



SLIPS, TRIPS AND FALLS

10



Steps to

**WORLD-CLASS
FLOOR SAFETY**

How to Prevent Slips, Trips and Falls at Your Facility



Introduction

10 Steps to World-Class Floor Safety

Same-level slips, trips and falls are the second leading cause of workplace injuries in the United States. These incidents account for about 65 percent of lost workdays and cost employers more than \$70 billion each year, according to a Liberty Mutual study.

In addition to the direct costs associated with these incidents, injuries can be life-altering for employees, especially those over 55 years old. Identifying and eliminating floor safety hazards can eliminate slip, trip and fall injuries. As a result, companies can avoid workers' compensation claims and Occupational Safety and Health Administration (OSHA) recordable injuries.

The average cost of a single slip, trip or fall workers' compensation claim is \$20,000. Although OSHA does not require companies to have a written floor safety program in place, the organization does require walking surfaces to be clean and dry whenever possible [20 CFR 1910.22(a)(2)].

In this Pig Paper, you'll learn why slips, trips and falls happen and the steps you can take to world-class floor safety and keeping workers safe.



The average workers' compensation claim from a slip, trip or fall is \$20,000.



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1. Conduct a Floor and Walkway Audit

A successful walkway audit will identify areas and conditions that present slip, trip and fall hazards throughout a facility. On-site personnel, professional walkway auditors, safety consultants and/or insurance carriers can perform walkway audits. The National Floor Safety Institute maintains a database of certified walkway auditors searchable by zip code.

Audit all areas of the facility, not just where assembly or production happens. The potential for someone to slip on a coffee spill near the cafeteria is just as real as it is for someone to slip on an oily floor in a production area.

Consulting a facility's floor plan helps to ensure that no areas are missed. Take notes on the condition of each area and use a camera to document conditions so it's easier to recall specific situations later.

Consider the following factors in each area:

- Type of floor (concrete, wood, tile, etc.)
- General condition of the floor (wet or dry)
- Lighting
- Any causes of slipperiness (weather, overspray from machines, leaks and spills, aged floors, floor finishes, etc.)
- Potential causes of trips (loose floorboards, uneven pavement, wrinkled rugs, curled entrance mats, items extending into aisles from storage shelves, etc.)

Two often overlooked areas are the parking lot and sidewalks surrounding the building. Potholes and parking curbs are common hazards in parking lots. Uneven sidewalks and any walking surfaces that vary by more than a quarter inch can contribute to a slip, trip or fall. Consider seasonal weather conditions for outdoor areas and areas right inside doorways, as well.

During an audit, speak with employees who are in that area frequently to identify concerns that may be missed during a casual walk-through. For example, if stock is low or it is a slow day in the warehouse when the audit is performed, fewer issues may be present than on a day when several trucks of supplies have just arrived.



A thorough walkway audit will help identify slip, trip and fall hazards.



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2. Declutter and Organize Work Areas

Humans are creatures of habit and reluctant to change unless an issue is explicitly pointed out and addressed. It might not be enough to ask employees to keep workspaces and storage areas clean and organized, but incorporating 5S strategies to create good housekeeping procedures will send the message that the company is serious about eliminating floor safety hazards and preventing injuries.

The 5S model should be practiced as follows:

- **Sort:** Have employees go through workspaces and group what goes together. Set aside or tag items that do not fit in anywhere and might need their own home or can be pitched.
- **Set in Order:** Organize workspaces in a way that makes sense and will benefit employees' job functions.
- **Shine:** Thoroughly inspect and clean workspaces and storage areas for optimal functionality.
- **Standardize:** Create guidelines to get all employees on the same page. These guidelines will also need to be enforced with consequences for employees who do not follow the company's clean and decluttered workspace mindset.
- **Sustain:** Remind employees how important it is to keep workspaces and storage areas clean and organized and incorporate good housekeeping as part of their daily workflow.

A 5S program is meant to be ongoing, not a one-time event. Spending just a few minutes each day to keep areas clean and clutter-free helps to minimize floor safety hazards.



