therapy, I was barely able to walk and was in pain most of the time. Allison, my assigned therapist started me on a program to strengthen my leg and ankle muscles that would enable me to walk again without a cane or assistance. I am very pleased with the results I have



obtained in what I consider to be a short amount of time (10 weeks). I no longer need a cane to walk and am now working on the last phase of my therapy

- R.K.



I had both of my knees replaced. I was in home therapy for 2 weeks before coming to ryan PT. I

thought the therapy was great! I did very well there. I was advancing so well that I would go to work for 4 hours after therapy. I am blessed that therapy went as well as it did, I attribute that to Steve.

- R.S.



I had a total knee replacement and had home therapy for 2 days before coming to Ryan PT. the therapy went smoothly. It was quite amazing to me. I know for sure it was the excellent therapy I received there, that's what helped me recover as fast as I did. I am up and around

just like new. The therapy is what did it!

-M.S.



FEAR

of Falling Affecting Your Life?

call today for a **FREE CONSULTATION**

Find out if physical therapy can help you ease the pain and help you gain a new outlook on life.

785-271-5533

FALLS and FALLS PREVENTION: Best Evidence

Since falls among the aging population is becoming a costly issue and awareness of the problem is growing, what can Physical Therapists do about it? There is no medication that prevents falls; in fact, medication is frequently a contributor to the problem. What about those patients with chronic conditions, such as diabetes, Parkinsonism, and dementia? Patients can be referred directly to physical therapy for fall prevention or be assessed for the risk factors, even if they are seeing the Physical therapist for some other problem. What assessments are there for accurately predicting future fall risk?

Individuals with a score of 20-29 seconds are considered to have a moderate to high future risk and a comprehensive fall risk assessment is recommended. Individuals with a score of 30 seconds or greater have variable mobility and a comprehensive fall risk evaluation is strongly recommended.

Fall prevention programs that are multidisciplinary have been shown to be the most effective. Exercise and balance training alone have not been shown to be a consistently effective intervention. When combined with other efforts such as assess-



ing medication and alcohol consumption, vision screening, environmental assessment, depression screening, and assessment of neurological and cardiovascular status the exercise and balance aspect becomes an integral part of the program. Other risk factors that should be assessed are continence and foot problems.

The most important steps in any fall prevention program are to identify those persons who

have previously experienced a fall, determine the potential for future falls, and reduce individual fall risk factors. This is accomplished through baseline screening, comprehensive evaluation, and treatment of ongoing health problems. Physical therapists, as part of the medical team, can greatly contribute to reducing the frequency and severity of falls through utilization of evidence based exercise and balance regimens, which have been shown to be effective in improving gait, balance, and postural stability.

The Timed "up and go test" (Podsiadio and Richardson, 1991) has been shown in many, but not all studies to be an accurate predictor of future falls. Its value in the physical therapy clinic is that it is quick and easy to administer. It is also a valuable tool to objectively measure patient progress. The patient is seated in a chair and is asked to stand, walk 10 feet, turn around and be seated again. The therapist with a stopwatch times the test. Different studies have recommended varying cutoffs as predictors of fall risk, but generally individuals with an average score of 10 seconds or less are freely mobile and have a low risk of future falls. Individuals with a score of 11-19 seconds are considered to be independently mobile and have a low to moderate risk of future falls. For this group, further identification of other fall risk factors may be appropriate.

WE CARE ABOUT YOU!

Call us today for a free consultation at **Hagerstown (301) 797-4572** or visit us at www.ryanphysicaltherapy.com



Ryan Physical Therapy
Steve Ryan, M.P.T.
1190 Mt. Aetna Road
Hagerstown, MD 21740