

## Falls and Fall Prevention in Older Adults

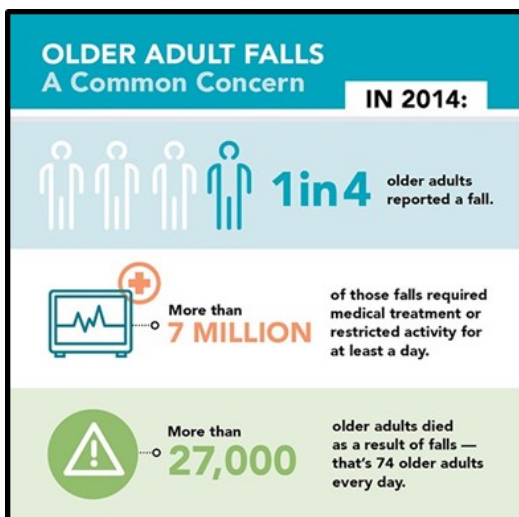
Teresa Colvin, MD, PhD

**Question:** An 82-year-old-female presented to the office with her daughter because she fell while trying to get to bathroom during the night. She did not have shoes on when she fell, and no light was on in the room. She had taken diphenhydramine the previous evening to help her sleep. Which of the following is the most appropriate intervention for preventing future falls?



- A. Medication review, environmental changes, and education for the patient and family
- B. Physical therapy referral for strength and balance
- C. Evening fluid restriction and sleep hygiene interventions
- D. Use of nightlight and slippers

See answer on  
next page...



Graphic from [www.cdc.gov](http://www.cdc.gov)

### Background

Falls are a major source of mortality and morbidity

95% of hip fractures are caused by falls<sup>1</sup>

Falling once doubles the chance of falls in the future<sup>2</sup>

While 1:4 older adults fall in a year<sup>3</sup>, only half report it

- Vision Problems
- Home Trip Hazards
- Lower Body Weakness
- Orthostatic Hypotension
- Difficulties with walking or balance
- Inappropriate Footwear
- Vitamin D Deficiency
- Cognitive Impairment
- Chronic Conditions
- Medications (sedatives, psychoactive, blood pressure)

## Implications for Daily Practice<sup>6</sup>

Link to provider check list [here](#).

### 1. Screen all adults age >65 for falls at least annually

Ask, "How many times have you fallen in the past year?"

### 2. Review the history surrounding the fall

- What where they doing?
- Where/When did it occur?
- Environmental factors?
- Prodromal symptoms?
- Timing of medications or EtOH in relation to fall?
- Chronic medical conditions contribute (Chronic pain, cognitive impairment, stroke, diabetes)?

### 3. Focused Physical Exam

- Get up and Go Test
- Vision Testing
- Lower Extremity Strength
- Sensory Assessment
- Orthostatic Vital Signs
- Postural stability
- Gait

### 4. Diagnostic Evaluation

- BMP- rule out diabetes (hyper or hypoglycemia) and dehydration
- 25OH- Vitamin D levels- rule out deficiency
- CBC- rule out anemia

## Fall Prevention Strategies<sup>7</sup>

<b>Gait, Strength or Balance Deficit</b>	PT referral or Fall prevention program
<b>Medications</b>	Stop, switch, or reduce dose
<b>Home Hazards</b>	OT Referral for home evaluation
<b>Orthostatic Hypotension</b>	Adjust medication and BP goals, educate patient about safe standing and adequate fluid intake, compression stockings
<b>Vision Impaired</b>	Refer to Ophthalmology or Optometrist, cataract surgery needed?, multifocal lenses education/avoid for depth perception
<b>Footwear/Feet</b>	Educate on shoe fit, traction, insoles, etc., Refer to podiatry
<b>Vitamin D Deficiency</b>	Dietary or Vitamin D supplement
<b>Comorbidities</b>	Optimize treatment CHF, Diabetes, etc

Links to Fall Prevention Strategies (STEADI) for providers and patients [here](#) and [here](#)

### The Bottom Line

Older adult falls are largely preventable<sup>5</sup>. Health care providers play an important role in educating patients and families and providing appropriate interventions!

### Answer: A

Assess all patients for fall risk. Falls are usually caused by a variety of reasons. A multicomponent approach is most likely to prevent future falls. Addressing environmental factors and exercise are appropriate but not sufficient. Fluid restriction should be avoided given risk of dehydration.

## References

1. Parkkari J, et al. Majority of hip fractures occur as a result of a fall and impact on the greater trochanter of the femur: a prospective controlled hip fracture study with 206 consecutive patients. *Calcif Tissue Int*, 1999;65:183-7.
2. O'Loughlin J et al. Incidence of and risk factors for falls and injurious falls among the community-dwelling elderly. *American journal of epidemiology*, 1993, 137:342-54.
3. Bergen G, et al. Falls and Fall Injuries Among Adults Aged ≥65 Years — United States, 2014. *MMWR Morb Mortal Wkly Rep* 2016;65:993-8.
4. Stevens JA, et al. Gender differences in seeking care for falls in the aged Medicare Population. *Am J Prev Med* 2012;43:59-62.
5. Stevens JA and Lee R. The potential to reduce falls and avert costs by clinically managing fall risk. *Am J Prev Med* 2018; 55(3):290-7.
6. Centers for Disease Control and Prevention 2019, *STEADI- Older Adult Fall Prevention*, CDC, viewed 7 February 2020, <<https://www.cdc.gov/steady/index.html>>
7. Kenny, RA, et al. Summary of the Updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. *J Am Geriatr Soc* 2011; 59 (1): 148-57.