

Balance and Hip Strength: The Foundation of Mobility

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Why is Balance Important?

- Prevents falls and serious injuries
- Maintains independence with daily activities
- Helps with proper posture
- Helps maintain confidence with mobility





How Many Falls Actually Happen?

- More than 1 out of 4 older adults aged 65 or older fall each year
- Every year, there about 3 million ED visits due to falls involving seniors
- In 2019, 88% of ED visits and hospitalizations for hip fractures were due to falls



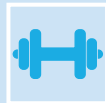
Causes of Poor Balance

- Muscle weakness
 - Reduced sensation
 - Vestibular changes
 - Vision changes
 - Decreased flexibility and mobility
 - Medication side effects
 - Diseases like Parkinson's, diabetes , MS
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Contributors to Good Balance



Good posture



Strong muscles



Nutrition



Coordination



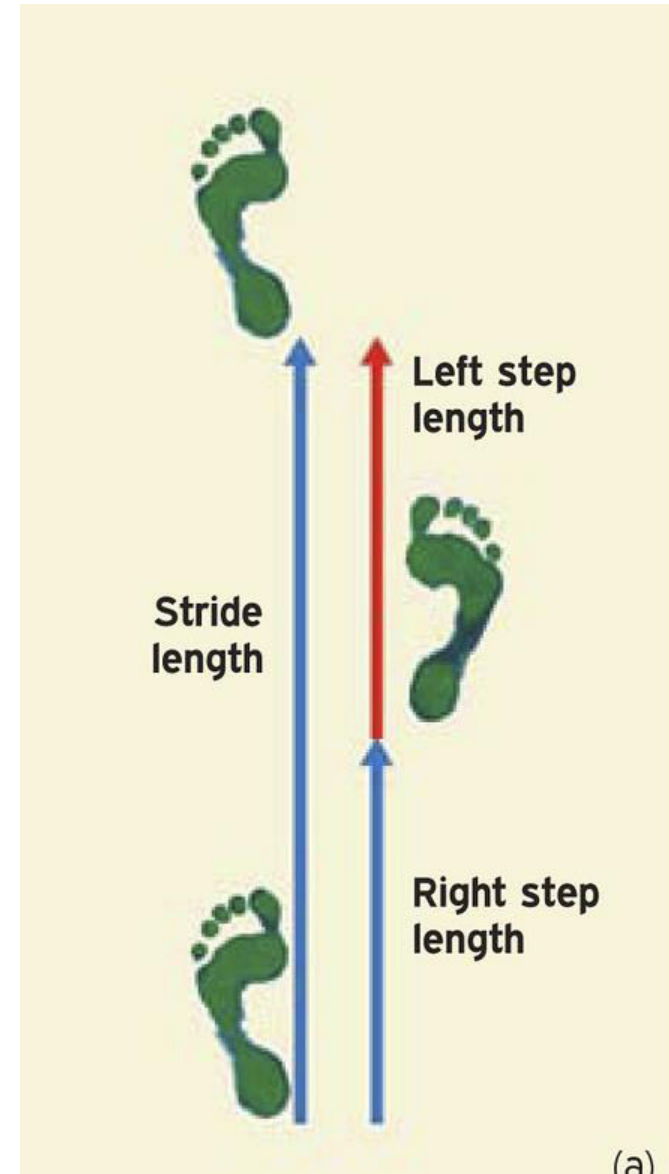
Vestibular system is intact



Healthy sensation
and proprioception
systems

Signs of Poor Balance

- Frequent falls; one or more in the last year
- Short, slow steps; wide BOS
- Difficulty walking on uneven surfaces
- Holding on to objects while walking
- Cross over steps
- Trouble with standing up from a chair





