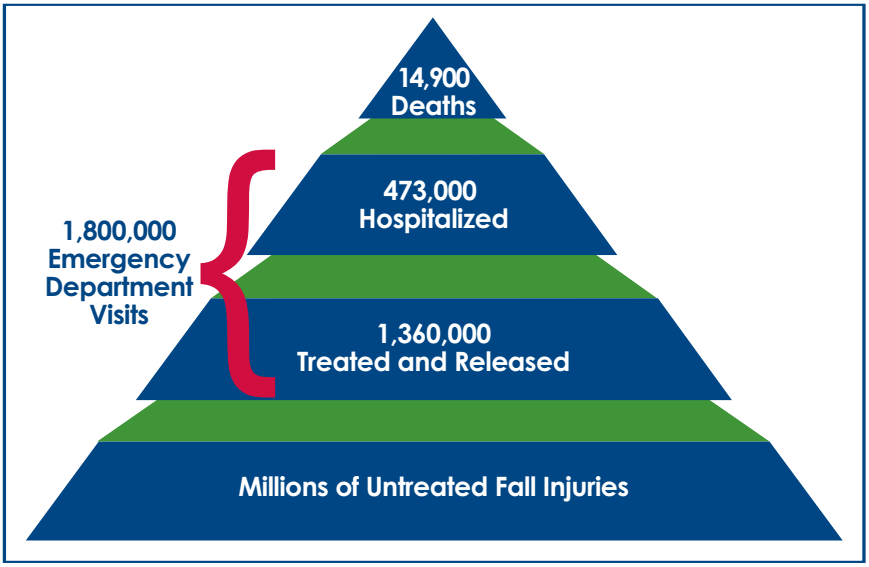
Falls and mobility problems are *not* "just part of getting old"!

Every year, a third of Americans over age 65 living in the community suffer a fall, and 50% over the age of 80 fall at least once per year.[1,2] 10% of these result in serious injury such as a hip fracture, which can lead to loss of mobility, confinement to a nursing home, and death.[2] Even if no fracture results, fear of subsequent falls can sharply reduce an older patient's mobility and quality of life.

Falls and fall injuries are more common than strokes, and their consequences can be just as serious. They are the most preventable cause of nursing home placement.[3] Falls-related injury and consequences in older adults are shown below.[4]

Falls-related injury and consequences[3]



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Balanced data about medications

Background

Gait unsteadiness and falls are ***not*** a normal aspect of aging.[5] A simple workup with questions that are part of most visits can identify patients who have treatable conditions or other risk factors – including medications – that put them at increased danger of falls and mobility problems. Medications may be an easily reversible risk factor.

Recently, large intervention trials have shown how a coordinated set of simple interventions can greatly reduce the risk of falls, even – perhaps especially – in frail older patients.[6-10]

Ask the question

In a busy primary care practice, it's hard to add even more to the medical history. A patient may not report a fall that left no lasting injury, or may ignore a feeling of unsteadiness that could be the warning signal of an impending problem. Uncovering this history can be life-saving. Three quick screening questions and a simple test can help identify which patients need further assessment, and should be asked of every older patient (or a caregiver):[7,8]

- **Have you fallen in the past year?**
- **Do you have difficulty with getting around, or with balance?**
- **Are you afraid of falling?**

The "Get Up And Go" test is a good way to assess several aspects of mobility.[7]

The Get Up and Go Test
Ask the patient to:
• Stand from a sitting position without using arms for support
• Walk several paces (10 feet)
• Turn
• Return to the chair
• Sit down again without using arms for support

Patients who answer "yes" to any of the questions, or have difficulty/deficits in gait, mobility or balance when performing the test require further assessment. Think **HIP**:

- **H**istory
- **I**nspection (physical examination)
- **P**rescription

Taking the history

For patients who answer "yes" to any one of the screening questions, some targeted questions can further identify whether they may benefit from risk-reduction interventions:

- ☑ all prescription medication use, as well as OTC drugs, herbal remedies, and alcohol
- ☑ confusion
- ☑ weakness
- ☑ drowsiness
- ☑ other neurological symptoms
- ☑ visual impairment
- ☑ urinary incontinence

A targeted physical exam

Clinically significant orthostatic hypotension is present in up to 30% of elderly persons.[7] Measuring blood pressure is nearly universal, but checking for ***postural hypotension*** is key in any patient with falls or mobility problems. Blood pressure is measured after the patient is supine for ≥5 minutes, then immediately after the patient stands upright, and again standing two minutes later.[7] A drop of ≥20 mm systolic, **or** ≥10mm diastolic, **or** the presence of symptoms on standing, warrants further action.

A targeted physical exam is continued on page 5

Several aspects of the neurological exam require special focus:

- strength, especially in the legs
- coordination (finger-to-nose test)
- balance (Romberg test)
- screening mental status test (mini-mental status exam)
- extrapyramidal symptoms (may be evidence of Parkinson's disease or a drug side effect)
- vision (acuity, loss of peripheral fields)

