

# Balance Training for Fall Prevention

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***“In the United States, one of every three adults 65 years old or older falls each year.”  
--U.S. Centers for Disease Control***

**Balance underlies all human movements and is one of the fundamental movement skills.** Functional balance means that you can maintain balance during movements. Maintaining balance is primarily a combination of these senses: ocular (vision), vestibular (inner ear), kinesthetic (body position awareness).

**“Functional Training” & Balance:** Functional training is very “core” oriented. Functional Training is useful whether you are an athlete or senior wanting to improve general health. ***Functional Training gives you better balance and muscular control during everyday movements.***

**“Core Training” & Balance:** All balance and movement starts in your “core” or midsection; therefore, ***Functional Training starts with “core training.”*** Core is more than just front abdominals or stomach muscles—core is the whole midsection of your body that goes from groin to upper back and chest—including sides. Without good core development, you will not be able to move and react efficiently whether casually walking or playing sports. Good core development from Functional Training will enhance all human movement for all populations and activities of daily living—***and especially seniors!***

***If you can’t balance, your movements will be awkward or even unsafe!***

**Getting Started:** First teach yourself to balance in a neutral or static position with *both feet* on the ground. Static balance in a neutral position is a great beginning; however, in the real world you need the ability to balance and maintain control *during actual movement.*

**Using Your Balance:** The human body must be able to achieve and maintain balance in a variety of different positions, planes/angles, and conditions to be totally functional. “Functional balance” is dynamic just like real life (For our purposes, dynamic means “with movement.”) Functional balance means you will have better control of your daily movements, activities, and you will be more independent. To achieve this dynamic and functional balance, you must train dynamically—***this means you have to move!***

### **Joint Stability vs. Joint Mobility**

**Joint Stability:** (The ability to maintain a posture or control motion) Stability can be either static or dynamic. Static stability is the ability to “maintain stillness” in a certain position or posture. Dynamic stability is the ability to control and/or to decelerate motion. Stability is “reactive” in nature; it is the body’s automatic response to unstable or changing environments.

**Joint Mobility:** (Degree of freedom of movement around a joint or body segment) Mobility is a balance of flexibility, strength, and uninhibited motion. Mobility should be the initial goal of functional movement after static balance is mastered.

**Dynamic Stability:** (Ability to control and/or to decelerate motion) Stability is “reactive” in nature, i.e. the body’s automatic response to unstable or changing environments.

- Functional activities of daily living involve dynamic movement and instability; this is why it is important for your training to involve instability, reaction, and dynamic movements! ***Training in a “dynamic environment” will enable you to better control “real world” movements.***

**One of the foundational principles of Functional Training is training “*stability*” before “*mobility*.”** Using balance as an example, if you are not stable balancing in a static (little or no movement) position, joint mobility and flexibility are secondary. You need to stabilize your joints (controlled strength) before you worry about enhancing mobility and increasing movement. As stability

improves, “dynamic balance” exercises can be implemented that will improve stability around joints during actual movement.

<b>Basic Positions &amp; Exercises</b>	<b>Progression Challenges</b>
<p data-bbox="230 373 727 415"><u>Foot Position/Base of Support</u></p> <ol data-bbox="159 420 737 583" style="list-style-type: none"> <li>1. Both Feet on Ground</li> <li>2. One Foot on Ground Along With Toes of Other Foot</li> <li>3. One Foot on Ground</li> </ol> <p data-bbox="396 676 558 718" style="text-align: center;"><u>Exercises</u></p> <ol data-bbox="159 722 737 886" style="list-style-type: none"> <li>1. Two-Leg Squat</li> <li>2. Lunge</li> <li>3. Lunge &amp; Reach</li> <li>4. Programs (yoga, tai chi, Pilates)</li> </ol> <ul data-bbox="240 932 721 974" style="list-style-type: none"> <li>• #1 (easy) to #2-4 (harder)</li> </ul>	<ol data-bbox="828 373 1393 844" style="list-style-type: none"> <li>1. Turn Head Slowly to Sides</li> <li>2. Close Eyes</li> <li>3. Varied Surface (grass, incline, decline)</li> <li>4. Apparatus (foam pad, etc.)</li> <li>5. Dynamic Movements</li> <li>6. Increase Range of Motion</li> <li>7. Increase Speed of Motion</li> <li>8. Add Reaction (directional cues)</li> <li>9. Add External Stimulus (push/nudge)</li> </ol> <ul data-bbox="909 932 1390 974" style="list-style-type: none"> <li>• #1 (easy) to #2-9 (harder)</li> </ul>

For complete list of Balance Project references, please see website:  
[www.ronjones.org/CSUN/KIN645/BalanceProject/index.html](http://www.ronjones.org/CSUN/KIN645/BalanceProject/index.html)

***\*These exercises are intended for normal healthy individuals. If you have an injury, or abnormal pain is present, see a physician or a certified physical therapist before continuing your exercises.***

\* [www.ronjones.org](http://www.ronjones.org) “High-Performance Health” (1-4-03)