

SLIPS, TRIPS AND FALLS:

ADVANCING YOUR SAFETY PROGRAM

The workplace guide
to understanding
implementation and impact



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John understands what just one slip can mean for a facility. As an environmental health and safety manager in the manufacturing industry, he's seen not one, not two, but three accidents in his workplace this year that could have been avoided – if only the right prevention methods were in place.

This slips, trips and falls guidebook was created to not only give you a better explanation of what this common workplace safety offender is all about, but to dive deeper into exactly what causes these accidents, what you can do to avoid them and the steps to take when faced with an occurrence at your own facility.

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CHAPTER 1

WHAT YOU NEED TO KNOW ABOUT SLIPS, TRIPS AND FALLS

Slip, trip and fall occurrences are no stranger to manufacturing facilities. But how much do you really know about these incidents and the regulations that are in place to keep your workplace safer?





What exactly are we talking about with slips, trips and falls, you ask?

Let's break it down:

SLIP: Too little friction or traction between feet and walking/working surface, resulting in loss of balance.

TRIP: When a foot or lower leg hits an object and the upper body continues to move, or when stepping down to a lower surface, resulting in a loss of balance.

FALL: Too far off center of balance, resulting in a descent to the floor, into or against an object, or to a surface at a lower level than original surface.¹

These incidents are often caused by slippery, irregular or uneven surfaces, obstacles on the floor, or uncovered/unidentified hazard areas.





Slips, trips and falls are a dangerous and costly workplace occurrence that can be avoided.

In fact, there are some industry regulations currently in place that apply to these events:

OSHA 29 CFR 1910.22 – Walking/Working Surfaces

This standard supports worker safety by keeping workplaces clean and safe from hazards, including:

- Keeping facilities clean, orderly and dry
- Providing draining, platforms, mats or other dry standing places when wet processes are used
- Keeping floors and workplaces free from protruding nails, splinters, holes and loose boards
- Keeping aisles clear and in good repair
- Permanently marking aisles and passageways
- Using covers and guardrails to protect workers from open pits, tanks, vats, etc.
- Marking loads with approved plates and maintaining safe load weights

OSHA 29 CFR 1910.36 & 37 – Means of Egress

This standard supports the safety of exit routes. Some of the key elements that apply to slips, trips and fall in this standard include:

- The outdoor exit route must have guardrails to protect unenclosed sides if a fall hazard exists
- The outdoor exit route must be reasonably straight and have smooth, solid, substantially level walkways
- The outdoor exit route must be covered if snow or ice is likely to accumulate along the route, unless the employer can demonstrate that any snow or ice accumulation will be removed before it presents a slipping hazard



ANSI A1264.2-2012 – Provision for the Slip Resistance on Walking/Working Surfaces

This standard sets forth provisions for protecting persons where there is potential for slips and falls as a result of surface characteristics or conditions. It requires:

- Consideration of the use of slip resistant footwear to maximize traction
- Mats and runners to be used in areas where individuals may encounter slippery contaminants or foreign materials on the floor surface
- A housekeeping program, including appropriate cleaning and maintenance procedures and employee training, to be implemented to maintain safe walking surfaces
- Warnings provided where a slip/fall hazard has been identified

CHAPTER 2

THE SAFETY, PRODUCTIVITY AND FINANCIAL IMPACTS OF SLIPS, TRIPS AND FALLS

When you need operations to run safely and efficiently, a slip, trip or fall is the last thing you want to happen. Just what can a slip, trip or fall mean for you and your facility?



The Costly Effects of Slips, Trips and Falls

It's amazing what one small drip or one misplaced tool can lead to. When it comes to safety and compliance, a slip, trip or fall can lead to serious injuries, a variety of citations and costs, and an overall impact on the running of your facility.

Let's explore the impact an incident can have in three key areas:





Safety Impact

Safety is the number one concern surrounding slip, trip and fall hazards. That's because these hazards account for the majority of industry accidents, ranging in severity, from minor pain to temporary or permanent disability, and even death.

DID YOU KNOW?

Slips, trips and falls...

