



PREVENT THE SHUFFLE, IMPROVE YOUR BALANCE

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PARTNERS



ONE ALBUQUERQUE senior affairs

 **New Mexico Falls Prevention**
nmstopfalls.org

 **Paths to Health**
Tools for Healthier Living

NEW MEXICO DEPARTMENT OF HEALTH

 **Albuquerque Oasis**
Lifelong Adventure

 **ALBUQUERQUE AREA SOUTHWEST TRIBAL EPIDEMIOLOGY CENTER**

 **Home Care ASSISTANCE**

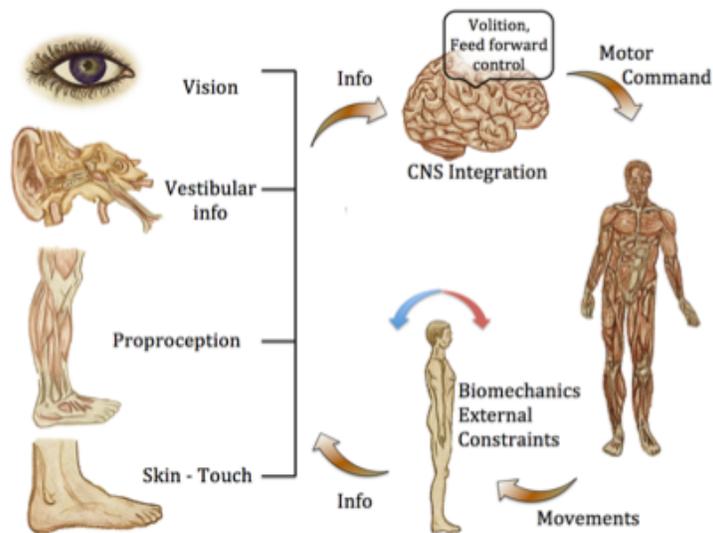
NEW MEXICO Foot & Ankle INSTITUTE

TODAY'S DISCUSSION

- Learn about how the body controls balance
- Review changes in walking which may affect balance
- Discuss some ways to reduce a shuffling style of walking and improve your balance



BALANCE CYCLE



GAIT PATTERNS

Community based older adults 70+: 35% abnormal gait pattern

- Neurological: 40%
- **Non-neurological: 50%**
 - Musculoskeletal Disorders
 - Arthritis: hip and knee osteoarthritis
 - Traumatic Injuries: fractures, muscle/tendon/ligament injuries
 - Cardiopulmonary Disease
 - Deconditioning from COVID social isolation
 - Fear of Falling: slow, wide base, reduced arm swing, slightly stooped posture
- Both: 10%

Vergheze J, LeValley A, Hall CB, Katz MJ, Ambrose AF, Lipton RB. Epidemiology of gait disorders in community-residing older adults. *J. Am. Geriatr. Soc.* 2006;54(2):255-261.

PHASES OF GAIT CYCLE

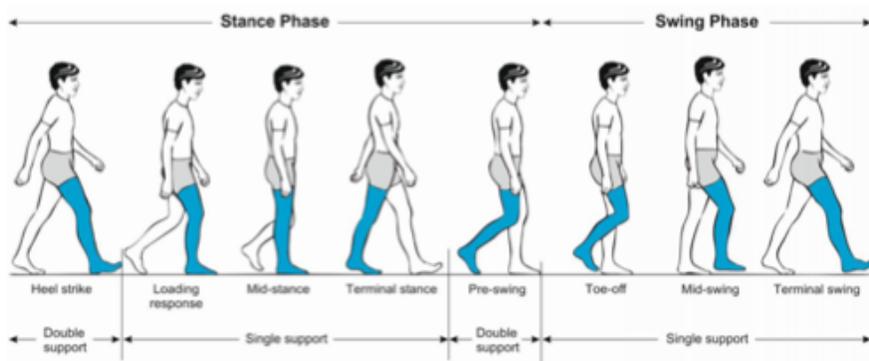
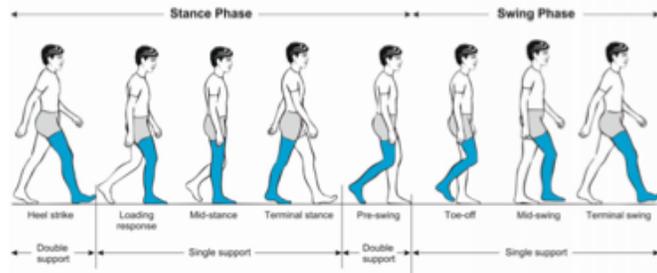


