



National Workers Compensation & Disability Program

www.Fit2wrk.com - 1-877-Fit-2WRK (1-877-348-2975) - referral@Fit2WRK.com



Slips and Falls in the Workplace

Education is the Key





Slips and Falls in the Workplace

Falls are consistently the leading cause of injury-producing accidents. They account for more than 1 million injuries each year in the United States.

According to OSHA, slips, trips and falls constitute the majority of workplace accidents. In 2002, 37% of workplace injuries were slips, trips and falls. Falls, fatal and nonfatal, are a serious safety concern in the workplace, taking 715 lives and causing 313,335 injuries involving a work absence every year.

1. Same level falls, like slips and trips, make up 65% of fall injuries.
2. Most slip, trip and fall incidents are preventable with general precautions and safety measures.
3. Falls can cause serious injuries such as severe head injuries, back injuries, paralysis, broken bones, sprains and strains to muscles and even death.
4. 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



www.Fit2wrk.com

Slips and Falls in the Workplace

How do falls happen?

Statistics show that the majority (60 percent) of falls happen on the same level resulting from slips and trips. The remaining 40 percent are falls from a height. This document will summarize information on "falls on the same level" (slips and trips). Falls from an elevation, such as falls from ladders, roofs, down stairs or from jumping to a lower level, etc., will be discussed in another document since each type of fall requires different features in a fall prevention program.

Slips

Slips happen where there is too little friction or traction between the footwear and the walking surface. Common causes of slips are:

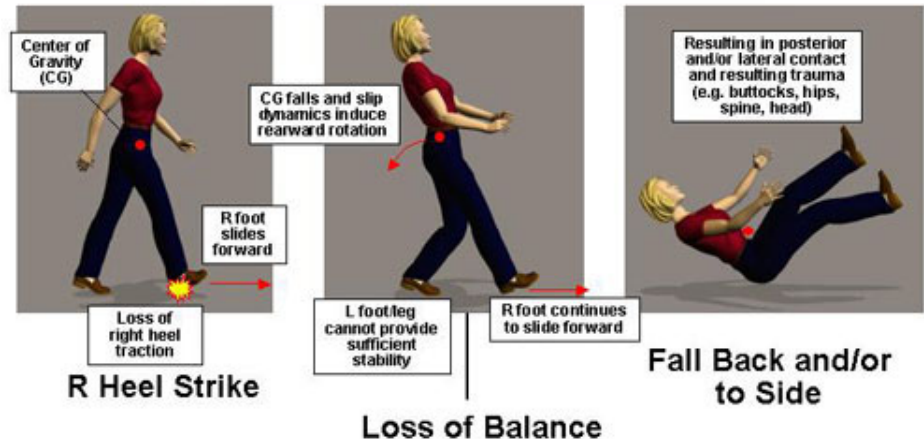
- wet or oily surfaces,
- occasional spills,
- weather hazards,
- loose, unanchored rugs or mats, and flooring or other walking surfaces that do not have same degree of traction in all areas.

Trips

Trips happen when your foot collides (strikes, hits) an object causing you to lose the balance and, eventually fall. Common causes of tripping are:

- obstructed view,
- poor lighting,
- clutter in your way,
- wrinkled carpeting,
- uncovered cables,
- bottom drawers not being closed, and
- uneven (steps, thresholds) walking surfaces.

Slip and Fall Dynamics



Slips and Falls in the Workplace

Slip

A slip occurs when there is too little traction or friction between the shoe and walking surface.



Trip

A trip occurs when a person's foot contacts an object in their way or drops to a lower level unexpectedly, causing them to be thrown off-balance.



Fall

A fall occurs when you are too far off balance.



Slips and Falls in the Workplace

There are two types of falls:

Same Level

When you fall to the surface you are walking on. Same level falls are more common and are usually caused by slips and trips.



From Elevation

When you fall to a level below the one you are walking on. Falls from elevation are more severe and are usually caused by ladders, stairs, platforms and loading docks.



Slips and Falls in the Workplace

OSHA Regulations

There are quite a few OSHA standards that apply to slip, trip and fall prevention. [29 CFR 1910 Subpart D](#) covers walking-working surfaces for general industry.

