

Improving Balance & Strength

How to Decrease Your Risk for Falls

A Physical Therapist's Perspective

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moveforhealth.com

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PHYSICAL THERAPY

Facts About Falls (2025)

- 1/3 of those over 65 fall each year
- 40% of nursing home admissions are related to falls
- More than 90% of hip fractures > 65 YO
- Direct medical costs >65 YO ~\$80 billion
 - representing 6% of all Medicare payments
 - fear of falling causes decreased activity
- Hospital Stay ~\$25,000; ER Visits ~\$3,500
- Fall-Related Treatment Cost ~\$101 Billion (2030)

What is Balance?

- The ability to maintain our body position:
 - Walking on different surfaces/ variable speed
 - With Movement & Postures
 - Core Stability PLUS Foot/Ankle Control



What Controls Our Balance??

- Vision
- Inner ear
- Proprioceptive sensing
- Touch
- Strength & flexibility



Signs of Balance Issues

- Possible signs of impaired balance
 - Limping
 - Shuffling
 - Unsteadiness or staggering with walking
 - Decreased speed with walking
 - General weakness with rising from sitting
 - Dizziness with changing positions or walking
 - Avoiding bending over due to dizziness or fear of falling

Risk Factors

Medical Conditions:

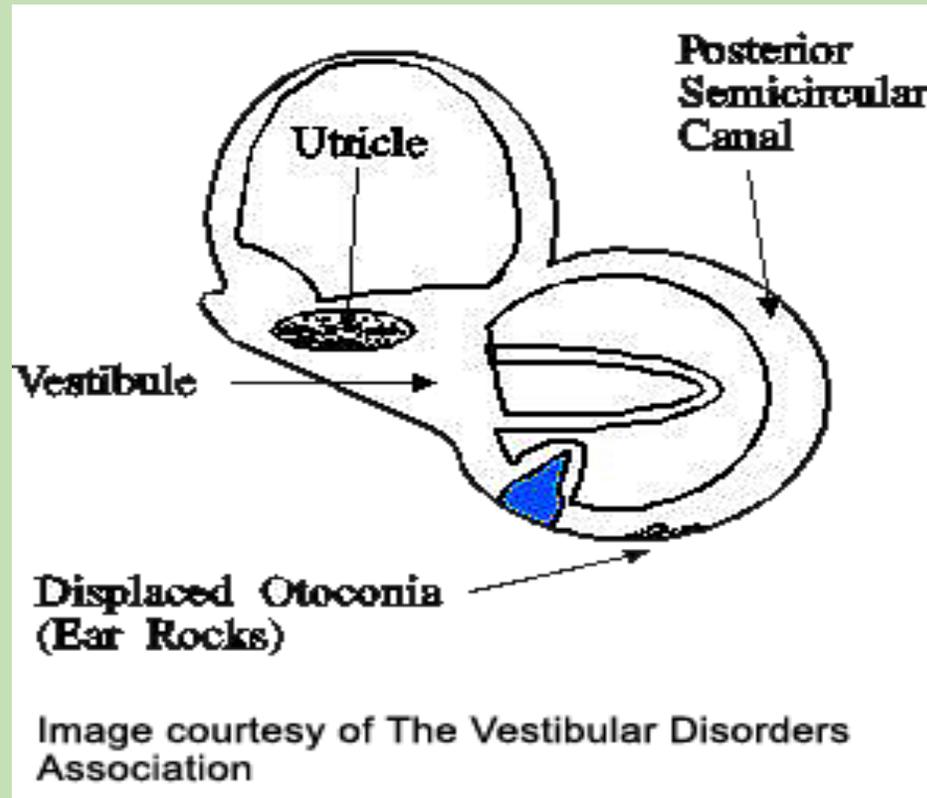
- Poor general health
- Diabetes
- Arthritis
- Osteoporosis
- Deconditioned Status
- Stroke
- Incontinence
- Musculoskeletal stiffness
- Weak muscles



BPPV: Benign Paroxysmal Positional Vertigo

Small calcium particles in the inner ear become displaced and disrupt the inner ear balance sensors, causing dizziness

*Consult with your Physician or Physical Therapist



Risk Factors for Falls

- Medication use
- Sensory perception—hearing, vision, feeling
- Strength Including Posture changes/more stooped over
- Cognitive/mental health—memory, inattention, dementia, depression