... are one of the leading causes of unintentional injuries in the U.S., accounting for approximately **8.9 million emergency room visits**²

... account for **15% of all accidental deaths**, the second leading cause behind motor vehicles³

... lead to over **17% of all disabling occupational injuries**⁴

... **could be prevented** with the right precautions



Productivity Impact

When an incident occurs and a worker experiences an injury, this could lead to a significant loss in productivity that impacts your business. That's because the out-of-work days of an experienced worker means a less experienced or temporary worker would need to step in.

DID YOU KNOW?

Slips, trips and falls lead to...

... **1 in 6** lost time injuries

... **95 million workdays** per year lost ⁵

... an average of **11 days away from work** ⁶



Financial Impact

When a slip, trip or fall happens, it can lead to thousands of dollars in expenses for both employers and employees.

- Employers face lost productivity, increased industrial insurance premiums, regulatory fines and costs associated with training a replacement worker
- Workers lose wages due to out-of-work days and face the possibility of paying out of pocket medical expenses

DID YOU KNOW?

Slips, trips and falls...

... Cost an average of **\$20,000 per incident**⁷

CHAPTER 3

WHERE AND HOW SLIPS, TRIPS AND FALLS OCCUR

Slips, trips and falls can occur when
and where you least expect it.





While the majority of workplaces make efforts to reduce slips, trips and fall hazards, only **2.2% have completely eliminated them.**

According to a survey of 1,294 safety professionals, 95% cited one of 3 main causes:

54% human factors,

25% wet/slippery surfaces and

16% housekeeping issues.⁸

When you need to know how to prevent slips, trips and falls in your facility, you first need to know where and why they commonly occur.



Take a minute to think about your facility. Think about all of the areas that could potentially lead to a slip, trip or fall — whether it's near machinery, in the break room, in a cluttered back hallway or even in the parking lot. To get you thinking, take a look at this list of potential hazards:

- ✓ Overspray from a wet process
- ✓ Spill from a drum or container
- ✓ Wet floor from recent moping
- ✓ Drips and condensation from pipes or the roof
- ✓ Uneven flooring/ unexpected step
- ✓ Leaks or drips around machinery
- ✓ Liquid tracked onto stairs
- ✓ Leak from a trash can
- ✓ Drips around sink after washing hands
- ✓ Beverage spilled on the floor
- ✓ A misplaced object or tool on the floor
- ✓ Damp shoes on a slick surface after walking in from the rain
- ✓ Uncovered cords, hoses, cables or wires
- ✓ Ice in the parking lot
- ✓ Unsafe scaffolding or ladders
- ✓ Dust from milling, cutting or sanding
- ✓ Poor lighting leading to the inability to see trip hazards



Mistakes that Lead to Slips, Trips and Falls

A person takes an average of **8,000 steps in a day**, but it just takes 1 step to cause a serious injury. ⁹

It's that easy to have an accident in the workplace, especially when the right precautions aren't taken. Of course, anyone can make a mistake, but now that you have an idea of the areas in your workplace that could cause slip, trip or fall hazards, let's go over some of the most common mistakes:

Employer Mistakes

- ✗ Not providing adequate warnings of slip, trip and fall hazards
- ✗ Ineffective maintenance for flooring problems
- ✗ Having the wrong floor for the work environment
- ✗ Inadequate training around workplace hazards

Employee Mistakes

- ✗ Not cleaning up a spill or mess immediately
- ✗ Not being conscious of your surroundings
- ✗ Leaving tools or items in common walkways
- ✗ Wearing the wrong footwear for your work environment

CHAPTER 4

10 STEPS TO PREVENT SLIPS, TRIPS AND FALLS

When the safety of your employees is in your hands – and you need to send them home safely every day – you need a safety program you can trust. These 10 steps can guide you on the ways to preventing slips, trips and falls in your facility.



You know all too well what one glitch in your safety program could lead to. We'll walk you through the elements that you should consider when working towards a safer and more compliant workplace by preventing slips, trips and falls.