[29 CFR 1910.22 "General requirements"](#) specifies that:

- all areas of employment should be kept clean and sanitary
- the floors shall be kept clean and dry and where wet processes used, they shall be kept as dry as practical
- aisles and passageways shall be kept clear and in good repair
- permanent aisles and passageways shall be marked

[29 CFR 1910.141 \(a\)\(3\) "Sanitation"](#) further specifies that:

- the floor of every workroom shall remain as dry as practical
- if wet processes are used, proper drainage and dry standing places (mats, platforms) shall be provided

[29 CFR 1910.23 "Guarding floor and wall openings and holes"](#) states that:

- every stairway floor opening shall be guarded by a standard railing constructed in accordance with [paragraph \(e\) of 1910.23](#)
- every ladder floor opening or platform shall be guarded with a standard toeboard on all exposed sides (except at the entrance to opening)
- any floor hole that could be walked into must have standard railing or toeboard surrounding it
- for infrequently used floor holes, such as trapdoors, a cover that is of standard strength and construction shall be used; when the cover is not in place, the opening shall be constantly attended by someone or shall be protected by removable standard railings

OSHA's regulations regarding ladders in general industry can be found in standards:

[29 CFR 1910.25 - Portable wood ladders](#)
[29 CFR 1910.26 - Portable metal ladders](#)
[29 CFR 1910.27 - Fixed ladders](#)

OSHA's regulations regarding stairways in general industry can be found in standards:

[29 CFR 1910.21\(b\)\(8\) - Walking-Working Surfaces: Definitions](#)
[29 CFR 1910.24 - Fixed industrial stairs](#)



Slips and Falls in the Workplace

Prevention of Slips, Trips & Falls

Slips & Trips

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.

Some conditions that create **slip hazards** include:

- [Housekeeping](#)
- [Wet or slippery surfaces](#)
- [Footwear](#)
- [Poor lighting](#)
- [Personal factors](#)
- [Environmental factors](#)
- [Task factors](#)

Some conditions that create **trip hazards** include:

- [Housekeeping](#)
- [Change in elevation](#)
- [Poor lighting](#)
- [Footwear](#)
- [Personal factors](#)
- [Environmental factors](#)
- [Task factors](#)



Slips and Falls in the Workplace

Falls from elevation

Falls from elevated surfaces are less common, but more severe than falls occurring on the same level, such as slips and trips. There are numerous "risk areas" for falls, ranging in elevation from uneven surfaces, such as curbs, to ramps or platforms. Many of the accidents caused at these sites are due to lack of proper fall protection or inattentiveness while working or using the surface.

Some common conditions that create **fall hazards** include:

- [Stairs](#)
- [Uneven surfaces](#)
- [Ladders](#)



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.

Slips and Falls in the Workplace

Housekeeping

Practicing good housekeeping may be the most important measure in preventing slip and trip incidents. Having a clean and organized working environment will not only help reduce the risk of injuries from these types of incidents, it will also help employees work more efficiently and increase employee morale — nobody wants to work in a cluttered, dirty and potentially hazardous environment.

Although housekeeping may be delegated to custodial staff in most work environments, it is everyone's job to keep their workplace orderly. Developing a housekeeping program can be done in three easy steps:

1. **Plan ahead:** know what needs to be done, when it should be done and what the workspace should look like when you're finished picking up.
2. **Assign responsibilities:** of course, individuals should be responsible to clean up after him or herself, but assigning responsibilities for shared spaces may be helpful to ensure that housekeeping duties are completed.
3. **Implement the program:** make housekeeping duties a part of the daily routine.

Following this simple rule will reduce the risk of slip and trip injuries:

**If you drop it, pick it up.
If you spill it, wipe it up.
Look where you are going,
and go where you are looking.**



*Cluttered office space
can create hazards*

Slips and Falls in the Workplace

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. Food preparation areas and residential dorm bathrooms and kitchens are also at high risk for slippery surfaces.

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



Use anti-slip mats.



Display "Wet Floor" signs.

Slips and Falls in the Workplace

Footwear



Slip resistant safety shoes

- carpenters
- welders
- plumbers
- maintenance mechanics
- grounds workers operating heavy machinery or tools
- power plant maintenance workers.



Old shoes and high heels may increase the risk of slips, trips and falls



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](#). Jobs that are likely to require safety shoes include, but are not limited to:

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.

For more information on protective footwear:
[Personal Protective Equipment](#) (OSHA)
[Safety Footwear](#) (CCOHS)

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.

Slips and Falls in the Workplace

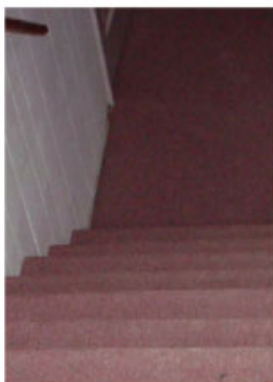


Poor Lighting

Inadequate lighting can hide slip, trip and fall hazards and is associated with an increase in accidents.