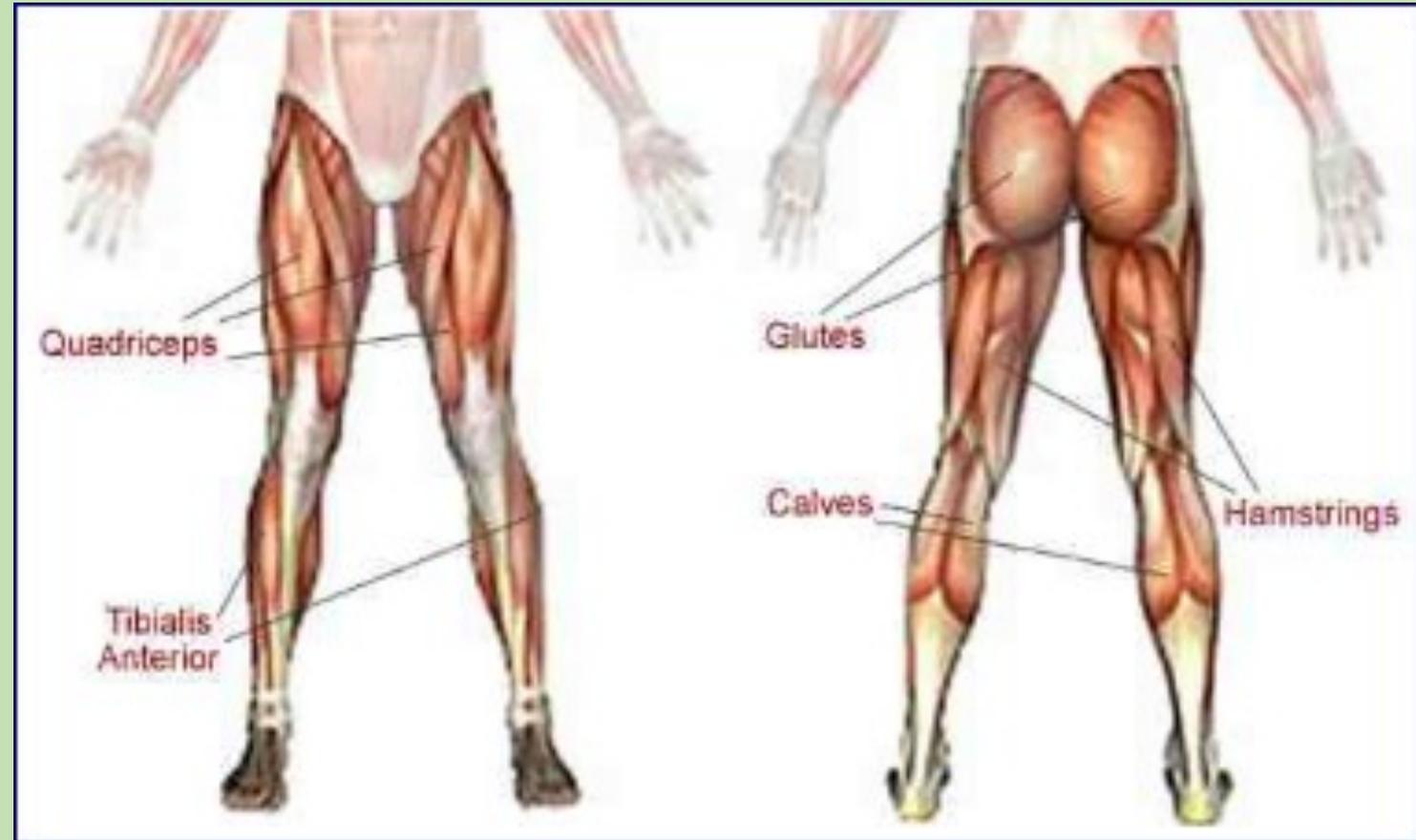


Strength

Major Muscle Groups

Lower Body

- Gluteals
- Quadriceps