Things You Can Modify in Your Home

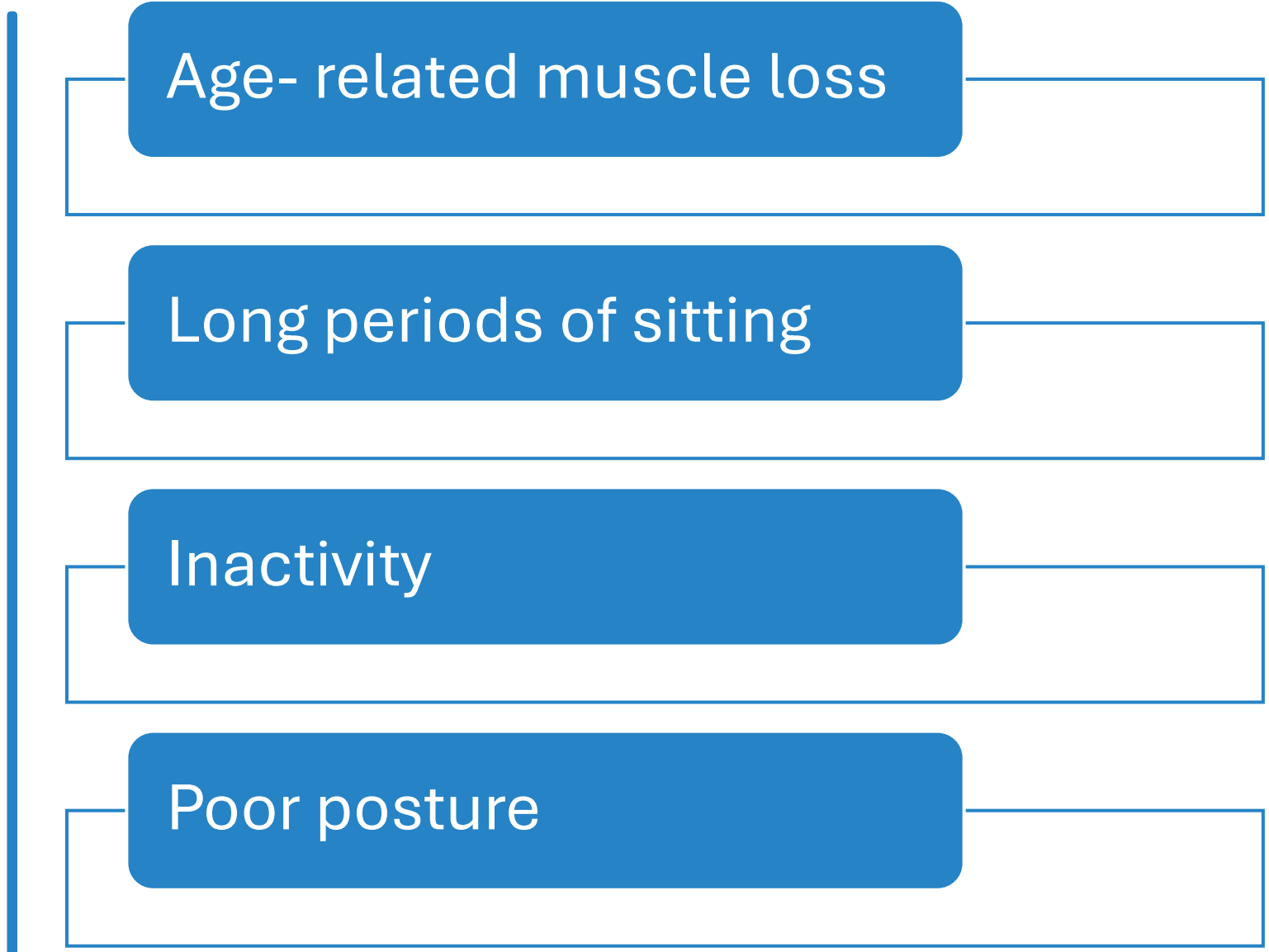
- Remove any loose rugs in home
- Have sufficient lighting throughout home
- Be aware of loose cords and chargers
- Install grab bars
- Use non-slip mats in the shower/tub
- Create a safe pathway by rearranging furniture if needed
- Use an AD if needed

You Are Not Alone

- Talk with your family if you are worried and feel unsafe
- Have regular vision check ups
- Stay connected and/or join a community
- Stay hydrated and eat a proper diet
- Don't stay quiet, ask for help



What Causes Hip Weakness?



A diagram illustrating the causes of hip weakness. On the left, a vertical blue line serves as a central axis. Four horizontal blue bars of varying lengths extend to the right from this axis. Each bar contains white text representing a cause. From the top bar, a thin blue line extends horizontally to the right, then turns 90 degrees downward, and finally turns 90 degrees left to connect to the right side of the bar. This same L-shaped line structure is repeated for each of the four bars, creating a comb-like effect.

