Improving Your Balance
Leader's Guide for Extension Association
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As we age we start fearing falling more. Why? Is it because it is harder getting up? Maybe, but more likely it is because after someone is injured from a fall we notice that they begin having more health problems. (Can tell a personal story here)

About 90 percent of osteoporosis-related hip fractures and more wrist and pelvic fractures result from falls. We tend to lose bone as we get older. We also lose our ability to stay in balance. These combined changes dramatically increase the risk of falls and fractures. Health statistics show a rise in fractures for women starting around age 45.

Balance exercises actually tax your brain more than your muscles. Their important contribution to bone health is to help prevent falls. With just a little physical effort, you can make significant progress very quickly. In fact, the worse your balance is now the faster you'll improve.

Research shows that balance training can reduce falls in older men and women by about 50 percent.

Let's Test Your Balance. We are going to go through a series of balance tests created by Dr. Nelson. We will do these in order. Need to have comfortable, supportive shoes. Stand by a chair or counter. When you raise your hand off the chair just hover over the chair, so you can quickly grab it if you need to.

Preliminary test: Stand in front of the counter with your feet side by side and touching. Can you remain in this position for 10 seconds. If not then stop the test here. Your balance is extremely poor.

Test 1 – Tandem Stand -Stand to the side of your chair or counter and put your hand on it for support. Position one foot directly in front of the other; the heel of the front foot should be just touching the toes of the back foot. Distribute your weight evenly on your two feet. Steady yourself and let go of the counter. If you can hold this position for 10 seconds move to the next test. If not your balance is ranked very poor.

Test 2 – One-legged stand - Stand to the side of your chair with your feet together. Put you hand on the chair for support. Shift your weight to one foot. Bend the other knee to bring that foot up in back. When you're balanced on one leg, let go of the chair and hold for 10 seconds. If you pass this test move to the next. If not your balance is ranked poor.

For these tests have a partner be a spotter and then switch. Try each for 10 seconds.

Test 3 - Tandem Stand with eyes closed. If you pass move on and If not your balance is ranked fair.

Test 4 - Tandem Stand with eyes closed and head turning. After you steady yourself and close your eyes let go and start turning your head to the left and then the right. If you pass this test move to the next. If not then your balance is ranked as fair.

Test 5 – One-legged stand with eyes closed. Same as test 2 but close your eyes prior to letting go. If you pass this test your balance is ranked excellent. If not you are ranked very good.

Don't be discouraged if your results were disappointing, you can work to improve your balance significantly.

As we just learned good balance depends on vision. But balance also depends on fitness and agility, since we must constantly shift our weight to maintain equilibrium. The brain receives information about our position from 3 different sensory systems. We can remain standing even if one or two of the systems aren't working perfectly. But we need all three for optimal balance.

Receptors on the skin and in the muscles and joints tell the brain where we are in our environment. Have you ever tried to walk when your foot has fallen asleep and is temporarily numb? Without information from nerves in your feet, it's very difficult to be steady.

Try this simple test to see how your sense of where you are in space is. Sit in a comfortable chair that's more than an arm's length away from other objects. Close your eyes and put your left arm out to your side. Keeping your eyes closed, touch your left fingertip to your nose. Do the same with your right hand. If your fingertip landed in the wrong place, even after a few tries you should mention this to your doctor at your next check up.

Our eyes help our brain know where we are in space and whether we're upright. So cataracts, macular degeneration or any other kind of impaired vision compromises out balance. Think back to the first time you put on bifocal glasses and how that made you feel.

Try this quick assessment to see if you have unsteady vision. Ask yourself if you experience these minor problems more often than other people or more often than your younger self:

Do you trip when you're walking?
Do you bump into obstacles, such as the corner of a coffee table?
Do you stumble because you misjudge steps or sidewalk curbs?
Do you accidentally knock over objects, such as a wineglass or a table lamp?
Do you hit your head when you're getting out of a car?

Answering "Yes" to any of these questions could reflect vision problems. Good vision isn't just a matter of being able to read letters on an eye chart; it has to do with depth perception and ability to see contrasts. Have your vision checked regularly, and make sure it's corrected as well as possible. This is especially important if you wear bifocals.

Your inner ears are filled with fluid that plays a key role in balance. As your head moves, this fluid sloshes against receptors that signal the brain. The test that involved turning your head demonstrated the importance of this system.