Maintaining appropriate lighting in workplaces, public buildings and at home is an important factor in reducing accidents. Here are some ways that can prevent and control poor lighting conditions in various environments:

- Have light switches accessible, preferably near entrances to rooms
- Keep a flashlight in a central location to use in case of a power outage emergency
- If a worker faces a window, shades can be used to reduce glare
- Move slowly where light is dim
- Diffuse light to reduce glare
- Use a light-colored, matte finish on walls, ceilings and floors to reduce glare
- Perform regular maintenance on lighting systems to reduce flickering or burnt-out lights



Poor lighting in stairwells and lack of accessible light switches can create a major hazard

Changes in Elevation

Changes in elevation are a major source of trip accidents. Experts estimate that even a change in walking surface of $\frac{1}{4}$ " - $\frac{1}{2}$ " 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



Even a small crack in a sidewalk can be a hazard.

Slips and Falls in the Workplace

Personal Factors

There are numerous personal factors that may increase an individual's risk of a slip, trip or fall. These may include:

- Age
- Body shape or mass
- Gait dynamics (the particular way an individual walks)
- Physical condition
- Perception (an individual's ability to see and their awareness of the surroundings)
- Psychological and psychosocial factors (stress and distractions)



An individual's gait, or how they walk, can affect the risk of a slip, trip and fall incident

Much like being a “defensive driver” to avoid accidents, one must also be a “defensive walker” to avoid slips, trips and falls. Here are some simple ways to alter your behavior and avoid hazards:

- Watch where you are going while walking—pay attention and look for slip, trip and fall hazards
- Walk, don't run—make sure to give yourself enough time to get where you're going
- Don't engage in activities that may be distracting—for example, reading or writing while walking
- Use handrails while climbing or descending stairs
- Check that your walkway is clear and that your view is not blocked before you lift anything
- Don't carry a load that you can't see over or around while carrying
- Walk carefully and slowly when you transition from one walking surface to another
- Slow down and take small steps if the walking surface is cluttered, narrow, uneven, slippery or at an angle
- Wear stable shoes with non-slip soles

Slips and Falls in the Workplace

Environmental Factors

Some examples of environmental factors are:

- Temperature and humidity
- Precipitation
- Type and volume of traffic in walking area
- Walking surface
- Lighting conditions in walking area

Because many of these conditions are out of an individual's control, wearing the right shoes for weather and walking conditions and walking cautiously will help prevent accidents.



Weather conditions such as ice, snow or rain can increase the risk of an accident.



Pushing an object, such as a wheelbarrow can increase the risk of a slip, trip or fall incident.

Task Factors

Task factors are characteristics of the work performed that can affect the risk of slip, trips and fall hazards. For example:

- Pushing or pulling objects
- Shape and weight of an object carried
- Change in direction while walking

Although these factors, like environmental ones, sometimes cannot be altered, you can be cautious while transporting objects:

- Limit the amount of objects that you carry
- Ensure the things that you are carrying, pushing or pulling do not block your view
- Carry small loads close to your body, maintaining your center of balance
- Make sure you have a clear path to walk on before beginning tasks

Slips and Falls in the Workplace



Highlighting stair edges helps decrease the risk of accidents.



When carrying objects on steps, be sure you are able to see where you are going and can hold onto the handrail.

Stairs

Falls are the second leading cause of fatal accidents (only after automobile accidents), and of those falls, nearly 50% occur on stairs.

Keeping stairs in good repair is essential to prevent accidents. Make sure that stairways have secure handrails and guardrails, even surfaces, even tread heights and are free of deteriorating coverings such as fraying carpets.

To prevent an accident, awareness and prevention are key—here are some simply ways to prevent a fall incident on stairways:

- Whether going up or down stairs, always use the handrail
- Make sure stairways are well lit, with on/off switches at the top and bottom
- Make sure stairways are clear of any obstacles
- Make sure that the edge of the bottom stair is noticeable—if the stairs and floor have the same carpeting or same paint color, it may not be obvious where the stairs end. Painting the edge white or using adhesive caution tape will help differentiate the stairs from the floor
- If you are wearing footwear such as high heels, slippers or sandals take extra caution while going up and down stairs
- If throw rugs are positioned at the top or bottom of stairways, make sure they are secured with a skid-resistant backing
- Routinely check stairs for loose or worn carpeting and make repairs when necessary
- Keep outdoor stairways free of ice, snow or water accumulation
- When carrying objects up and down steps, be sure you are able to see where you are stepping and can hold onto the handrail

The chances of fall accidents in stairways increases with inattention, illness, fatigue and haste, so take care when ascending and descending stairways.