Age- related muscle loss

Long periods of sitting

Inactivity

Poor posture

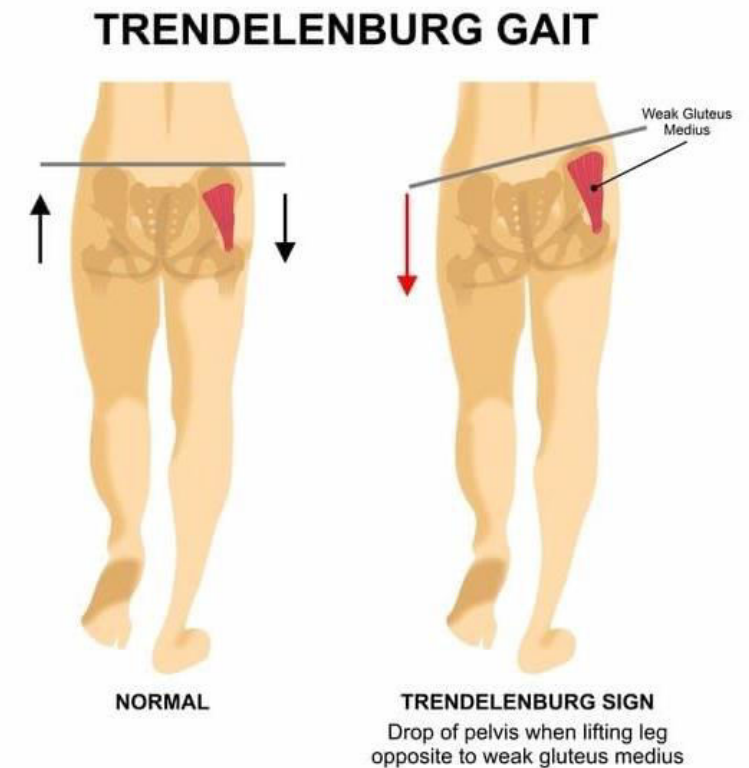
Impact of Poor/Forward Posture

- Poor posture can reduce extensor activation
- There becomes a muscle imbalance
- Can shift the center of gravity forward increasing fall risk
- Poor posture can affect reaction times when losing balance
- Decreased breathing leading to inactivity



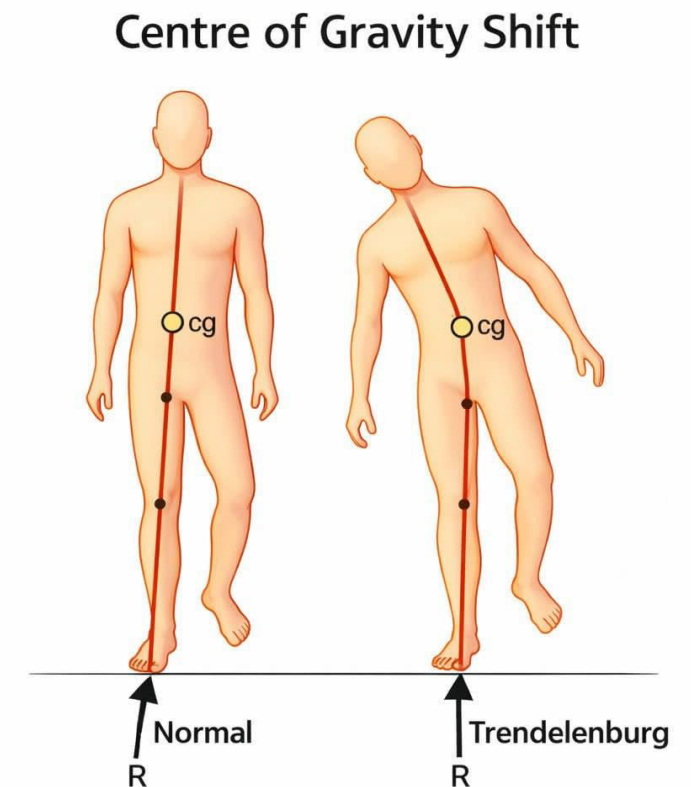
Hip Weakness and Balance Connection?

- Causes a side-to-side waddle pattern
- Affects single-leg stance activities like stairs, getting into a car, putting pants on etc
- Trunk leans towards one side making walking less efficient increasing risk of falls



Hip Weakness and Balance Connection?

- Center of gravity changes and you become unstable
- Reaction time decreases one's ability to recover from a fast movement or from tripping onto something
- Can affect turns when walking leading to slow, uncoordinated gait , increased risk of tripping over feet



Important Hip Muscles

Hip muscles	Purpose
Gluteus medius	Helps stabilize pelvis when walking
Gluteus maximus	Helps extend the leg back
Hip flexors	Allows you to lift your leg when walking, doing stairs, etc

Getting Started Safely



These exercises are general recommendations. Choose 4-5 that work for you and you are comfortable with.



Do not exercise into pain. If it hurts, STOP.



Hold on to a counter or chair for support as a precaution.



Remember to always breathe throughout the exercise 😊

Exercises

Exercises	
Brace supine march	Glute bridges
Sit to stands with band above knees	Standing weight shifts
Iso wall press	Tandem balance
Bent knee hip extension	Standing posture

March with a pause

- Find somewhere firm to lay on your back. Bend your knees and have your feet flat on the surface. Engage your abdominal muscles. Slowly lift one foot 3-5 inches off the surface and hold for 3-5 seconds. Then proceed with the other foot. Avoid arching your back. Do 12-20 reps on each leg. Do 1-3 sets each session. Do this daily.



