

# Falling by the Wayside?

## Falls Prevention in Dialysis



By **Laura Plantinga, PhD,**  
**Bernard Jaar, MD, MPH,** and  
**C. Barrett Bowling, MD, MSPH**

### Why are dialysis patients at particular risk for falls?

Studies show that approximately one-quarter of dialysis patients fall every year, meaning that they are about three times more likely to fall in any given year, compared to the general population. While older age certainly plays a role, there are several other factors that put dialysis patients — regardless of age — at higher risk for falls. In fact, most falls probably result from a combination of factors, usually a combination of long-term “predisposing” risk factors and short-term “precipitating” factors. For dialysis patients, predisposing factors include health conditions like nerve damage from diabetes, weakness from heart failure, or poor circulation in the legs and feet due to peripheral arterial disease; reduced vision; long-term medication use; and reduced physical functioning and/or frailty. Precipitating factors include environmental factors in your home or neighborhood (or even in the dialysis clinic); slippery and/or dark conditions; and low blood pressure and dizziness after dialysis or in response to starting a new medication (see Table).

### What are the consequences of falling?

Falls can damage more than just your ego! Of course, not all falls result in injury, but a pattern of even minor falls suggests that there are underlying issues that should be addressed to prevent future falls. Additionally, even minor falls can create a vicious circle, in which frequent falls result in a fear of falling, which can then reduce physical activity and functioning, which then makes future falls — and associated injuries — even more likely. For dialysis patients, falls are more likely to result in broken



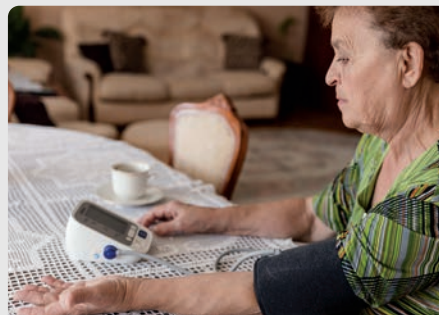
bones (fractures), since end-stage renal disease is associated with bone mineral metabolism problems that can result in bone softening (osteopenia). Additionally, fractures that do occur may take longer to heal. Falls are also associated with increased risk of other unwanted outcomes, such as emergency room visits, hospital admissions, nursing home admissions, and even death. Therefore, it is critical to address falls and their underlying causes as soon as possible.

### What can you do to decrease your risk of falling?

The most important thing you can do to reduce your risk is to report any falls, “near-misses,” or risk factors for falls to your nephrologist, primary care physician, and/or other providers, as appropriate (see Table). While your doctors are likely

aware of any major underlying medical conditions, it is unlikely that they will know about gradual changes in vision, physical performance (strength, balance, walking ability), or environmental conditions. Remember that they most often see dialysis patients in the clinic and sitting still, making it hard to distinguish the patient who easily walked unassisted into the dialysis clinic from the patient who needed help getting in and out of the chair. In some cases, it might be helpful to ask the dialysis clinic nurses, social workers, or dietitians if they can help you access services, rather than wait for doctors, whom you may see less frequently. Note that most of the sources of help listed are at least partially covered by Medicare; your social worker can also help navigate these issues.

While falls assessment is common in geriatric medicine, it is rarely done by busy dialysis clinic providers, who have many competing demands on their time. Thus, advocating for personalized, effective falls prevention for yourself or loved one is important. Preventing falls will help you or your loved one maintain and maximize quality of life and independence.



**Table. Common risk factors for falls in dialysis patients and sources of help**

Risk factor	What you can do	Who can help
<b>Predisposing (long-term) factors</b>		
Diabetes	Control blood glucose as much as possible; get recommended screenings (especially foot/vision checks)	Nephrologist, primary care physician, endocrinologist, dietitian
Peripheral arterial disease	Address diabetes/stop smoking, get recommended screenings (including foot checks)	Nephrologist, primary care physician, cardiologist
Heart failure	Control fluid intake, take diuretics as prescribed	Nephrologist, primary care physician, cardiologist
Vision loss (general or night-time)	Get regular eye exams, identify and address underlying issues	Ophthalmologist, optometrist
Frailty/loss of muscle mass	Follow recommended physical activity plans, ensure healthy diet	Nephrologist, physical therapist, dietitian
Problems with balance, walking, etc.	Rule out and/or treat medical causes, follow recommended physical activity plans, obtain and use walking aids	Primary care physician, physical therapist, occupational therapist, social worker
Cognitive and/or psychiatric issues	Rule out and/or treat medical causes, learn workarounds (e.g., using technology)	Neurologist, psychologist/psychiatrist
Taking unnecessary or harmful medications long-term	Ask for a medication reconciliation (to ensure no duplicate medications and stop or taper any medications that are no longer needed, including any over-the-counter medications or supplements)	Nephrologist, primary care physician, pharmacist
<b>Precipitating (short-term) factors</b>		
Starting a new medication (including those given during dialysis treatment)	Immediately report any new issues with dizziness, vision, balance, etc., if you recently started or were administered a medication, particularly those commonly used for itching (Benadryl, or diphenhydramine), sleep (temazepam, zolpidem), anxiety (lorazepam) or high blood pressure (clonidine)	Nephrologist, nurse, primary care physician, pharmacist
Large volume shifts during dialysis (leading to very low blood pressure/dizziness)	Ask for longer dialysis duration; reduce fluid intake	Dialysis nurses, nephrologists, dietitians
Dialysis clinic factors (examples: blocked walkways, insufficient time to transition from dialysis to walking)	Ask that wheelchairs, IV stands, etc., be moved out of the way during shift changes and request recovery seating areas	Dialysis medical directors, clinic administrators, nurses, social workers
Home factors (examples: low lighting, unsecured rugs/furniture, lack of handrails, pets)	Get a home evaluation and make necessary changes	Occupational therapist, social worker, family members/friends
Neighborhood factors (examples: cracked or blocked sidewalks, insufficient time to navigate crosswalks)	Contact local services (e.g., Department of Transportation), politicians, and/or consumer advocates	Social worker, family members/friends
Rushing	Plan ahead so that you have adequate time to catch public transportation, go to appointments, and complete errands	Family/friends, social worker
Weather (icy or rainy conditions)	Take extra time and wear appropriate footwear; ensure sidewalks are cleared of snow/ice before going out	Family/friends
Footwear	Wear only closed-toe shoes with sufficient support (no flip-flops); obtain neuropathy shoes if needed	Orthopedist
Eyewear	Ensure you are wearing a current prescription; be especially careful when transitioning to bifocals or progressives	Optometrist

**About the Authors:**

*Laura Plantinga is an epidemiologist and health services researcher at Emory University in Atlanta, Georgia, whose work primarily focuses on improving the equity, quality, and patient-centeredness of U.S. dialysis care. Bernard Jaar is a nephrologist and clinical researcher at Johns Hopkins University in Baltimore, Maryland. He serves as the medical director of a dialysis clinic and his research interests include epidemiologic studies of chronic*

*kidney disease and end-stage renal disease and their related complications. C. Barrett Bowling is a geriatrician at the Durham Veterans Affairs Geriatric Research Education and Clinical Center, Durham Veterans Affairs Medical Center (VAMC), and Duke University, Durham, North Carolina, whose research focuses on patient-centered care that optimizes function and quality of life over traditional disease-based approaches, particularly in patients with chronic kidney disease.*