

Preventing and Managing Falls in Adults with Cardiovascular Disease (2022)

About the Guideline

- This statement was created by eight physicians and nurses on behalf of the American Heart Association Cardiovascular Disease in Older Populations Committee of the Council on Clinical Cardiology and Council on Cardiovascular and Stroke Nursing, the Council on Lifestyle and Cardiometabolic Health, and the Stroke Council.
- This statement offers general agreement on the interdisciplinary evaluation, prevention, and management of falls among adults with cardiac diseases and the management of cardiovascular care for patients at risk of falling.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements provided in this guideline.

Introduction

- One in four older adults reports experiencing a fall each year. These falls often cause significant adverse outcomes such as injuries, hospitalizations, and death.
- Even when injury does not occur, falls may elicit a fear of falling that is associated with a tendency for functional decline and a decrease in quality of life.
- Falls may be attributed to cardiovascular disease (CVD) causes or co-occurring non-CVD causes, or they may be related to medication side effects. Examples of CVD and non-CVD causes include the following:
 - Hypotension (from medication)
 - Autonomic dysfunction
 - Reduced cardiac output
 - Syncope
 - Visual impairment
 - Gait and balance problems
 - Cognitive impairment
- Falls are most often a result of multiple contributing factors.
- More than 60% of adults hospitalized with CVD have a moderate to high risk for falls.
- Other contributing factors to falls include non-CVD medication effects, fluid intake, and environmental factors.

Risk Factors

- Medications associated with falls include the following:
 - Antidiabetic agents
 - Digoxin
 - Diuretics
 - Benzodiazepines
 - Antidepressants
 - Antipsychotics

- Antiepileptics
- Opioids
- Type 1A antiarrhythmics
- Angiotensin-converting enzyme (ACE) inhibitors
- Other risk factors include the following:
 - Orthostatic hypotension
 - Syncope
 - Frailty and sarcopenia
 - Sensory impairment and musculoskeletal problems
 - Cognitive impairment

Preventing and Managing Fall Risk

- Clinical assessment and physical assessment should be performed and include the following:
 - Include the patient, family, and caregivers when asking about recent falls.
 - Conduct a comprehensive review of medications and alcohol use.
 - Observe the patient's gait and balance.
 - Perform a brief physical frailty assessment.
 - Assess weakness and gait speed.
- Consider the following cardiovascular targets to reduce fall risk:
 - **Orthostatic hypotension (OH)**
 - Perform OH vital signs at least once, monitor standing and supine blood pressures in patients with confirmed OH and ask the patient about any signs or symptoms of hypotension after a meal.
 - Manage salt and fluid intake, discontinue medications that worsen OH, have the patient sit upright for 30 minutes after meals, and avoid prolonged bedrest when hospitalized.
 - **Neurally mediated syncope**
 - Inquire about loss of consciousness (LOC) symptoms and identify potential causes, such as vasovagal or carotid sinus syndrome.
 - Perform medication reconciliation and address the primary cause.
 - **Cardiac syncope due to arrhythmias**
 - Inquire about LOC symptoms, perform an electrocardiogram (ECG) and conduct ambulatory cardiac monitoring to identify causes such as tachycardia, bradycardia, or conduction diseases.
 - Perform medication reconciliation and address the primary cause.
 - **Nonarrhythmic cardiac syncope**
 - Perform an ECG and cardiac imaging to assess for and identify aortic stenosis, ischemia, cardiomyopathy, or other causes.
 - Perform medication reconciliation and address the primary cause.
 - **Frailty and sarcopenia**
 - Perform frailty assessments, such as 5-time chair stand and gait speed assessments.
 - Encourage cardiac rehabilitation or exercise, address comorbidities, and institute guideline-based therapies to optimize cardiovascular disease status.
 - **Sensory impairment**

- Evaluate proprioception and standing balance, refer the patient for a formal eye examination, and evaluate the home for potential hazards.
- Address any home hazards, ensure optimal lighting, encourage adequate footwear, and collaborate with physical and occupational therapy for evaluation, management, and assistive devices.
- **Musculoskeletal problems**
 - Observe the patient's gait and identify any comorbidities, such as arthritis, that contribute to an impaired gait.
 - Collaborate with physical and occupational therapy for gait and balance evaluation, exercise program, and assistive devices.
- **Cognitive impairment**
 - Perform a cognitive assessment to identify executive function or visuospatial deficits.
 - Review medications, remove home hazards, and collaborate with physical and occupational therapy to optimize safety.
- **Environment**
 - Perform a home assessment.
 - Inquire about proper footwear.
- Work collaboratively with the patient, their family, and support network to develop strategies to address falls and the risk for falls.
- To assist patients in finding a balance between fall risk and maintaining quality of life, encourage safe practices without severely restricting activities.

Considerations for Anticoagulation Management

- When treating older patients on anticoagulants, minor and major bleeding is a concern.
- Despite the risk of bleeding, oral anticoagulant therapy should not be withheld in patients at risk for falling.
- Use of a non-vitamin K oral anticoagulant is preferred.
- For patients on atrial fibrillation therapy, consider stroke risk, bleeding risk, and patient preference.

Reference

Denfeld Q. E., et al. (2022). Preventing and managing falls in adults with cardiovascular disease: A scientific statement from the American Heart Association. *Circulation: Cardiovascular Quality and Outcomes*, 15(6), Article e000108. <https://doi.org/10.1161/HCQ.000000000000108>

Link to Practice Guideline:

<https://www.ahajournals.org/doi/10.1161/HCQ.000000000000108>