- Hamstrings
- Calves

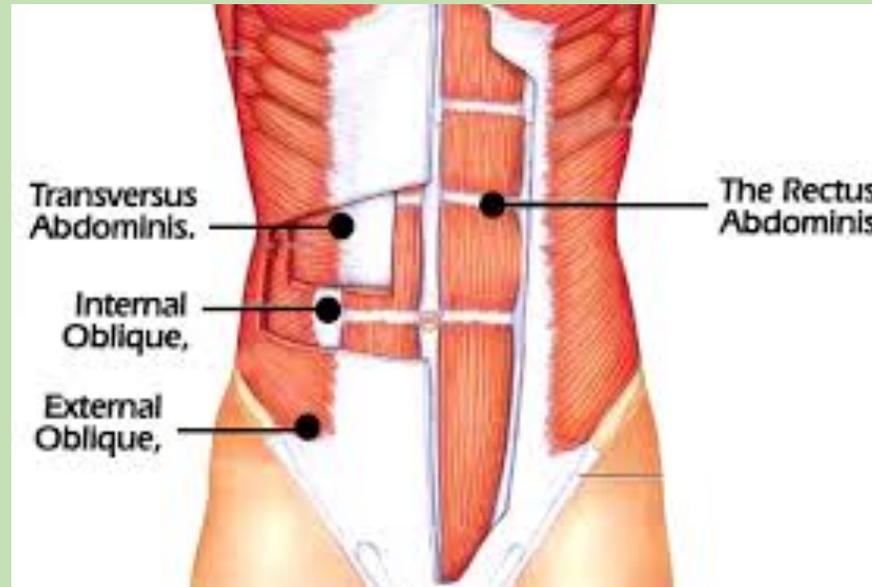
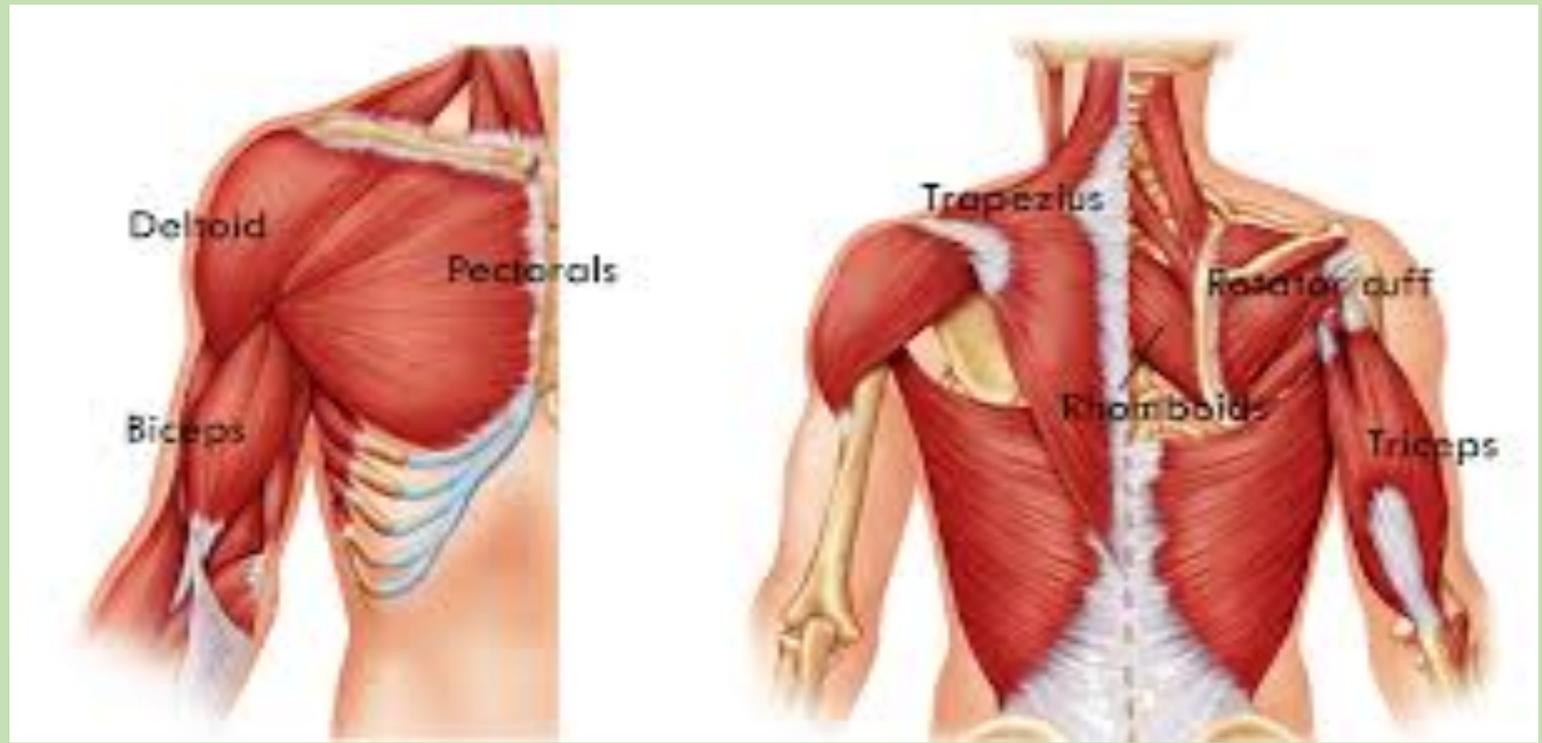