These 10 steps include:

1. Assess Your Workplace
2. Mark Aisles and Passageways
3. Provide Traction on Slippery Surfaces
4. Improve Stair Safety
5. Mark Emergency Evacuation Routes
6. Post Safety Signs and Labels
7. Warn of Temporary Hazards
8. Inspect Scaffolds and Ladders
9. Control and Clean Oil and Spills
10. Train Employees





STEP 1

Assess Your Workplace

Know Your Workplace

Effective workplace safety starts with knowing your workplace, and knowing what steps to take to improve working conditions. Take the time to assess your facility and look into past slip, trip and fall incidents by type and location. This will help you uncover problem areas.

Keep it Cleaner

Remember that a clean and clutter-free facility is a safer facility. With this in mind, review your housekeeping processes and determine if certain areas need additional attention. For example, if a leaking machine is leading to a slip risk, get the right absorbent materials and warning signs in place to keep the location clean and draw attention to the risk.



Not sure where to start when you need to evaluate your facility? Seek an on-site assessment from a third party. With an outsider's perspective, you can identify hazards you might have previously overlooked and gain insight in developing an improved safety program.

STEP 2

Mark Aisles and Passageways

Keep workers on the right path with visual cues. Floor marking tape can be used to identify passageways, equipment and storage areas, hazardous flooring and forklift traffic. By marking off obstacles in aisles and pathways, employees can more easily and safely navigate a clear path.

While several OSHA regulations dictate that permanent aisles and passageways must be clearly marked, there are no current government-mandated or even widely accepted industry standards that recommend what colors to use when marking floors. Here is a useful guideline to help you establish floor marking consistency in your workplace:

Color		Area
Yellow		Aisle ways, traffic lanes and work cells
White		Equipment and fixtures not otherwise color coded (workstations, carts, floor stand displays, racks, etc.)
Blue, Green and/or Black		Materials and components, including raw materials, work-in-progress and finished goods
Orange		Materials or products held for inspection
Red		Defects, scrap, rework and red tag areas
Red & White		Areas to be kept clear for safety/compliance reasons (areas in front of electrical panels, firefighting equipment and safety equipment, such as eyewash stations, safety showers and first aid stations)
Black & White		Areas to be kept clear for operational purposes (not related to safety and compliance)
Black & Yellow		Areas that may expose employees to special physical or health hazards



STEP 3

Provide Traction on Slippery Surfaces

Slip free is the way to be. Keeping your feet firmly on the floor means having effective traction and taking the right steps to eliminate slippery surfaces.

To prevent injuries, make sure:

- Floors are clean and dry, whenever possible
- Stairs, landing areas and hazardous slip areas have anti-slip tape or material on them that withstands grease and oil
- The right floor materials are used in the right areas, based on slip hazards. That means using mats, absorbents and anti-slip flooring when needed





STEP 4

Improve Stair Safety

Since stairs are one of the most common areas in a workplace for a slip, trip or fall to occur, you need to take additional measures to keep stairways safe.

That means:

- All treads should be reasonably slip-resistant
- Stair nosing should have a non-slip finish
- Anti-skid cleats are used to mark stairs and improve safety
- Stairways are kept clean and dry (of course)





STEP 5

Mark Emergency Evacuation Routes

It's one thing to have a safe facility under standard working conditions, but when it comes to the potentially dim-light and smoky conditions of an emergency, you should be prepared.

When an emergency occurs, employees need to be able to quickly and safely exit the building, with enough visibility that slips, trips and falls can be avoided. That means clearly marking exit signs, emergency egress signs and a path towards the exit. Glow-in-the-dark floor and stair markings and directional signs can help lead the way for safer evacuation in unexpected conditions.



STEP 6

Post Safety Signs and Labels

The first line of defense in protecting workers against slips, trips and falls is putting the right signs in the right places. With warning signs at the point of need, you can tell workers at-a-glance of any nearby hazards, including equipment leaks, uneven surfaces and other potential obstacles. Effective signage includes a clear header, bright colors, bold text, languages aligning with workforce needs and intuitive infographics.

ANSI Signage

Under OSHA's November 2013 update, users can now use either the latest American National Standard Institute (ANSI) standard from 2011 (ANSI Z535.1, Z535.2 & Z535.5) or the previous standard from 1967-1968. The ANSI Z535 signs allow for clearer messages with a descriptive header, a legend containing the hazard and a visual pictogram to help convey the safety message.