If you scored at least a good on the balance test you could try this test for your vestibular system in the inner ear.

Stand squarely behind your chair and take a step back. Have a spotter near you. Close your eyes and march in place for one minute. Try to remain in the same spot as you march. When the minute is up, open your eyes and see if you held your position. If you drifted more than a foot to the left or right, you may have a vestibular problem. Mention this to your doctor at your next check up.

People who are fit and active have better balance and fewer falls. As you start to lose your balance, you brain triggers a response. If you are quick enough, then you can steady yourself

before you fall. For this reason it is important that we stay active. Three aspects of fitness are especially important:

Lower-body strength. Test this by sitting in a sturdy chair, can you stand up without assistance from your hands? If not your risk for falling is 2 to 3 times higher than normal.

Ankle strength and flexibility. Weak, inflexible ankle joints significantly increase your risk for falls. If you ankles can't bend easily, it's easier to lose your balance and harder to catch it again. Are your ankle up to the job? Here are two tests

> Stand behind your chair, with your feet shoulder-width apart. Put your hands on the chair to balance. Stand on the balls of your feet. If your ankles are flexible, you should be able to raise your heels at least 2 inches off the ground.
>
> Stand with your back to a wall, your feet about 4 inches away. Your shoulders and buttocks should touch the wall. Try to lift your toes and balls of your feet off the floor, so you're standing on your heels. If your ankles are strong and flexible, you'll be able to raise the balls of your feet at least 1 ½ inches off the floor. Most people find this test much more difficult than the first one.

Quick reflexes prevent falls. If you get off balance, your body doesn't have much time to react. Here are two simple tests to check reaction.

Test 1 (with a stop watch): Start and stop a stopwatch as close to 5 seconds as you can. After a couple of practice tries, if you can consistently stop the clock between 4.9 and 5.1 your reaction time is good.

Test 2 have your partner face you standing. She holds a dollar bill by the short edge and your position your fingers on either side of the middle of the bill about an inch apart. The person holding the bill counts 1, 2, 3 and then drops the bill. If you are able to catch the bill your reaction time is good. This may take a few tries.

Let's try a few balance exercises. It is important to do some type of balance exercise every day. Normally when we exercise we tell people to keep their feet hip width apart to form a solid base. With balance it is the opposite, we want a narrow base of support. Be sure to have sturdy shoes and be by a counter or solid chair when doing the exercises. If you find yourself teetering, stop. Regain your balance before you start again.

Pick some out of the handout based on time.
Administer Evaluation and send to Brenda Bishop

Resources:

- Exercises for Seniors the Complete Guide: http://www.evelo.com/exercises-for-seniors/#balance
- http://www.healthline.com/health/balance-exercises-for-seniors?print=true
- Exercises to Try: https://nihseniorhealth.gov/exerciseandphysicalactivityexercisestotry/balanceexercises/01.html
- 7 Exercises to Improve Balance: http://www.active.com/fitness/articles/7-exercises-to-improve-balance?page=2
- Designing Balance Exercises for Older Adults: https://www.acefitness.org/certifiednewsarticle/687/designing-balance-exercise-programs-for-older/
- Exercise: a guide from the National Institute on Aging. Publication # NIH 99-4258
- Strong Women, Strong Bones by Miriam Nelson Phd 2000

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Improving Your Balance Evaluation

Date: _____

1. How many days a week should I perform a balance exercise routine?
a. 1 b. 3 c. 5 d. 7

2. Balance Training can reduce falls by what percentage?
a. 10 b. 30 c. 50 d. 70

3. If you participated in the balance screening, what is your balance rank?
a. Extremely poor
b. Very poor
c. Poor
d. Fair
e. Good
f. Very Good
g. Excellent

Please rate each of the following	**Low**		**Moderate**		**High**
4. My Understanding on the senses involved in good balance.					
Before Participation **Now, After Participation**	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
5. My Knowledge on how to practice balance exercises.					
Before Participation **Now, After Participation**	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
6. My Awareness of my need to improve my balance.					
Before Participation **Now, After Participation**	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
7. My Skill Level for balancing.					
Before Participation **Now, After Participation**	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐

8. I intend on performing a balance routine _____ days a week.

9. How did you find out about this program?

10. Other topics for workshops I would like to attend?