

# Risk Review Online

Your direct link to better risk management practices

a publication of **Princeton Insurance**

A Medical Protective/Berkshire Hathaway Company

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## Avoiding Slips, Trips & Falls at Your Practice

Most healthcare providers are aware of common slip-and-trip hazards. However, familiarity with your environment may have allowed you to adjust, making it easy to overlook, or even to not notice, situations that can cause injury to others less familiar with the surroundings. In this article we will examine the mechanics, environment and client profile that lead to injuries, and we will provide strategies to improve the safety of your office setting.



### Falls

By understanding the mechanics of how humans walk we can better appreciate what conditions lead to falls. A person's gait cycle consists of four basic phases: toe off, foot swing, heel strike and weight bearing. Each of these fits into one of two fall categories – slips or trips.

**Trips** typically happen during the “toe off” and “foot swing” phases. During these phases, weight is being transferred forward in our stride. Those with a normal gait will swing their foot only one half inch above the walking surface. If an outside force interrupts either of these phases, a person will typically fall forward. Individuals that fall forward or trip may incur injury to their knees, wrists, shoulders, face and head. Elderly people are more susceptible to hip injuries due to compromised bone density. Most trips occur when walking on irregular level surfaces or traversing steps (either up or down).

**Slips** tend to happen during the heel strike and weight bearing phases. During these phases our weight is landing and being stabilized so the next step can occur. The energy produced by the locomotion of our body is being absorbed by the heel strike; therefore it is critical that the walking surface have enough friction to provide and maintain a steady landing. When moving forward we bear weight onto our entire foot and balance our body mass so the next foot swing can take place. Once again it is critical that the walking surface be flat and that it provide sufficient friction to maintain a secure foot plant. Slips tend to cause backward falls. Individuals that fall backward or slip often incur back, elbow, neck, shoulder, head and hip injuries.

### Common Hazards

Most common slip-and-trip hazards are fairly obvious: loose or wrinkled carpet, uneven wooden decking, broken or irregular sidewalk slabs, wet or icy surfaces and loose steps. Other hazards can be much tougher to recognize. Consider the following:

- **Inconsistent Steps** (i.e. the rise or tread dimensions vary from step to step)  
All steps should have uniform riser heights and tread widths to prevent trip up or heel slip situations. This is not an easy condition to fix. If the steps cannot be replaced or corrected, clear signage warning others of the hazard should be present along with a sturdy hand rail with a good grip rating.
- **Single Monochromatic Steps** (where the floor covering and/or the walls are of the same color or pattern)  
When we walk, we typically look forward, not down. A single step may not provide enough depth perception to be seen, especially if the décor acts to camouflage the step. Poor lighting magnifies this problem. Several precautions can improve this situation:
  - ◆ Mount a hand rail along the step for assistance while also giving a visual cue to the presence of the step.
  - ◆ Install warning signs, brightly colored anti-slip toe covering and adequate lighting to improve the person's ability to recognize the hazard.
- **Ramps**  
Ramps are a practical solution for accommodating walker and wheelchair traffic; however, danger exists on either side of the ramp. Typically the transition from the side of the ramp to the lower level is abrupt and may be the same color as the ramp. This has led to litigation resulting from ankle injuries sustained when patrons step too close to the edge of the ramp and roll

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their ankles on the curb. The ramp curb should be painted in a highly contrasting color to make it more obvious. In addition, the installation of handrails on both sides of the ramp is imperative.

- **Mats and Area Rugs**

Individuals with walking impairments often experience difficulties when encountering mats and area rugs. Rug edges are a particular hazard for those with a walker, suffering from toe drop, or otherwise shuffle when they walk. It might be a good idea to consider removing decorative area rugs altogether. Although, mats used to contain wet conditions at exterior doorways may be a necessity. In this application, be sure the rugs have tapered edges and anti-slip backings. In cases of extreme weather, the rugs may need to be cleaned or replaced more often than usual.

- **Downspouts**

Downspouts draining across walkways can lead to a severe hazard. Ice and snow on a roof will often thaw and run off during a sunny day, only to refreeze when temperatures drop later in the evening or when the weather takes a turn for the worse. This very thin coating of ice ("black ice") is practically invisible to pedestrians and can lead to falls. To prevent this possibility, all downspouts should be directed towards a non-walking area and all walkways should be properly maintained during winter months. This includes keeping them clear of snow and ice and applying preventive measures such as salting and sanding. It is also recommended that you assess your walkways throughout the day as weather conditions can change rapidly.

- ◆ **Handy Tip:** If possible, try keeping a small salt container in your vehicle so you can treat the walkway as you approach your building first thing in the morning.

- **Parking Curbs**

Movable parking curbs are used to designate parking spots and prevent vehicles from hitting a structure. At times these can be at the end of a ramp or walkway presenting a trip hazard. Care should be taken to prevent these movable curbs from becoming a trip hazard.

- ◆ Parking curbs should never be located near the end of a ramp or walkway.
- ◆ Curbs should be painted a bright color.
- ◆ Consider attaching a vertical cue such as a bright colored flexible marker stick like you would see in downhill skiing.
- ◆ Take care not to strike or move curbs during snow removal. Return any disrupted parking curbs back to their intended position immediately and replace any that have been damaged by snow plows.

- **Wet Leaves**

Wet leaves can pose a very slippery condition for clients and staff. They are a pesky condition since leaves can fall off trees for several weeks. Leaves can gather at the step-off point from a walkway to the parking surface. This may seem innocent enough, however once they have become wet due to rain or snow they can and do hold moisture, creating a very slippery condition. It is essential that you maintain your walkway free of any gathering leaves as frequently as possible.

- **Lawns**

Although pathways from the parking lot to the building are provided, many people often cut across lawn areas to enter a building. These areas pose multiple hazards including uneven turf and slip hazards from mud or moss. Consider placing an obstacle such as decorative fencing around it or a sculpture in this area to discourage people from cutting through.

Finally, you should consider the population that you will be serving. Are they predominately younger or older individuals? Become familiar with any physical limitations that your patients may have and make every effort to provide the safest environment for them. Be prepared to upgrade your practice over time.

## **Resources**

[http://www.issa.com/?id=shp\\_slips\\_trips\\_falls\\_in\\_the\\_workplace](http://www.issa.com/?id=shp_slips_trips_falls_in_the_workplace)

<http://www.cdc.gov/niosh/docs/2011-123/pdfs/2011-123.pdf>