STEP 7

Warn of Temporary Hazards

While workplace signs and labels are a more permanent solution to identify slip hazards, sometimes you need a more temporary option. When there's a short-term hazard due to maintenance, housekeeping or a spill, it can be marked with cautionary floor stands, barricade tape, and warning posts and chains. That way you can easily put these signs into place when needed, and remove them when the area no longer poses a threat.





STEP 8

Inspect Scaffolding and Ladders

While 60% of accidents happen on same-level surfaces, **40% occur from elevation.**¹⁰ With this stat in mind, the next step in keeping your workplace safe is inspecting the elevated equipment that is used in your facility: scaffolding and ladders.

Establish a standard at your workplace for frequently inspecting scaffolds and ladders for damage, faults and wear. This should include the use of scaffolding tags and inspection tags to mark inspection dates and the authorized employee who performed it, as well as the next due inspection date.



STEP 9

Control and Clean Oil and Spills

While keeping your floors clean and dry is an essential step in preventing slips, there's no denying that leaks, drips and spills are common occurrences in a workplace. When faced with oversprays that coat surfaces with oily film, slow drips from machinery or a spilled cleaning chemical, you need a process for immediately detecting, assessing and correcting all types of spills.

Having the right absorbent on hand can help you tackle that spill quicker and more effectively. Absorbent products include pads, rolls, SOCs, pillows, mats, rugs and kits designed to meet the ranging durability, absorbency and size needs of potential leaks, drips and spills in your facility.



DID YOU KNOW?

The overall cost of using laundered towels is 2-4 times higher than using polypropylene-based absorbents. Consider what option fits your needs.





Here's some spill characteristics to keep in mind when choosing the right absorbent:

✓ Check product type

Are you using pads for a leak that a SOC can contain?

Are you using the right kind of material?

- **Universal absorbents:** All-purpose cleaning products that can be used to absorb coolants, solvents, chemicals, and oil-based and water-based fluids
- **Oil-only absorbents:** Absorbents designed to float indefinitely and repel water, while absorbing hydraulic, motor and cooking oil, brake fluid, turpentine, and other oil-based fluids
- **Chemical absorbents:** Brightly colored products designed to absorb aggressive chemicals. The bright hue aids in quick disposal by drawing attention to hazardous waste

✓ Check durability

Are your absorbents falling apart due to heavy traffic?

Get the right durability based on ply, coverstock and material to align with the job. For smaller spills, a lightweight product will do. But when using pads and rolls for high-traffic areas, heavy weight products with durable spunbond coverstocks are a better alternative.

✓ Check absorbency

Are you using your absorbents to capacity?

If you choose an absorbent that soaks up more than you need, you may be paying too much, but if you choose an absorbent that doesn't soak up enough, you may have to purchase more than you actually need.



STEP 10

Train Your Employees

Employee training is an essential element of establishing an effective slip, trip and fall prevention program because these are the people that are on the floor each day. They need to be in on it and know why slips, trips and falls occur, how they can be avoided and how to respond when one occurs.

By giving employees the tools, training and support they need to effectively prevent and respond to slips, trips and falls, you're taking the right steps to avoid employee injuries, declines in productivity and the costs of an incident.



CHAPTER 5

A SLIP, TRIP OR FALL OCCURS... NOW WHAT?

Even when preventative measures are taken at your facility, there's still the possibility of a slip, trip or fall. And when it happens, you and your employees need to know what to do.





Slips, Trips and Falls Response Plan

In the event of a slip, trip or fall, everyone in your facility should be prepared to quickly and effectively respond. When planning for the possibility of an incident, keep these three tips in mind:

1. **First and foremost, provide assistance.** This means immediately checking with the person who experienced the slip, trip or fall to help determine severity, providing first aid and calling for emergency medical assistance when needed.
2. **Report the incident to the appropriate person within your workplace.** From there, it should be recorded with an incident report as quickly as possible. These reports should be filed and kept to review for common incident areas and provided to your insurance company.
3. **Identify ways to avoid the incident in the future.** This is when you can identify the training, products and housekeeping improvements that should be made to ensure future safety and compliance.