Glute Bridges



Find somewhere firm to lay on your back. Bend both knees and keep your knees/feet aligned together. Tighten stomach muscles, squeeze the glutes, and then push through your heels to lift hips off table. Hold this position for 1-3 seconds. Do 12-20 per set. DO 2-3 sets per session. Do daily.

Sit to Stands with Band Above Knees

Using an appropriate resistance band place it above your knees while sitting down. Scoot to the edge of the chair and have your legs shoulder width apart. Gently push outwards against the band with your thighs. Lean your trunk forward and maintain the push on the band the whole time as you stand up. Do this 12-20 times per set. Do 1-3 sets per session. Do daily.



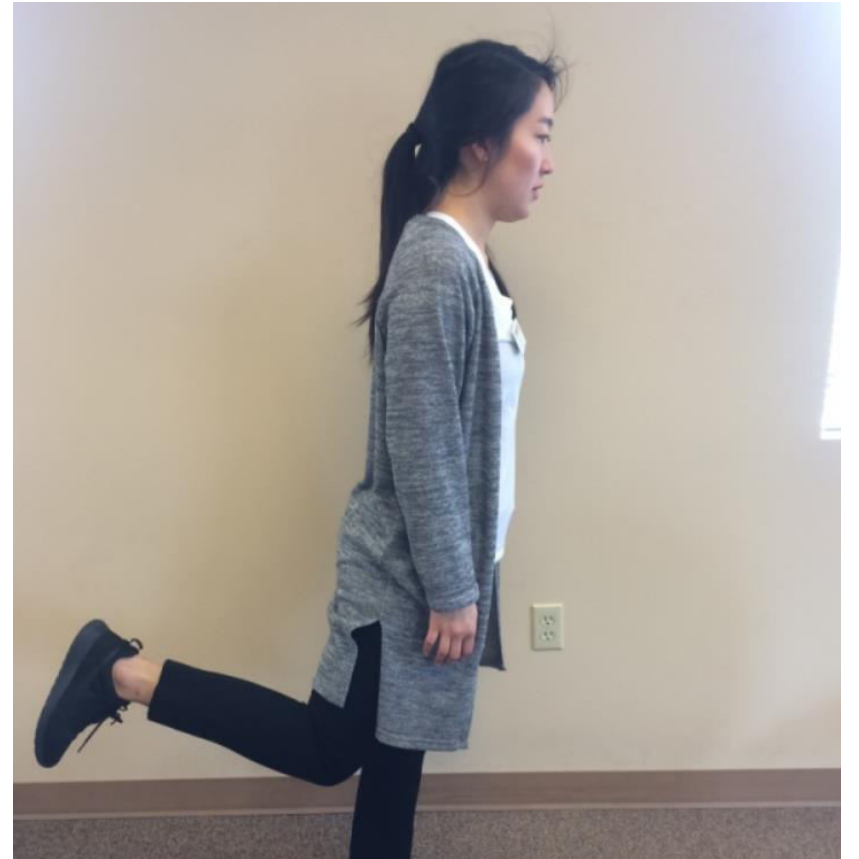


Tandem Balance

Find a counter or chair to hold on to for support. Place one foot in front of the other. Maintain this position initially for 15-20 seconds. Then switch to the other foot in front. Perform 3 reps on each leg. Do 1-3 sets per session. Do 1-3 sessions daily. Increase time as confidence increases.

Bent Knee Hip Extension

Stand in front of a counter or chair for support. Choose one leg to stand on and then bend other knee to 90 degrees or so that your shin faces the ground. Maintain an upright posture the whole time and extend the bent leg behind you keeping it bent the entire time. Do 12-20 times per set per leg. Do 1-3 sets per session. Do daily.





Iso Wall Press

- Stand about 6-8 inches in front of a wall and then lift your arms out laterally about 30 degrees. Place palms on the wall. Tighten abdominal muscles and then through your hands push in to the wall maintaining an upright position. Hold for 5-10 second. Do this 6-10 times per set. Do 2-3 sets per session. Do 1-3 sessions daily.

Standing weight shift

- Stand in stride stance - normal step width apart holding onto something (such as a counter) for stability if needed. Keeping upright posture, move your weight back and forth from forward to/from back foot. When you shift forward allow your back heel to come off of floor. When you shift backward lift front of foot off of ground. Do for 1-5 minutes per set per side. Do 1-2 sets per session. Do 1-3 sessions per day.



Standing posture against the wall



- Find a wall with enough space for your back and arms to rest on. Face forward and have your palms face out. Place your feet shoulder width apart. Your head, back, glutes and heels should be touching the wall as you maintain this position. Hold for 30 seconds to 1 minute. Do 2-5 sets of this each session. Do 1-3 sessions daily.