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3. Repair Problem Areas and Address Low-Traction Surfaces

Parking lots with potholes, loose floor tiles on ramps and inside buildings, and low-traction surfaces are all safety hazards that must be identified and corrected.

Occasionally problem-ridden floors and walkways can be fixed with some maintenance, such as filling in a pothole, gluing down the floor tile or improving cleaning methods. Other times, the safest solution will require replacing a floor or sidewalk. Areas that cannot be improved right away must be marked with a sign, tape or barricade to alert workers to the issue.



Potholes are a safety hazard, and must be filled or guarded to prevent trip and fall injuries.



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4. Create Floor Cleaning and Maintenance Procedures

Traction levels on many walking surfaces can sometimes be improved simply by changing cleaning routines.

A common mistake that facilities make is purchasing one kind of floor cleaner and expecting it to work well on multiple types of floor surfaces. Even though cleaners may be marketed as “multi-surface,” it is better to choose products specifically designed for the type of flooring where they will be used.

Using the wrong cleaner can cause multiple problems. It may leave slippery residues to build up on a floor that once had good traction. It can also strip away the elements that give the floor its traction, making them smooth and slippery.

Flooring manufacturers are a great source of information on cleaning products that will help maintain a floor’s surface. Likewise, floor cleaning chemical manufacturers are likely to have tested their products on a variety of surfaces and can recommend what will work best in a particular application.

Simply choosing the right chemicals is not enough, however, to ensure that traction will be maintained on any given floor. The written instructions for all chemicals used need to be followed each time a floor is cleaned. That means using the right amount of cleaner and the right cleaning products for each area, every time.

If one cup of a floor cleaner is good, two cups will be twice as good, right? Wrong. This not only wastes product, it can also create a floor safety hazard. Excess chemicals in a cleaning solution can leave slippery residues or may strip texture from a floor.

Another common problem is using water at the wrong temperature. Pay attention to cleaning instructions and appropriate water temperature to maximize the cleaner’s capabilities. Water, mops and other cleaning equipment should also be changed often. Water that is brown or gray, mops that are frayed or dirty and cleaning equipment with worn-out pads or parts can further damage floor surfaces.



Choosing the right cleaning products for your equipment will help maintain a floor’s surface and reduce slip hazards.



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5. Establish Footwear Guidelines

Proper footwear plays an important role in floor safety, which is why footwear guidelines that address expectations for all employees should be established. Office workers who enter slippery production areas in dress shoes are more prone to injury than employees who work in the area daily, are used to its conditions and are wearing proper footwear.

It is important to know what is making a floor slippery when selecting footwear for employees in production areas. Shoes designed to be slip-resistant in wet, outdoor conditions may not maintain their slip resistance on a shop floor coated with oily overspray. Likewise, shoes designed for restaurant workers dealing with food-based oils may be quickly degraded by industrial cutting oils.

Reputable footwear suppliers should be able to provide appropriate solutions for specific situations. They should also be able to assist with establishing a changeout schedule. Even the best footwear needs to be replaced from time to time, because a shoe's sole with 50 percent of its tread worn means that the shoe is twice as likely to contribute to a slip and fall injury as a new shoe or one with less wear.

Knowing whether to expect three months or six months out of a pair of safety shoes helps with budgeting expenses, and having a written plan for footwear replacement lets workers know that they are not expected to make a pair of shoes last forever.

For office workers, stocking slip-resistant shoe covers at the entrances to production areas may be a solution to help improve safety, and may be more viable than requiring everyone to wear safety shoes at all times. Proper signage can help remind office employees of the need for safety shoes (or covers) when entering production or other slippery areas.



Supply employees with the proper footwear for their work area to reduce the chance of slips, trips and falls.



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6. Implement Slip, Trip and Fall Prevention Controls

Rain and snowmelt in entrances can quickly turn an otherwise safe area into a skating rink. Highly polished surfaces — such as stone, tile, marble and vinyl — are especially slippery when wet.

Many facilities use mats or runners both inside and outside entrances to help remove water and dirt from peoples' shoes. For mats to be effective, they need to be maintained. This involves washing and/or vacuuming them regularly to make sure they remain capable of absorbing water and capturing dirt.

