



SIU MEDICINE

DALE & DEBORAH SMITH CENTER
FOR ALZHEIMER'S RESEARCH
& TREATMENT

FALL PREVENTION and STEPPING UP Demonstration

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Why is Fall Prevention Important?



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**Center for Disease Control and
Prevention (CDC), 2023**
<https://www.cdc.gov/falls/facts.html>

- More than 1 in 4 people age 65 or older fall each year.
- About 36 million older adults are treated in the ER for a fall injury each year.
- More than 95% of all hip fractures are caused from falling.
- Falls are the most common cause of Traumatic Brain Injury (TBI).



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Brain Health and FALLS

-Older adults with mild cognitive impairment or certain types of dementia are 6-8 times more likely to fall .(Allan, et al, 2009)

-Even persons with mild Alzheimer's disease may show deficits in balance and gait. (Graz, et al, 2015)

-Balance and gait deficits and risk for falls increase as the dementia progresses. (Fernando, et al, 2017)



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OTHER REASONS FOR FALLS in OLDER ADULTS

CDC, 2023 <https://www.cdc.gov/falls/facts.html>

- Lower body weakness
- Vitamin D deficiency (that is, not enough vitamin D in your system)
- Difficulties with walking and balance
- Use of medicines, such as tranquilizers, sedatives, or antidepressants. Even some over-the-counter medicines can affect balance and how steady you are on your feet.
- Orthostatic Hypotension (low blood pressure upon standing causing dizziness or lightheadedness)
- Vision problems
- Foot pain or poor footwear
- Home hazards or dangers such as broken or uneven steps, and throw rugs or clutter that can be tripped over.



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HOW TO PREVENT FALLS

CDC, 2023

<https://www.cdc.gov/falls/facts.html>

Talk to your Doctor

- Ask your Doctor or healthcare provider to evaluate your risk
- Talk to them about your medications
- Ask them about taking Vitamin D

Do Strength and Balance Exercises

- Do exercises that make your legs stronger and improve your balance.

Have Your eyes checked

- Get your eyes checked at least once a year
- Update your eyeglasses if needed

Make your home safer

- Get rid of things you could trip over.
- Add grab bars inside and outside your tub or shower and next to the toilet.
- Put railings on both sides of stairs.
- Make sure your home has lots of light by adding more or brighter light bulbs.
- Keep items you use often in cabinets you can reach easily without using a step stool.
- Use non-slip mats in the bathtub and on shower floors.



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AM I AT A RISK FOR FALLING?

Please answer yes or no to yourself
to each of these questions.

National Institute on Aging, 2023- <https://www.nia.nih.gov/health/older-adults-and-balance-problems>

Do I feel dizzy, or as if
room is spinning even
for brief amounts of
time?

Do I feel unsteady,
lose my balance
and sometimes fall?

Do I feel as if I am
moving when I know I
am standing or sitting
still or feel as if I am
falling?

Does my vision
become blurred?



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EXERCISE and Fall Risk Reduction

Multi-modal programs are most effective:

- They address strength, endurance, and static and dynamic standing balance, using targeted progressive exercise (Gillespie, 2012, Sherrington, 2011, Shubert, 2011)

Multi-modal exercise programs prevent falls:

- They prevent falls for typically-functioning older adults living in the community (Gillespie et al, 2012)
- Similar outcomes noted for community-dwelling older adults with dementia (Burton et al, 2015)
- Injuries and injury severity from falls for older adults was reduced by participation in exercise (Gillespie et al, 2012; El-Khoury et al, 2013; Jin, 2018).

STEPPING UP- An evidence based exercise and dance program for people with Dementia and their Care partners.

*Developed by Eve Fischeberg, OTR/L in 2016

Uses assessments and exercises from the Otago Program (Campbell and Robertson, 2003)

Features-

1. Group Support and Encouragement
2. Falls Risk Reduction
3. Fitness including strength training, chair yoga, and dance (multi-modal exercise)
4. Fun



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Source: Alzheimer's Association

What do we do in Stepping Up?



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- Perform evidence-based falls risk assessments each semester

- Develop exercises for each person to perform in class and at home



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INCLUDING:

- * Warm-ups
- * Resistive lower body exercises (ankle weights according to ability)
- * Static and dynamic balance exercises



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*Each class includes a choreographed dance that provides aerobic and balance challenges

- Dance- benefits of participation in dance, including fall risk reduction, could be accrued in as low a frequency as one time per week (Keough, 2012).

*Enjoy moving to great music with the group

* FUN and Laughter



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*End each class with a cool down including relaxing chair yoga and stretching to soothing music



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Let's Try it!



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THANK-YOU!



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