CHAPTER 6

SLIP, TRIP AND FALL PREVENTION CHECKLIST

Take the time to review your current program and be sure you have the right practices, products, training, response and reporting steps in place to establish and maintain a safer workplace.



Slip, Trip and Fall Prevention Checklist

Question	Yes	No
Do you have a slip, trip and fall prevention program in place?		
A written program will help to cover training, response, assessment needs and more. By proactively planning for and tracking slip, trip and fall incidents, you'll be one step ahead in creating a safer and more compliant workplace.		
Do you have employee training and re-training plans in place?		
To help prevent slips, trips and falls, your employees first need to understand what hazards are in the workplace and how best to respond to them.		
Do you have a spill response plan in place?		
When spills occur, you should have a quick and effective process in place to resolve them before they become a problem.		
Do you have absorbent supplies on hand?		
Be sure to have the proper absorbent and cleaning materials in your facility to effectively respond to spills and leaks of various sizes.		
Do you use workplace signage and labels to warn against hazards?		
Clear hazard identification is essential in helping to prevent slips, trips and falls.		
When an incident occurs, do you have a process in place to review incident type and location?		
Learn from mistakes. Immediately after an incident happens, determine how you can avoid this problem in the future with products, training and improved cleaning.		
Do you use floor marking tape in your facility?		
Floor marking tape helps to outline safe walking areas to help prevent tripping over obstacles and steer employees away from other unsafe storage and equipment areas.		

Slip, Trip and Fall Prevention Checklist

Question	Yes	No
Do you have a consistent floor marking color practice in place?		
It's important to use a consistent floor marking color approach so employees understand and can clearly identify what each area is used for (walking, forklift, storage, etc.)		
Do you use proper flooring materials to accommodate frequent slip locations?		
Mats, runners, slip-resistant flooring and other options help to reduce incidents in problem areas.		
Do your stairs have proper railings and slip-resistant materials?		
Use the right materials and railings on your stairs to help reduce slips, trips and falls in this high-risk area.		
Are emergency evacuation routes labeled?		
Glow-in-the-dark labels and signs help employees safely exit the building in case of an emergency.		
Do you have temporary hazard signs on hand?		
Some hazards only pose a temporary threat. Be sure to have moveable signage to put in place and take down as needed.		
Do you have a scaffolding and ladder inspection plan?		
Keep track of when inspections occur and who performed them to help ensure safety on elevated equipment.		

Slip, Trip and Fall Prevention Checklist

Question	Yes	No
Do you have a slip, trip and fall emergency response plan in place?		
Everyone in your workplace should know what's expected of them when an incident occurs. This should include assessing the situation, calling for emergency medical assistance and reporting the incident.		
Do you have a consistent cleaning plan in place?		
Cleaning is one of the most important steps of incident prevention. Your workplace should be clean and dry, and areas with unique hazards should have additional cleaning attention.		
Does your workplace require slip-resistant footwear to maximize traction?		
Depending on your workplace, employees might need to wear slip-resistant footwear to ensure safety.		
Do you assess your workplace regularly to identify hazards, repair needs, housekeeping improvements and more?		
Take the time to review the safety of your facility and what steps can be made to reduce and eliminate any slip, trip and fall hazards.		

CHAPTER 7

CONCLUSION

What next?



When the safety of your employees is in your hands, you need an effective program to help prevent slips, trips and falls. Through this guidebook, you know how to implement the right practices, products and precautions to improve safety and compliance in your facility.

Don't wait for accidents to occur, as John experienced in his manufacturing facility. Put the right prevention methods in place today.

If you need additional insight and support, Brady is a safety partner you can trust. With safety and facility identification products, a full line of absorbent and spill control products, workplace audits and training solutions, printing systems and more, we can help guide you on your journey to a safer workplace.

Visit BradyID.com to learn more.

¹ OSHA. (2007). Slips, Trips & Falls Identification & Prevention. Retrieved from https://www.osha.gov/dte/grant_materials/fy07/sh-16625-07/slipstripsfalls.ppt

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¹⁰ National Floor Safety Institute. (2015). *Quick Facts*. Retrieved from NFSI.org: <http://nfsi.org/nfsi-research/quick-facts/>

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