Entrance mats are notorious for buckling and creating trip hazards. Adhesive-backed floor mats prevent these problems and can be cleaned like traditional matting.

Whether adhesive-backed or not, entrance mats should be long enough for a person to take at least three to four steps on the mat before stepping off of it. When a person does step off the mat, their feet should be dry.

Transition areas are the locations where a floor surface changes. It may be from carpet to tile, wood to concrete, stone to vinyl or any other combination. When adjoining surfaces are similar, it's less likely a slip, trip or fall will occur at the transition area.

If cleaning and other surface preparations cannot be used to make transitions smoother, matting can sometimes be an alternative that helps make transitions less drastic and safer. Signage in transition areas can also be used to alert employees to sudden changes.



A high-traffic adhesive-backed floor mat in entrance areas will catch water and debris from employees' shoes.



Use a high-traffic adhesive-backed floor mat where you have carts rolling through.



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7. Use Containment and Absorbents in Areas with Regular Leaks and Drips

Cleaning up leaks and drips from machines is an important part of workers' daily operations. If ignored, regular leaks and drips can cause floor safety hazards when they run into walkways and other high-traffic areas.

Surround leaky machines with secondary containment berms or absorbent socks to keep the liquid in a confined area and from traveling to where someone could slip and get hurt.

Most leaks and drips can also be cleaned up with one-time-use absorbent mats and pads. For leaks and drips directly in walkways and other high-traffic areas, consider putting down an adhesive-backed floor mat that won't bunch or buckle when walked on or driven over.



Absorbent mat pads are a great way to control machine leaks.

8. Prepare for Spills

Environmental Protection Agency regulations require facilities to be prepared for spills. Stocking spill kits or drain covers in spill-prone areas provides workers with the resources they need to effectively handle incidental spills.

Spill kits and other response items are common in production areas, fluid dispensing and waste collection stations and loading docks. Spills can also happen in cafeterias, break rooms and coffee islands. Stocking these areas with adequate spill response supplies will encourage workers to clean up spills as they happen.



Keep a spill kit or supply of absorbents near spill-prone areas for fast cleanups.



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9. Use Appropriate Signage, Barricades and Lighting

Temporary safety items such as wet floor signs, barricade tape, traffic cones and other signage help workers to quickly identify areas that may be unusually slippery, and alert everyone to use increased caution in those areas. Like stocking paper towels in the cafeteria, making these items readily available encourages their use.

Placing warning signs or other barricades on wet floors helps everyone identify hazards. However, leaving signs out long after a floor is dry can cause people to disregard them, so ensure that plans include procedures or instructions for removing cones and barricades as soon as the hazard has passed.



Cones and signs alert workers to unsafe conditions.

It's also important to verify that lighting is adequate in all areas inside and outside the facility. Poor lighting contributes to floor safety issues and subsequent slips, trips and falls. It can also disguise or hide hazardous conditions. Local building codes often require a minimum level of lighting, with the value often being expressed in foot candles.

10. Train Employees About Floor Safety



Training is an important step in improving floor safety.

Replacing poor lighting, stocking spill response supplies and refining cleaning procedures are all great steps toward eliminating floor safety hazards at your facility and keeping employees safe. But if employees do not know the company is taking a stance on floor safety and about the improved procedures, hazards will still exist. This is why it's important to train employees about floor safety hazards and what their role is in preventing accidents.

Hold employee training sessions to expose and review floor safety hazards at your facility. These meetings will get everyone on the same page and your company that much closer to eliminating floor safety hazards altogether.



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Document Steps 1–10 for a Comprehensive Floor Safety Program

Evaluating risks and taking proactive steps to eliminate floor safety hazards is a proven way to minimize the chance of slip, trip or fall incidents injuring employees. A comprehensive floor safety program documents the tasks and procedures, such as those outlined in the above steps, that will be followed to maintain safe walking surfaces.



A well-documented floor safety program outlines specific tasks and procedures to minimize slip, trip and fall hazards.



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