



Slip Resistant Footwear

Slip and Fall Prevention



A major contributor to slip and fall incidents is footwear soles that are not appropriate for walking surface hazards. For example, walking on ice in high heels or wearing leather soled shoes on wet surfaces. In fact, there are specific shoe or boot sole materials designed to provide better traction on various indoor and outdoor contaminants such as water, oil/grease and snow/ice. Property owners cannot control what types of footwear are worn by the general public, but they can implement a slip resistant footwear program for their employees to control Workers' Compensation related slips and falls. CNA does not endorse or recommend any specific brand, vendor or supplier of slip resistant footwear. Any lists contained in this guide are not all-inclusive and are only to be considered a source of guidance.

Where Do Slips and Falls Happen?

Slips and falls can occur anywhere. Below are some operations that have a higher risk of a slip and fall:

- Healthcare
- Food Services (kitchens, near buffets and beverage counters, and freezer and cooler entrances)
- Real Estate (tiled floors and steps)
- Hotels
- Laboratories
- Data Centers
- Manufacturing
- Grocery and Convenience Stores
- Maintenance Shops
- Trucking
- Construction
- Industrial mats must be slip resistant when exposed to oils and lubricants. When a mat is coated with oils or lubricants it should be replaced and cleaned.

Slip Resistant Footwear as Personal Protective Equipment

Employers are required under OSHA 1910.132 General Requirements to assess the workplace to determine if hazards are present, or likely to be present, which necessitates personal protective equipment (PPE). If a hazard such as wet or oily floors is present, the employer is to select the appropriate PPE. In this case, that may be a particular type of slip resistant footwear. Be aware that under this requirement, the employer may be responsible for paying for the footwear as PPE if the shoes/boots are not worn outside the job.

Footwear for slippery conditions may also need to comply with OSHA requirements for protective footwear if employees are exposed to other hazards such as electrical, punctures or impact from falling or rolling objects. OSHA 1910.136 Foot Protection outlines that criterion.

Key Takeaways

Slip Resistant Footwear

- Leather soled shoes should be avoided on all wet surfaces.
- No footwear is slip proof. Slip resistant shoes should be worn as part of an overall slip and fall prevention program.
- Footwear must be appropriate for the specific walking surface hazard.
- Corporate-required slip resistant footwear as personal protective equipment is effective in controlling workplace slips and falls.
- Slip resistant footwear should be high priority for all employees who are working in an icy environment.

Determining the Proper Type of Footwear

Not all "slip resistant" shoes are appropriate for all conditions. It is necessary to investigate the various types and brands available for specific conditions, and it is important to have a formal selection plan in place.

- Get feedback from workers regarding their work environment and tasks.
- Identify surfaces and potential contaminants (water, oil, food, ice, dust, etc.) workers will encounter. Always consider both indoors and outdoors.
- Considerations for selection:
 - Comfort
 - Cost
 - Appearance
 - Floor surface/work environment
- Any footwear program should take into account the workers' desire to use the shoes/boots. Comfort, cost and appearance all play a role in the program's success. With this in mind, any program should offer a variety of styles and price ranges, allowing workers to select what they need.

- Pilot a few models by having a test group of workers wear them. A test period should be long enough to allow them to make a good determination of the comfort and overall functionality of the shoes/boots on hazardous surfaces. Feedback from the group should be gathered.
- Model options should be made available, as one shoe/boot may not be pleasing and functional for all workers. Options in selection can improve the effectiveness of the slip resistant footwear program.
- Follow-up is necessary to determine if the footwear is being properly used, remains appropriate for walking surface conditions, is maintained and to confirm if there were any slip, trip or fall incidents while wearing the footwear.¹

While there are no uniform standards or rating for slip resistance, some independent studies have been conducted to provide consumers with a reasonable slip resistance rating of various brands. These studies include casual and work footwear that are used when walking on ice in harsh winter conditions. One such location where footwear ratings can be found is www.ratemytreads.com.

The Health and Safety Executive (HSE), a European clearinghouse for research policies and publications, has developed a GRIP rating scheme for all footwear. This will help users identify suitable slip resistant footwear for any situation. All testing is in compliance with European standards for mechanical testing of footwear. The rating scheme can be found at www.hsl.gov.uk/publications-and-products/grip/grip-ratings. Any footwear can claim to be "slip resistant" so it is important to find footwear that has been tested to the ASTM F-2913 (Whole Shoe) test.

