

# Importance of Balance for Fall Prevention



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# Fall Prevention

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# Why is it important?

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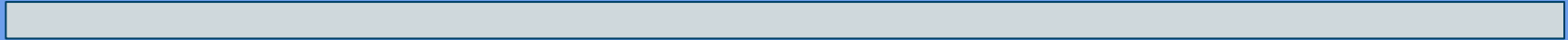
- About 36 million falls are reported amongst older adults each year
- These account for almost 32,000 deaths and 300,000 hospitalizations due to hip fractures
- Over 30% of people aged 65+ experience at least 1 fall per year
- The winter months are often the most dangerous, especially in areas where the snow melts and freezes, creating icy and slippery surfaces



# Fall Prevention Questionnaire

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The next slide is a short questionnaire about assessing your risk of falling and the importance of knowing your risk level.



Please take the time to complete this and tally up your score at the bottom. If you scored more than 4 points, you should consider taking extra precautions to prevent your risk for falls.

## Check Your Risk for Falling

Circle "Yes" or "No" for each statement below			Why it matters
Yes (2)	No (0)	I have fallen in the past year.	People who have fallen once are likely to fall again.
Yes (2)	No (0)	I use or have been advised to use a cane or walker to get around safely.	People who have been advised to use a cane or walker may already be more likely to fall.
Yes (1)	No (0)	Sometimes I feel unsteady when I am walking.	Unsteadiness or needing support while walking are signs of poor balance.
Yes (1)	No (0)	I steady myself by holding onto furniture when walking at home.	This is also a sign of poor balance.
Yes (1)	No (0)	I am worried about falling.	People who are worried about falling are more likely to fall.
Yes (1)	No (0)	I need to push with my hands to stand up from a chair.	This is a sign of weak leg muscles, a major reason for falling.
Yes (1)	No (0)	I have some trouble stepping up onto a curb.	This is also a sign of weak leg muscles.
Yes (1)	No (0)	I often have to rush to the toilet.	Rushing to the bathroom, especially at night, increases your chance of falling.
Yes (1)	No (0)	I have lost some feeling in my feet.	Numbness in your feet can cause stumbles and lead to falls.
Yes (1)	No (0)	I take medicine that sometimes makes me feel light-headed or more tired than usual.	Side effects from medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I take medicine to help me sleep or improve my mood.	These medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I often feel sad or depressed.	Symptoms of depression, such as not feeling well or feeling slowed down, are linked to falls.

**Total** \_\_\_\_\_

Add up the number of points for each "yes" answer. If you scored 4 points or more, you may be at risk for falling.

# Risk Factors for Falling



- Demographics
  - Aged 65 or older
  - Female
  - Previous fall history
  - Taking multiple medications
- Physical Characteristics
  - Poor nutrition
  - Decreased lower body strength
  - Impaired vision or hearing
  - Weak or abnormally tight postural muscles
  - Changes in blood pressure
- Health Conditions
  - Parkinson's Disease
  - Arthritis
  - Cataracts, glaucoma
  - Diabetes
  - Vertigo
- Environmental
  - Slippery or wet floor surfaces
  - Dim lighting
  - Unsecured rugs or thick carpeting
  - Low bed, chair, or toilet heights
  - Obstacles

# What can you do to prevent falls?

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- Speak with your doctor about risk prevention if you feel unsteady or are worried about falling
- Review your medications (side effects, drug interactions)
- Manage your health conditions
- Always wear proper footwear
- Eliminate risk factors in your home (seek guidance from an occupational therapist)
- Stay active - resistance training, cardio, and most importantly, balance training

# What is Balance?

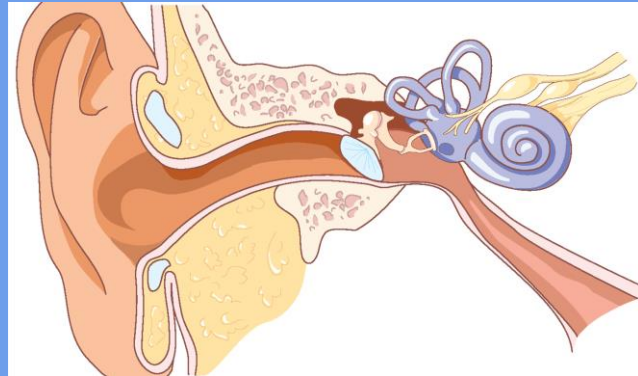
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# What is balance?

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- The ability to stay upright and stable due to evenly distributed weight
- Balance is static or dynamic
- Three systems in our body help us maintain our balance and postural control:
  - Visual
  - Proprioceptive
  - Vestibular



# The Importance of Balance

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- Having good balance is important for daily activities such as walking, doing stairs, getting up and sitting down in a chair, and doing various household chores
- Balance is the key indicator of fall risk in older adults
- Having good balance is often associated with more energy and strength, and helps you move more freely
- Higher levels of physical activity reduce morbidity and mortality associated with falls by 30-50%

# Balance Training Guidelines

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How often?