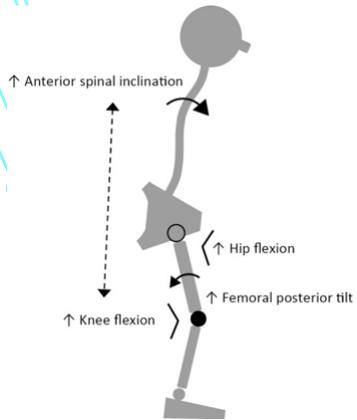
Image from Pirker, Walter & Katzenschlager, Regina. (2016). Gait disorders in adults and the elderly: A clinical guide. *Wiener klinische Wochenschrift*. 129. 10.1007/s00508-016-1096-4. Open Access.

“EASY WALKING”

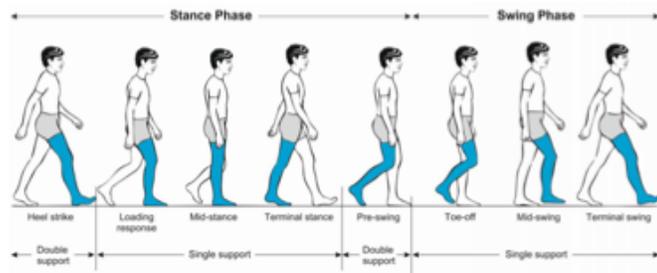
- Standing tall: Upright trunk
- Hip extension: prompts leg to swing forward
- Heel strike: toes clear during swing
- Terminal stance: propels body forward
- Weight shift: allows less weight on one leg to step forward



DIFFICULT WALKING



- Stance widens
- Increased double support time
- Step length shortens
- Feet are lifted less high during swing phase (shuffle)
- Walking slows
- Posture becomes stooped



THE SHUFFLE: 10 COMMON CAUSES

- Weak hip and leg muscles
- Arthritic pain in legs
- Loss of flexibility in feet leading to decreased dorsiflexion
- Decreased ability to maintain balance
- Vision difficulties
- Fear of falling
- Medication side effects
- Worn or poorly fitting shoes/slippers
- Slippery floors

CHALLENGE: ANKLE DORSIFLEXION FLEXIBILITY



WHY DOES ANKLE DORSIFLEXION MATTER?

- Avoid catching toe during swing phase
- Contributes to larger forward step
- Helps with standing up from a chair



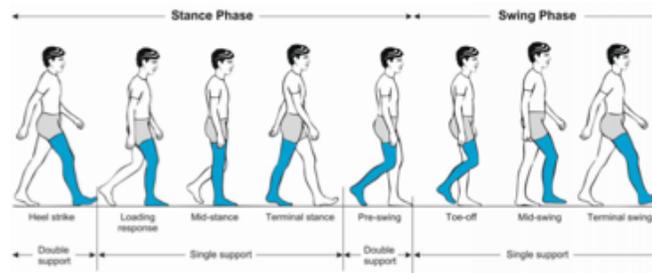
BALANCE CHALLENGE: STANDING ON ONE LEG

- If you use a walker, do not perform without help
- Face the kitchen counter and hold with 2 hands
- Stand on one leg and find your balance
- Try to lift hands off of counter, hovering hands 1-2 inches from counter
- Hold for 10 seconds



WHY DOES STANDING ON ONE LEG MATTER?

- Walking: balance on one leg 30-40% of the time
- Practice makes “perfect”



CHALLENGE: CALF STRENGTH

- Hold kitchen counter with **two hands** for support
- **Stand on one leg** and raise the heel up through your full range of motion
- Repeat up to 5 times, if possible
 - Keep the knee straight for the “test” leg
 - Do not push up with your hands



CALF STRENGTH: WHY DOES IT MATTER?

- Helps to keep you steady upon standing
- Contributes to bigger step when walking
- Improves efficiency so walking is less effort
- Can decrease lower leg swelling



CHALLENGE ACTIVITIES: HOW DID YOU DO?

- Please answer the anonymous poll questions.
- Is there some room for improvement?