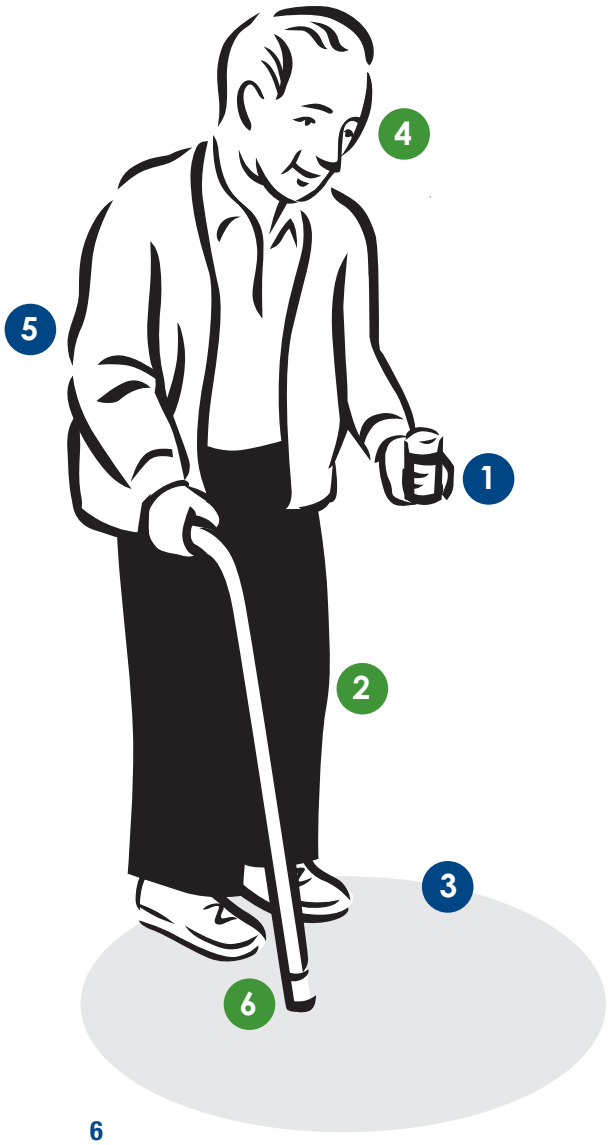
Useful lab tests

Laboratory tests for a falls work-up might include:

- electrolytes, creatinine and urea
- glucose
- complete blood count
- thyroid function test
- liver function tests
- vitamin B_{12}

Interventions

Often, the history and physical examination will point to specific points of intervention. These are the most common ways of targeting preventable falls and mobility problems. For all patients:



1 Reassess every medication and OTC remedy. Is each one necessary? Could a different dose be tried? Focus in particular on:

- all psychoactive drugs (antipsychotics, benzodiazepines, antidepressants, sedatives/hypnotics, anticonvulsants)
- antihypertensives
- narcotic pain medications
- drugs with strong anticholinergic effects (these include antipsychotics, atropine, antihistamines, antiemetics, drugs used for urinary incontinence, tricyclic antidepressants, anti-Parkinsonian medications, skeletal muscle relaxants, and antispasmodics)

2 Strength training

- see accompanying patient education brochure

3 Search for and remove home hazards

- involve family or other caregivers
- a home hazard assessment can be covered by Medicare

4 Vision referral if needed

5 Osteoporosis drugs if indicated

- if there is a history of fracture, or if T-score on bone mineral density test is lower than –2.5

6 Assistive devices

- for some patients, a cane or walker may mean the difference between independent living and nursing home placement

Help in the community

Preventing falls and helping patients who have mobility problems usually requires assistance beyond the doctor's office. Services available in the community can supplement physician interventions, and provide comprehensive treatment plans for at-risk patients. These might include:

References: 1. Gillespie LD, Gillespie WJ, Robertson MC, Lamb SE, Cumming RG, Rowe BH. Interventions for preventing falls in elderly people. Cochrane Database of Systematic Reviews (Online) 2003(4):CD000340. **2.** U.S. Department of Health and Human Services. Office of the Surgeon General. Bone health and osteoporosis: a report of the Surgeon General 2004; 2004. **3.** Connecticut Collaboration for Fall Prevention. Facts about Falls. (Accessed at http://www.fallprevention.org/pages/fallfacts.htm). **4.** Sleet DA, Moffett DB, Stevens J. CDC's research portfolio in older adult fall prevention: A review of progress, 1985-2005, and future research directions. *Journal of Safety Research* 2008;39(3):259-267. **5.** Bloem BR, Gussekloo J, Lagaay AM, Remarque EJ, Haan J, Westendorp RG. Idiopathic senile gait disorders are signs of subclinical disease. *Journal of the American Geriatrics Society* 2000;48(9):1098-101. **6.** Chang JT, Morton SC, Rubenstein LZ, et al. Interventions for the prevention of falls in older adults: systematic review and meta-analysis of randomised clinical trials. *BMJ* (Clinical research ed) 2004;328(7441):680. **7.** Tinetti ME. Clinical practice. Preventing falls in elderly persons. *New England Journal of Medicine* 2003;348(1):42-9. **8.** American Geriatrics Society, British Geriatrics Society, American Academy of Orthopaedic Surgeons Panel on Falls Prevention. Guideline for the prevention of falls in older persons. *Journal of the American Geriatrics Society* 2001;49:664-72. A 2005 update is available at: http://www.americangeriatrics.org/education/2006Falls_guidelines.shtml **9.** Jarvinen TL, Sievanen H, Khan KM, Heinonen A, Kannus P. Shifting the focus in fracture prevention from osteoporosis to falls. *BMJ* (Clinical research ed) 2008;336(7636):124-6. **10.** Connecticut Collaboration for Fall Prevention. Available at http://www.fallprevention.org/pages/clinicians.htm.

Additional references documenting these recommendations are provided in the evidence document accompanying this material.

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These are general recommendations only; specific clinical decisions should be made by the treating physician based on an individual patient's clinical condition.

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