



Slips, Trips, and Falls at the Jobsite

Nearly one-third of reportable injuries and 40% of fatalities in construction result from **slips, trips, and falls**. These injuries result in 50% more days away from work than other injuries (OSHA). Slips, trips, and falls can be caused by slick spots, debris, clutter, and unsafe stairs or ladders. Slips, trips, and falls cause nearly 700 fatalities per year and many more injurious accidents in the workplace according to the Bureau of Labor Statistics.

There are three physical factors involved in slips, trips, and falls: **friction, momentum, and gravity**. Each one plays a role. Friction is the resistance between objects, momentum is affected by the speed and mass of an object, and gravity is the force exerted on an object by the Earth.

Slips are a loss of balance caused by too little friction between your feet and the surface you walk or work on. Loss of traction is the leading cause of workplace slips.

Slips can be caused by wet surfaces, spills, or weather hazards like ice or snow. Slips are more likely to occur when you hurry or run, wear the wrong kind of shoes, or don't pay attention to where you're walking.

Trips occur whenever your foot hits an object and you are moving with enough momentum to be thrown off balance.

Trips are more likely to happen when you are in a hurry and don't pay attention to where you're going.

Falls occur whenever you move too far off your center of balance.

Falls account for more workplace fatalities than any other reason.

Prevention measures are vital in reducing/eliminating near misses/injuries.

Employee Training brings awareness to employees of, and how to avoid, unsafe conditions utilizing organizational resources as the following:

- Employee Manual;
- Job Description;
- Reviewing ways that employees can protect themselves from slip, trip, and fall hazards;
- The correct footwear for the particular job/task;

- Safety orientation that brings awareness to possible slip, trip, fall hazards;
- Housekeeping.

While the most catastrophic of these occur when working from heights, many injuries also happen at the ground level. Many accidents occur when walking across **uneven ground that is too soft, too hard, wet, or muddy**. The most common injuries are back injuries, twisted ankles, and knee strains. However, depending on how a person falls, so are fractured wrists and muscle tears. Preventing slips and falls is a concern that should be addressed by every employer and an important issue for workers, visitors, and the public. *(EHS Daily Advisor)*

The following guidelines set out tools for good practice in developing an overall slip-and-fall prevention program.

Risk Areas and Regular Maintenance

Regular maintenance with safety in mind is required so that working surfaces are maintained free of slip, trip, and fall hazards that may result in injury to workers. The following risk areas should be addressed as part of a regular maintenance program:

- **Walkways.** Seasonal changes in temperature, along with regular wear and tear, can deteriorate the condition of outdoor walkways, so these areas should be inspected regularly to identify the ruts, slippery conditions, and other uneven ground on the worksite. Also, identify holes and trenches on the site. Cover them and rope them off with caution tape to prevent access to the area. Workers should not take shortcuts through debris piles.
- **Floors.** Floors should be kept clean and free of water, oil, and grease. Tiled or concrete floors can be etched to provide a nonslip, nonskid surface. Smooth flooring also can be covered with skid-resistant materials to improve traction.
- **Stairwells and steps.** Stairwells and steps should be well lit, and sturdy railings should be provided along both sides when possible. Steps should not be dangerously steep and should have the same rise and depth with visible edges. Keep stairs and stairwells free of grease, ice, snow, boxes, and other obstacles that could cause slips or trips.
- **Lighting.** Reduce the risk of slips and falls by using proper indoor and outdoor lighting. Outdoor stairs, walkways, and parking lots should be well lit. Conduct regular lighting inspections of the construction site and replace burned-out bulbs immediately. Ensure adequate outdoor lighting as the seasons change and it gets dark earlier and stays dark longer.

Seasonal Safety Hazards

Walkways, ladders, and work platforms present seasonal slip-and-fall hazards due to snow, ice, and rain. It's important to evaluate your equipment and employee needs before each new season begins. For example, devise a team of volunteers or employees to handle snow- and ice-removal emergencies. Stock up on salt, sand, and shovels before the winter season.

Be sure to consider:

- **Snow and ice.** Clear snow and ice from emergency exits, outdoor staircases, walkways, and parking lots as soon as possible. Evaluate downspouts to ensure runoff does not form ice buildup on sidewalks or parking areas.
- **Rain.** Keep floors dry and alert people to potentially slippery surfaces in the event of rain. Entryways and hallways become slippery when wet, but also consider potentially dangerous outdoor areas, such as ramps. Preplanning and vigilance can help prevent a majority of slips and falls.
- **Working in Mud**
 - The single best practice is eliminating work in excessively muddy areas until it clears up or work areas are addressed.
 - Dress up areas with equipment such as a bulldozer to get down to more solid ground.
 - If work is continuing in an area that is muddy, stop when needed to dress it up again. It takes less time to fix an area to make it safer than it does to pull out stuck vehicles or equipment that tips over.
 - Never drive into excessively muddy areas or down slick slopes. Getting stuck creates more hazards due to other personnel having to come into the field to pull out your vehicle or equipment.
 - If you get your foot stuck in the mud, slowly work it out by moving your foot back and forth. Yanking on it is not very effective and can result in injury.
 - Maintain clean steps on equipment and remove mud off your boots before climbing up and down equipment. Always use three points of contact.

By taking a preventive approach, to include hazard identification, awareness training, and support, your organization can be more effective in reducing the hazards and behavior that lead to injury.