OSHA's regulations regarding stairways in general industry can be found in standards:

[29 CFR 1910.21\(b\)\(8\) - Walking-Working Surfaces: Definitions](#)

[29 CFR 1910.24 - Fixed industrial stairs](#)

For more information on stair safety:

[Stairways and Ladders](#) (OSHA)

[OHS Answers: Stairways](#) (CCOHS)



Slips and Falls in the Workplace

Ladders

There are a few hazards associated with ladder use:

- Ladder structure may deteriorate
- Ladders may tip sideways, backwards and slip at the bottom
- Ladders not fully opened or locked may cause the ladder to "walk," twist or close up when a load is applied to the ladder
- Using metal ladders around electricity
- Using fixed ladders without fall protection or cages

Here are some basic rules you should follow when using a ladder:

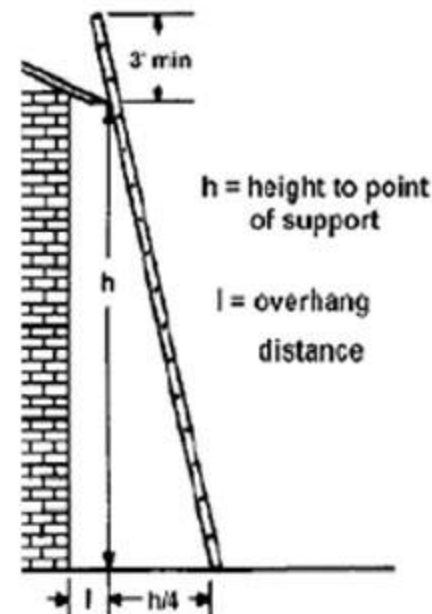
- Set up ladders or step stools on firm, solid ground
- Always face the ladder when ascending or descending
- Choose the right ladder length for the job
- Be sure shoes are not muddy, greasy or slippery before climbing
- Never lean too far to the sides, keep your hips within the side rails
- Maintain a "three-point contact" by keeping two hands and one foot or two feet and one hand on the ladder at all times
- Do not climb higher than the third rung from the top on straight or extension ladders, or the second tread from the top on stepladders
- Never jump off a ladder—always dismount from the bottom rung
- Inspect ladders before using
- If the ladder is set up in passageways or areas with traffic, secure the ladder and block off the area
- Do not set a ladder or step stool on other objects, such as tables, boxes or scaffolding
- Never move a ladder when someone is on it
- Do not tie ladders together, unless they are manufactured to be used that way
- Never leave an unsecured ladder set-up unattended
- Hold onto a ladder with both hands when going up or down—raise or lower needed materials with a rope before ascending or descending a ladder
- Keep ladders at least 10 feet away from power lines—even wet or dirty wood ladders can conduct electricity
- Use a 4-to-1 ratio when setting up a single or extension ladder— for example: place a 12 foot ladder so that the bottom is 3 feet away from the object the ladder is leaning against
- Any damaged ladders should be removed from the worksite for repair or to be discarded, until they can be, label or tag any ladders that have flaws accordingly—"Dangerous. Do not use."

OSHA's regulations regarding ladders in general industry can be found in standards:

[29 CFR 1910.25 - Portable wood ladders](#)

[29 CFR 1910.26 - Portable metal ladders](#)

[29 CFR 1910.27 - Fixed ladders](#)



Use a 4-to-1 ratio when setting up a single or extension ladder.



Damaged or deteriorated ladders increase the risk for a fall incident.

Slips and Falls in the Workplace



What can you do to avoid falling at work?

It is important remembering that safety is everybody business. However, it is employers' responsibility to provide safe work environment for all employees. Employees can improve their own safety too.

You can reduce the risk of slipping on wet flooring by:

taking your time and paying attention to where you are going,
adjusting your stride to a pace that is suitable for the walking surface and the tasks you are doing,
walking with the feet pointed slightly outward, and
making wide turns at corners.

You can reduce the risk of tripping by:

always using installed light sources that provide sufficient light for your tasks or,
using a flashlight if you enter a dark room where there is no light, and
ensuring that things you are carrying or pushing do not prevent you from seeing any obstructions, spills, etc.





National Workers Compensation & Disability Program

www.Fit2wrk.com

1-877-Fit-2WRK (1-877-348-2975)

referral@Fit2WRK.com

**Call & Experience our integrated approach
towards the continuum of care.**