

Fall Prevention in the Elderly

Condition: Falls in older adults are the third leading cause of chronic disability. Falls often have a significant impact on older adults including physical harms such as broken bones, fear of falling, loss of independence, and reduced quality of life. Fall injuries are one of the most expensive conditions with the medical cost of \$51 billion in 2015 and the cost is expected to increase to \$100 billion in 2030. However, falls are not an inevitable part of aging and many of them can be prevented.

Background: One in three of adults of age ≥ 65 living in the community experience at least one fall a year. The fall risk increases to 50% in people beyond the age of 75. Falls also occur more frequently when people are in nursing homes. Falls are the leading cause of injury-related hospitalizations in persons aged 65 and older. Even if a fall doesn't cause physical injuries, many older adults may develop fear of falling and subsequent downward spiral of restriction of activities, socialization, becoming frail, and decline in mobility.

Risk Factors: Older people fall due to balance or walking difficulty, poor vision, cognitive impairment. Individuals with neurological disorders (stroke, Parkinson's disease) have higher risk of falls compared to those without. It is very important to know that some medications including sleeping pills, medications for anxiety and pain relief, lowering blood sugar or blood pressure can increase the risk of falls significantly. Certain home environment may increase the risk of falls such as poor lighting and area rugs. Many falls occur in during "elimination process" meaning activities related to urination or bowel movement (e.g. trying to get out of bed to go to the bathroom, walking to the bathroom, or transferring to the toilet).

History and Symptoms: All older adults should be asked in every visit whether they had fallen or nearly fallen in the past 12 months. Healthcare provider should review medications with the goal of safe discontinuing or changing medications related to fall risk. Residential situation and environmental factors mentioned above should be assessed. In case of falls, location and circumstances of the fall, any associated symptoms, faint, dizziness, alcohol intoxication and ability to get up should be assessed.

Physical Exam: Comprehensive physical examinations includes vital signs (blood pressure, temperature, heart rate), cognitive function, neurologic evaluation, skin for bruise or cut, vision and hearing, bone and joint condition, walking and balance. Functional examination is essential such as walking speed which is a good indicator for fall prediction and overall function. Home environment inspection done by occupational therapist is shown to be effective in identifying environmental risk for falls at home.

Diagnostic Process: Considering falls can be caused by a wide variety of factors, clinicians will request related lab, imaging, or special tests (e.g. nerve and muscle test-electrodiagnosis). Lab tests include complete blood count for anemia and infection, basal metabolic panel tests for assessing electrolyte imbalance, hydration and kidney function, endocrine function, and urine test. For individuals with walking and balance difficulty, imaging of brain, cervical spine, and lumbar spine may be considered. Special tests for nerve and muscle is called electrodiagnosis which is considered for individuals with weakness or sensory loss. Cognitive function test is also important since impaired cognitive function is one of the main risk factor for falls.

Rehab Management: Fall is often a result of complex interaction among the deficits in a person, the environment, and medications. Removing and reducing the fall risk factors is the first step of rehabilitation

management. PM&R physicians are well equipped to assess the in-person risk factors as well as medications and environmental risks. Rehabilitation management uses patient education for fall risk factors, improving environmental factors, and training program focusing on balance and strength training. Proper footwear, braces, or assistive device (e.g. cane) can be prescribed based on the person's need. PM&R physicians can also coordinate a team of therapists, multiple specialists, patient and family to guide a patient centered interventions for fall prevention and interventions.

Other Resources for Patients and Families: [The National Council on Aging](#) offers a number of resources such as the Falls Free[®] National Action Plan. [The Centers for Disease Control and Prevention \(CDC\)](#) also offers tips on how to prevent falls in the elderly.

Frequently Asked Questions

What is PM&R?

Physical medicine and rehabilitation (PM&R), also known as physiatry, is a primary medical specialty that aims to enhance and restore functional ability and improve quality of life to those with injuries, physical impairments or disabilities affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. PM&R physicians, known as physiatrists, evaluate and treat the whole body, maximize patients' independence in their daily life and are experts in designing comprehensive, patient-centered treatment plans to empower patients to achieve their goals. By taking the whole body into account, they can accurately pin-point problems, decrease pain, assist in recovery from devastating injuries and maximize overall outcomes and performance with non-surgical and peri-surgical options. To learn more, visit www.aapmr.org/aboutpmr.

What makes PM&R physicians unique?

PM&R physicians' training focuses not just on treating medical conditions, but on enhancing the patient's performance and quality of life in the context of those medical conditions. They focus not only on one part of the body, but instead on the development of a comprehensive program for putting the pieces of a person's life back together – medically, socially, emotionally and vocationally – after injury or disease. PM&R physicians make and manage medical diagnoses, design a treatment plan and prescribe the therapies that physical therapists or other allied therapists perform or that are carried out by the patients themselves. By providing an appropriate treatment plan, PM&R physicians help patients stay as active as possible at any age. Their broad medical expertise allows them to treat disabling conditions throughout a person's lifetime.

Why see a PM&R physician?

A PM&R physician will thoroughly assess your condition, needs, and expectations and rule out any serious medical illnesses to develop a treatment plan. By understanding your condition and goals, you and your PM&R physician can develop a treatment plan suited to your unique needs.

How do I find a PM&R physician near me?

Visit www.aapmr.org/findapmrphysician or contact your primary care physician for a referral.