- Daily or as often as you would like, those at risk of falls should perform balance training 3+ times per week

Where?

- Anywhere! Balance activities can be done while in the kitchen, brushing your teeth, watching television, etc.

How?

- Seek advice from healthcare providers, find an instructional book or website, or go to your local recreation center for guided classes

# Examples of Balance Exercises

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Balance, strength, flexibility, and endurance all go hand-in-hand so training in any of these areas will improve your overall balance

- Static balance: squats, single leg stance, feet together, tandem stance
- Dynamic balance: sideways walking, crossover walking, backward walking, zigzag walking, front/back weight shifting, heel toe walking, high knee walking, sit to stand with no hands
- Activities: Tai chi, swimming, water walking, yoga, step aerobics, wobble board, dancing

# Benefits of having a balance routine

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## In summary, balance:

- Prevents falls
- Reduces risk of injuries
- Improves the ability to perceive space
- Improves joint stability



# Advice from Dr. Lai

“Watch your feet when you are  
walking outside

Use a device to help your  
balance

Spare a few dollars to get a  
good pair of comfortable shoes”





# Workout Session

## *30 Minutes*

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# Remember...

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- Always ensure your safety! Clear the floor of clutter, have a wall/chair nearby for support, and ask for assistance or supervision
- Breathe during each movement
- Not sure if you are doing it correct?  
Ask!



# Guided Balance Exercises

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# Session Breakdown

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<b>Lower Body Balance Exercises</b>	<b>Upper Body Balance Exercises</b>	<b>Static Balance Exercises</b>
<b>8 Exercises 12 Repetitions 2 Rounds</b>	<b>8 Exercises 12 Repetitions 2 Rounds</b>	<b>2 Exercises Hold 60 Seconds 2 Rounds</b>

# Warm-Up



# 30 Seconds Each Exercise

- Marching on the spot
- Shoulder rolls
- Side steps
- Arm circles
- Side bends with arms
- High knees
- Ankle circles
- Torso twists
- Neck rolls
- Front leg swings



## Heel Raises

Start



End



## Tandem Walking

Start



End



## Sit to Stand (No Hands)



## Leg Curls

Start



End



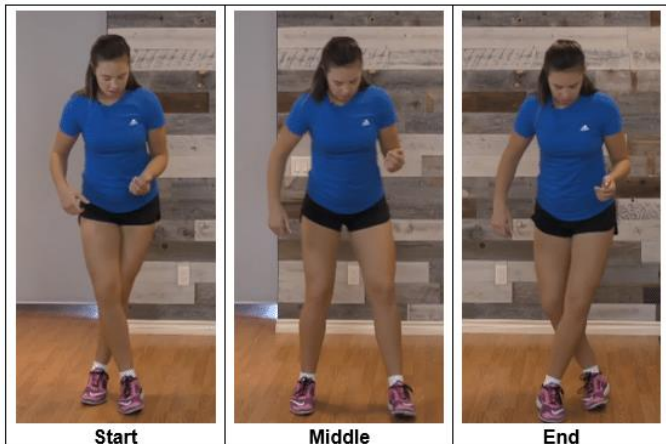
## Rock the Boat



## Lunges with Rotation



## Grapevine Walking



## Ankle Movements



# Break

Upper Body Exercises

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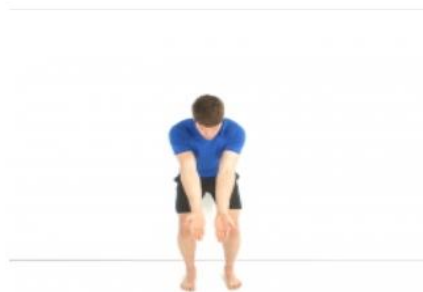


## Tandem Stand with Rotation



## Side Arm Lifts

Start



End



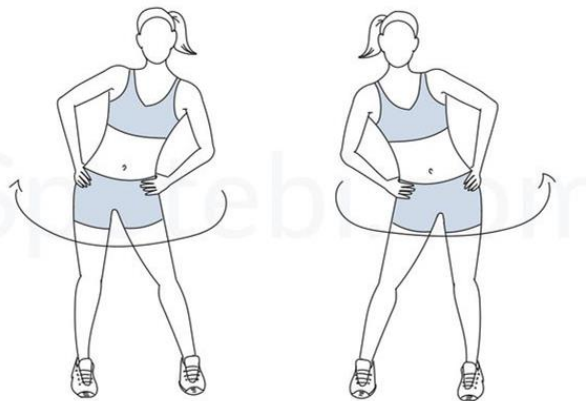
## Diagonal Shoulder Raise



## Cross Body Punches



## Body Circles



## Standing Bird Dog



## Front Arm Lifts

Start

End



## Sideways Crunch



# Break

Static Balance



Tree Pose



One Leg Stance



# Cool-Down



# 30 Seconds Each Exercise

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- Wrist flexor stretch
- Trunk rotation
- Quad stretch
- Side bend
- Shoulder rolls
- Knee to chest
- Posterior shoulder stretch
- Side lunge
- 3 Deep breaths



Thank  
you



# References

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