NCOA Image: Dickinson Hall-Lake Forest Lake Bluff Senior Center, Lake Forest, IL

WHAT TO DO ABOUT BALANCE PROBLEMS?

- Discuss with your healthcare provider to rule out medical causes or medication side effects
- Check your shoes and slippers
 - Good fit
 - Do your toes "claw" to keep the shoes on when walking?
 - September 11 podiatrist presentation "Taking Care of Your Feet to Prevent Falls"
- Annual vision check
 - Should you wear single prescription lenses in the community

WHAT TO DO ABOUT BALANCE PROBLEMS?

- Fear of Falling
 - A Matter of Balance, Tai Ji Quan Moving for Better Balance
 - September 18, "Keep Moving, Stay Independent"
- Home Safety
 - Remove trip hazards so you can move around more easily
 - Consider home modifications so your home meets your needs.
 - Department of Senior Affairs Home Retrofit Program: free grab bars installed; 505-764-6400
 - September 25, "Home Safety with HEART From Before a Fall to After"

WHAT TO DO ABOUT BALANCE PROBLEMS?

Physical Activity

- Strengthen hip and leg muscles
- Address arthritic pain in legs
- Improve flexibility in the ankles
- Improve balance



Image with permission from To Live 10,000 Years Project by Danny Goldfield; <http://www.tolive10000years.com>

September 18, "Keep Moving, Stay Independent"; Learn about available community exercise programs, virtual tai chi

Paths To Health NM: pathstohealthnm.org

505-850-0176; 575-703-2343

Muscle Weakness and Fall Risk

"Google" Workout to Go: Mini Exercise Guide

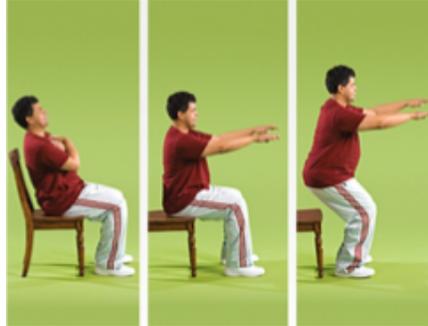
<https://order.nia.nih.gov/sites/default/files/2018-07/workout-to-go.pdf>

- Ankle dorsiflexors
(muscles along front of shins that lift your toes)
- Ankle plantar flexors
(calf muscles)



Muscle Weakness and Fall Risk

- Hip abductors (muscles on the side of hips)
- Quadriceps (front of thighs)



Flexibility and Walking

- Improve calf flexibility to increase dorsiflexion
- Improves toe clearance during swing phase (decrease "catching your toe" which can cause a trip)



"Google" Workout to Go: Mini Exercise Guide
<https://order.nia.nih.gov/sites/default/files/2018-07/workout-to-go.pdf>

NCOA FACEBOOK EVENT

- www.facebook.com/NCOAging
 - September 23 at 4:30pm MDT; Falls Free CheckUp Chat
 - September 24 at 4:30 pm MDT; Spanish Falls Free CheckUp Chat
- NCOA Falls Free Checkup; online self-assessment for falls risk; <https://www.ncoa.org/healthy-aging/falls-prevention/falls-free-checkup/>
- NCOA Chequeo Contra Caídas; <https://www.ncoa.org/about-ncoa/bienvenidos-a-ncoa/prevencion-de-caidas/falls-free-checkup-espanol/>

Janet Popp, PT, MS
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FALLS PREVENTION FRIDAYS 9:30-10:30

September 11: “Taking Care of Your Feet to Prevent Falls.”

You will learn and practice how to check your feet for problems. Also, we will review how to select shoes that help you stay steady.

September 18: “Keep Moving, Stay Independent.”

Learn about evidence based programs that help you build strength and balance.

September 25: “Home Safety with HEART from before a fall to after.”

Home safety is critical for HEART which is a division of Albuquerque Fire Rescue offering home modification, fall prevention/recovery classes and minimal case management to help Albuquerque residents thrive. HEART will discuss the roles of the individual to help prevent a fall, but when a fall does happen what to have available when 911 is called and the steps that are recommended after.

For more information, contact Jenifer Gonzales at jenifergonzales@cabq.gov or 505-764-6469

No RSVP is needed to watch on [Facebook.com/cabqseniors](https://www.facebook.com/cabqseniors)