Strength

Major Muscle Groups

Upper Body

- Abdominals
- Back
- Chest
- Shoulders



Risk Factors—*Lifestyle & Behavior*

- Exercise
- Footwear
- Alcohol use
- Nutrition
- Hydration
- Fear of falling



Fear of Falling

- Can be more disabling than the actual fall
- Falls lead to limiting activity -> more fall risk



Warning Signs for Fear of Falling

- Need to touch or hold onto things/people
- Walking very slowly
- Taking small steps
- Limited movement
- Express a fear of falling



Self-Assessment/ Risk For Falls - QUIZ

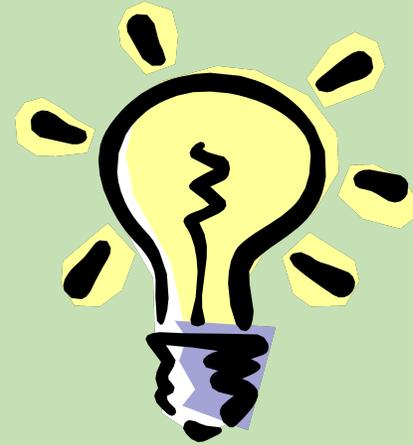
- **I have fallen in the last 6 months.**
- I use or have been advised to use a cane or walker to get around safely.
- **Sometimes I feel unsteady when I am walking.**
- I steady myself by holding onto furniture when I walk.
- **I am worried about falling.**
- I need to push with my hands to stand up from a chair.
- **I am often dizzy when I first stand up.**
- I have trouble stepping up onto a curb. I often have to rush to the toilet.
- **I have lost some feeling or have pain in my feet.**
- I take medicine that sometimes makes me feel light-headed or more tired than usual.
- **I take medicine to help me sleep or improve my mood.**
- I often feel sad or depressed.
- **Total = 4 or more: indicates potential fall risk**

Where Do People Fall?

- 60% fall in the home
- 30% fall in public areas
- 10% fall in healthcare facilities

Risk Factors— *Environmental*

- **Clutter**
- **Poor lighting**
- **Lack of handrails**
- **Items that are hard to reach**
- **Obstacles in paths**



How to Decrease Your Risk For Falls

- Exercise to stay Fit
- Core Stability AND Foot/Ankle Control
- Exercise classes, strength, walk
- Organize & de-clutter home environment
- Hydration - drink water!
- Eye and Ear Exams
- Professional Guidance:
 - Physician & Physical Therapist Team



Exercise to Prevent Falls

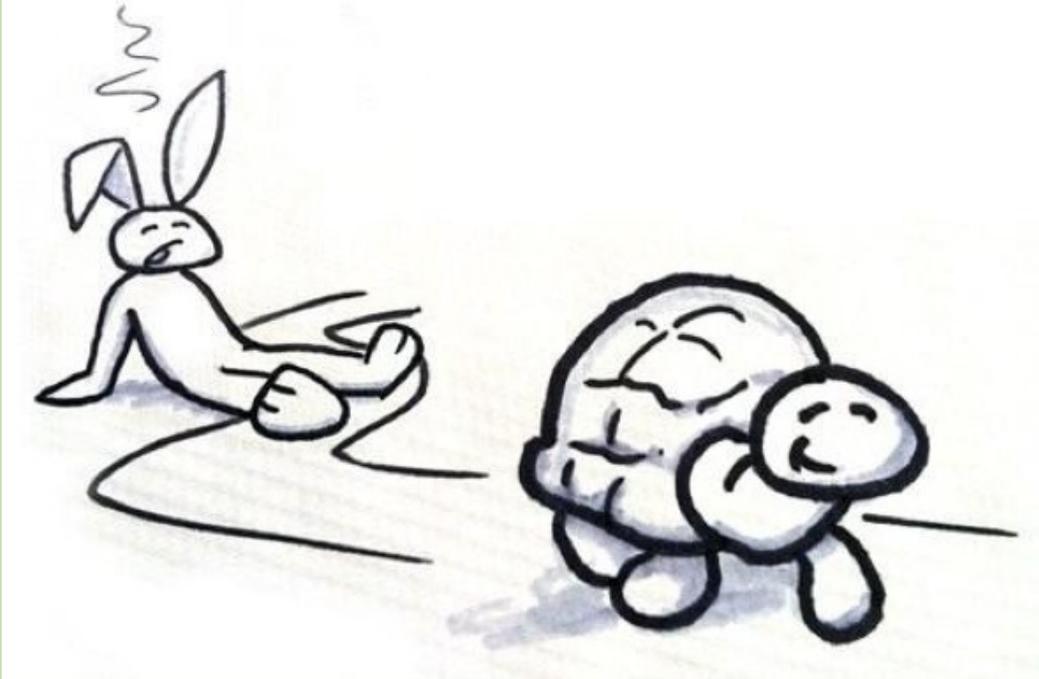


- Core Stability PLUS Foot/Ankle Control
- Heart, Lungs, Muscles, Joints
- Strength, balance & flexibility
- Balance training - speed up reflexes
- Physical Therapy Guidance
 - Posture, Movement, Balance
 - How to Move Well!