When non-slip resistant footwear is worn in slippery conditions, pull-over type shoe covers (overshoes) can be used to provide improved slip resistance. Medical/laboratories can also use disposable sanitary shoe covers that are slip rated.

A wide variety of quality slip resistant shoes and boots can be found through a simple internet search. While these products will provide a level of traction enhancement, the suitability of the shoe to a particular walking surface contaminate may not be known. Regardless, some added slip resistance is better than none. See Figure 1.



Figure 1

Footwear for Indoor Walking Surfaces

Slip resistant footwear, along with proper **floor cleaning and maintenance**, is a critical slip and fall program component.

Proper footwear should be prescribed for the specific condition a person may walk on.

This applies to any indoor walking surface that can become slippery when wet, greasy or have any other potentially slick contaminate.

Selecting Slip Resistant Footwear for Snow and Ice

Most outdoor slips and falls are influenced by snow and ice during winter weather. Parking lots and sidewalks are the primary locations of slips and falls. Outside of normal snow maintenance practices, slip resistant footwear is the next step to preventing a slip and fall.

Human walking mechanics inherently contribute to slips and falls on ice. A normal walking gait places the heel of the lead foot on the ice while the trailing foot is simultaneously pushing off of the ice with the toes. If either foot slips, the person loses their center of gravity and is at risk of falling. However, if the sole of the shoe provides a higher level of traction, the initial slip may not occur.

When selecting winter footwear, specifically for walking on snow and ice, consider the following characteristics:

- Entire sole slip resistant, not just heel or toes
- Rubber is the suggested material for walking on ice
- Deep tread for gripping snow and ice
- Wide and low heel
- Abrasive traction enhancers in the soles. See Figure 2



Figure 2

While a company cannot control the types of footwear the general public wears, it can control what their employees wear. Due to the high frequency and severity of slips and falls in parking lots, a business should implement a slip resistance footwear program for all employees, including office personnel, who typically do not wear appropriate shoes/boots for ice.

Truck drivers are not often considered in slip and fall prevention programs and therefore have the highest potential for a disabling slip on ice. Consider truck drivers as high risk for falls as they have to climb in and out of the cabs and on the ice-covered beds of their trucks.

An inexpensive traction device such as snow cleats, shoe chains, crampons, ice grips, etc. that pull over the

shoe should be provided to all employees to protect them on their trek across the frozen parking lot. See Figure 3.



Figure 3

Construction workers encounter a wide variety of walking surface hazards to consider, including mud, slick inclines, uneven surfaces, wet polished concrete, metal stairs and ladders. With such hazards, a good multi-purpose boot is necessary to prevent slips and falls.

A good boot should have:

- Slip resistant outsoles for oil and water.
- Deep tread to channel out water and mud and grip snow.



Figure 4

Slip Resistant Shoe Programs

There are a wide range of vendors who can provide slip resistant footwear and help guide you to the appropriate sole for a walking surface. Figure 5.

The two types of corporate programs are:

- **Company Paid** – Companies pay for the entire cost of the employees' slip resistant footwear.
- **Company Subsidized** – Company and employees share the cost of the footwear.

Typical benefits that vendors offer as part of corporate programs include, but are not limited to:

- Variety of brands and styles for employee satisfaction
- Corporate pricing discounts
- Slip and fall indemnity
- Online purchasing or shoe mobiles (Shoe trucks)

Notable programs are (Not CNA endorsed):

- Shoes For Crews
- SR Max
- Hytest Safety Footwear

Mobile Shoe Vendors

Another footwear program option for companies is mobile shoe vendors. A truck arrives at the company with a variety of footwear options. Employees can visit the truck and get the footwear they need. One disadvantage is the number of options may be less than those found online.

Notable mobile shoe services are (Not CNA endorsed):

- Shoes for Crews- Mobile Shoe Truck Service
- SR Max Shoe mobiles
- Saf-Gard Shoe mobiles
- Safeshoes.com
- Hytest Safety Footwear



Figure 5

Learn more about [managing slip and fall risks](https://cna.com/riskcontrol) at cna.com/riskcontrol (US) or cnacanada.ca (Canada).