

TABLE 124-4 RECOMMENDED COMPONENTS OF CLINICAL ASSESSMENT AND MANAGEMENT FOR OLDER PERSONS LIVING IN THE COMMUNITY WHO ARE AT RISK FOR FALLING

ASSESSMENT AND RISK FACTOR	MANAGEMENT
Circumstances of previous falls*	Change in environment and activity to reduce the likelihood of recurrent falls
Medication use <ul style="list-style-type: none"> High-risk medications (e.g., benzodiazepines, other sleep medications, neuroleptics, antidepressants, anticonvulsives, or Class IA antiarrhythmics—including Quinidien, Procainamide, and Disopyramide)** Four or more medications† 	Review and reduction of medications
Vision* <ul style="list-style-type: none"> Acuity <20/60 Decreased depth perception Decreased contrast sensitivity Cataracts 	Ample lighting without glare; avoidance of multifocal glasses while walking; referral to an ophthalmologist
Postural blood pressure (after ≥5 min in a supine position, immediately after standing, and 2 min after standing)* <ul style="list-style-type: none"> ≥20 mm Hg (or ≥20%) drop in systolic pressure, with or without symptoms, either immediately or after 2 min of standing 	Diagnosis and treatment of underlying cause, if possible; review and reduction of medications; modification of salt restriction; adequate hydration; compensatory strategies (e.g., elevating head of bed, rising slowly, or performing dorsiflexion exercises); pressure stockings; pharmacologic therapy if the above strategies fail
Balance and gait** <ul style="list-style-type: none"> Patient's report or observation of unsteadiness Impairment on brief assessment (e.g., the "get up and go" test or performance-oriented assessment of mobility) 	Diagnosis and treatment of underlying cause, if possible; reduction of medications that impair balance; environmental interventions; referral to physical therapist for assistive devices and for gait, balance, and strength training
Targeted neurologic examinations <ul style="list-style-type: none"> Impaired proprioception* Impaired cognition* Decreased muscle strength** 	Diagnosis and treatment of underlying cause, if possible; increase in proprioceptive input (with an assistive device or appropriate footwear that encases the foot and has a low heel and thin sole); reduction of medications that impair cognition; awareness on the part of caregivers of cognitive deficits; reduction of environmental risk factors; referral to physical therapist for gait, balance, and strength training
Targeted musculoskeletal examinations of legs (joints and range of motion) and examination of feet*	Diagnosis and treatment of underlying cause, if possible; referral to physical therapist for strength, range-of-motion, and gait and balance training, and for assistive devices; use of appropriate footwear; referral to podiatrist
Targeted cardiovascular examination† <ul style="list-style-type: none"> Syncope Arrhythmia (if there is known cardiac disease, abnormal electrocardiogram, and syncope) 	Referral to cardiologist; carotid-sinus massage (in case of syncope)
Home-hazard evaluations after hospital discharge**	Removal of loose rugs and use of nightlights, nonslip bathmats, and stair rails; other interventions as necessary

From Tinetti ME: Clinical practice. Preventing falls in elderly persons, *N Engl J Med* 348(1):42–49, 2003.

*Recommendation of this assessment is based on observations that the finding is associated with an increased risk of falling.

†Recommendation of this assessment is based on one or more randomized controlled trials of a single intervention.

**Recommendation of this assessment is based on one or more randomized controlled trials of a multifactorial intervention strategy that included this component.

TABLE 124-5 CAUSES, TYPES, AND TREATMENT OF URINARY INCONTINENCE

TYPE	DEFINITION	CAUSE	TREATMENT
Stress	Leakage associated with increased intra-abdominal pressure (coughing, sneezing)	Hypermobility of the bladder base, frequently caused by lax perineal muscles	Pelvic muscle exercise, timed voiding, α -adrenergic drugs, estrogens, surgery
Urge	Leakage associated with a precipitous urge to void	Detrusor hyperactivity (outflow obstruction, bladder tumor, detrusor instability), idiopathic (poor bladder), compliance (radiation cystitis), hypersensitive bladder	Bladder training, pelvic muscle exercise, bladder-relaxant drugs (anticholinergics, oxybutynin, tolterodine, imipramine)
Overflow	Leakage from a mechanically distended bladder	Outflow obstruction, enlarged prostate, stricture, prolapsed cystocele, acontractile bladder (idiopathic, neurologic [spinal cord injury, stroke, diabetes])	Surgical correction of obstruction, intermittent catheter drainage
Functional	Inability or unwillingness to void	Cognitive impairment, physical impairment, environmental barriers (physical restraints, inaccessible toilets), psychological problems (depression, anger, hostility)	Prompted voiding, garment and padding, external collection devices

with multiple comorbid conditions often have incontinence that results from a combination of chronic and/or acute causes.

Continence problems are frequently treatable but are often not raised by patients as a concern. A targeted history and physical examination can often identify the cause of UI and lead to appropriate intervention. Asking about and documenting the presence or absence of UI should be done biannually, as well as determining whether the UI, if present, is bothersome to the patient or caregiver. In addition to a history of acute and chronic causes, a

targeted physical examination should include an assessment for fluid overload, genital and rectal examination, and neurologic evaluation. Urine and blood tests are indicated to evaluate for infection, metabolic causes, and renal dysfunction. In addition, for patients suspected of having urinary retention, catheterization or ultrasound can help define the postvoid residual and determine any need for catheter placement and further urologic evaluation. Many institutions now offer more specialized evaluation and care through incontinence clinics, which offer a