Activity Level is the Key!

- Strong evidence shows that physical activity has beneficial effects on **well-being and healthspan** in older ages.
 - **Moderate Exercise** ~20-30 minutes/ daily
 - **Vigorous Activity:** >1 minute intervals daily/ weekly
 - **Accumulate 150+ minutes/week**
 - **See your Physician/ Physical Therapist**
 - **It's Never Too Late...**
 - **There's Always Something You Can Do!**

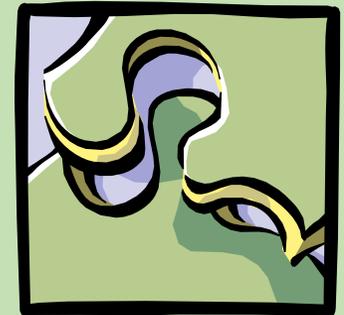
Body Awareness & Pacing Yourself



- Moving quickly can lead to tripping or stumbling
- Getting overly tired can lead to fall risk
- After rising from a chair, stand for a moment

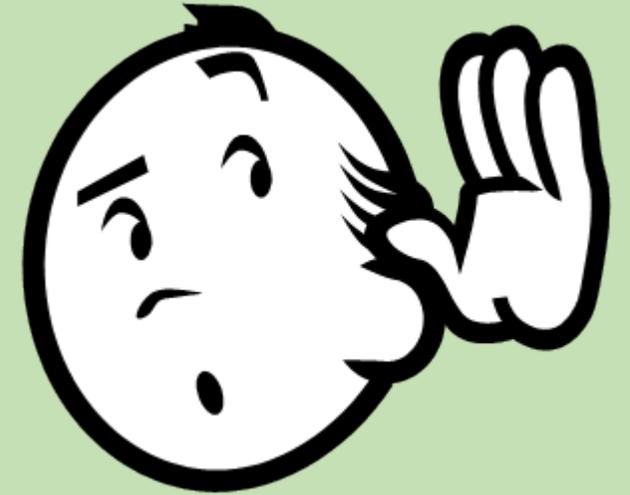
Brain Training

- Do challenging activities
 - Chess, Bridge, New Technology & Activities
- Exercise your mind regularly
- Talk with your Physician & Physical Therapist



Eye Exams and Hearing Screenings

- Eye exams are needed yearly
 - Eye glasses/prescriptions need to be updated
- Wear glasses when needed
- Wear hearing aids when needed



Some Tools for Toilets



Raised Seats add 4"



Tools for Tubs



New Fangled Grab Bars



Lighting & Spacing...

- Nightlights
- Consistent light between rooms
- A light switch for every entry
- Clearance for walkers, wheelchairs and other assistive devices
- Avoid: cords, clutter, loose rugs/carpet/floorboards
- Phone near bed



Stairs & Thresholds

- High contrast strips for steps, thresholds and door frames
- Steps, flooring and railings in good repair



Avoid Slips / Maintain Traction!



Grippy
Socks



More Prevention Tips!



Keep frequently used or heavy items within easy reach



Posture/ Core Stability/ Balance Screening

***Safety, Support, Balance**

Demonstration with Participation

Risk Factors You Can Identify (Self-Screening)

Sitting - Foot & Ankle Mobility - “Toe Yoga”

Sit to Stand - “Hip-Hinging” (Foot/Ankle + Pelvic Tilt)

Standing – Diagonal Stance with Neutral Pelvic Tilt

Single-LE stance (EO >15-30 sec, EC >1-3 sec)

Balance & Reach (one hand ~10”; one foot ~24”)

Breathing Screen (Residual Capacity > 25 sec)

Non-Painful & Symmetrical Movement & Stability

Evidence-Based Falls Prevention

NCOA (2024 Study (2014-2024) - 275,000 participants

52% Reduction # Falls

56% Reduction # Falls with Injuries

18% Reduction in ER Visits Due to Falls

\$45M Program Cost/ >\$1B Savings

RE

Core Stability & Functional Training for Healthy Movement, Balance & Strength

Tuesdays @ 2:15-3:15 PM

Jane Saltzman, Fitness Director

Darcy Higgins, DPT

Free to Members

moveforhealth.com

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