



## Preventing Injuries from Slips, Trips & Falls

According to OSHA, slips, trips and falls constitute the majority of workplace accidents. Same level falls, like slips and trips, make up 65% of fall injuries.

Because there are numerous causes of slips and trips, prevention takes various measures including housekeeping and storage measures, footwear requirements, appropriate work practices, maintenance of walking and working surfaces and employee education and awareness.

Falls can cause serious injuries such as severe head injuries, back injuries, paralysis, broken bones, sprains and strains to muscles and even death. Trying to catch your balance when you slip or trip can cause sprains and strains to muscles or joints and permanent back injuries, even if you don't fall.

### Wet or Slippery Surfaces

Wet or slippery surfaces are a major cause of slips. Many surfaces such as marble and ceramic tile can be extremely slippery even when dry. Spills and environmental factors such as rain, snow and mud add to the problem.

### Simple ways to reduce the occurrence of wet or slippery floors:

- Use anti-skid adhesive tape in high traffic areas
- Use absorbent mats in entrance ways during inclement weather  
Caution: unanchored mats may cause slip hazards themselves -- make sure that mats lie flat and that the backing material will not slide on the floor
- Display wet floor signs when appropriate; note that signs are a great awareness tool but should not be the only means of control
- Clean up spills and wet floors as soon as practical.
- Have a procedure to deal with spills
- Use proper mats in areas that tend to be "spill prone" (bathing facilities, food preparation)
- When wet processes are used, maintain proper drainage or use platforms or mats

### Footwear

Footwear plays a large role in the prevention of slips, trips and falls. The slickness of the sole and type of heel may cause accidents. Employees who work in environments that could cause foot injuries are required to wear protective footwear per OSHA standard 29 CFR 1910.136 and EM 385-1-1, Safety and Health Requirements Manual. Jobs that are likely to require safety shoes include, but are not limited to:

- Carpenters
- Welders
- Plumbers



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- Maintenance mechanics
- Grounds workers operating heavy machinery or tools
- Power plant maintenance workers

There are numerous types of safety shoes, including waterproof, slip-resistant, static dissipative, puncture resistant and steel-toed. Care of the shoes is also important – footwear should be inspected before each use for damage, as shoes wear, their effectiveness may be reduced.

Off the job footwear also poses a hazard. Wearing shoes that have worn soles or too high of a heel can cause slip, trip and fall incidents. Anticipating walking surfaces and environmental conditions and wearing shoes that reflect those conditions will help prevent accidents.

### Changes in Elevation

Changes in elevation are a major source of trip accidents. Experts estimate that even a change in walking surface of ¼" – ½" or greater will be sufficient to cause a trip. Curbs, cracks in the sidewalk, ramps and single steps are all examples of hazards. Changes in elevation may be almost unavoidable, but here are some simple ways to reduce accidents caused by these hazards:

- Place signs to warn walkers of bumps or changes in elevation
- Use adhesive caution tape to mark changes in elevation or paint curbs or steps yellow to warn walkers
- If the change in elevation is temporary (due to remodeling, etc.) use barricades to create an alternative route to avoid the hazard
- Learn how to "walk defensively" – follow safe walking procedures

### Uneven Surfaces

Injuries from falls may be caused by a variety of sources. Many of these sources, like curbs, flaws in parking lots and uneven lawns, are not of significant height, but have caused significant injuries. The best way to prevent injuries such as these is to be aware of where you are going and pay attention to your walking surface.

### Falls from Loading Docks

Loading docks and ramps are dangerous areas. They are frequently congested, heavy-traffic areas, and working and walking surfaces are often wet. Metal dock plates can wear smooth and become very slippery; in particular, the edge of a dock plate invites trips and falls.

Accidental backward steps can result in a fall from the dock. Portable railings, which can be easily removed from the edge of the dock, could prevent many dangerous falls. They are removed when a truck or tractor is at the dock, and replaced as soon as the truck or trailer leaves.

Proper housekeeping, well-designed traffic patterns and the use of abrasive, skid-resistant surface coatings will reduce the risk of slips, trips and falls.

Ramps and gang-planks have hazards similar to loading docks. The slopes should be as gradual as possible, as wide as possible, and as dry as possible. They should also have skid-resistant surfaces.

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### Behaviors that Lead to Falls

In addition to wearing the wrong footwear, there are specific behaviors which can lead to slips, trips, and falls. Walking too fast or running can cause major problems. In normal walking, the most force is exerted when the heel strikes the ground, but in fast walking or running, one lands harder on the heel of the front foot and pushes harder off the sole of the rear foot; thus, a greater COF is required to prevent slips and falls. Rapid changes in direction create a similar problem.

Other problems that can lead to slips, trips and falls are: distractions; not watching where one is going; carrying materials which obstruct view; wearing sunglasses in low-light areas; and failure to use handrails. These and other behaviors, caused by lack of knowledge, impatience, or bad habits developed from past experiences, can lead to falls, injuries, or even death.

### Reporting slips, trips and falls

All slips, trips and falls, with or without injury, should be reported, recorded and thoroughly investigated. Corrective action to prevent such a repeat occurrence should be taken immediately.

Slips, trips and falls whether on or off the job are expensive, disruptive, painful, and may be tragic.

### Reminders

- Wear appropriate shoes.
- Walk in designated walkways.
- Watch where you are walking.
- Walk slowly and **don't rush!** Plan ahead and give yourself enough time.
- If you drop it, pick it up.
- If you spill it, wipe it up.

A portion of the information above is an excerpt from the uwsp.edu website.

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