



# **Solving slips, trips and falls** *once and for all*

**A guide to addressing the  
physical and human factors  
in slips, trips and falls**





## Slipping into Distraction

Frustrated by recurring slips, trips and falls in your workplace? You're not alone. Safety folks in every industry struggle to prevent injuries that occur when employees lose their balance or traction.

This guide will provide you with a comprehensive look at the problem, from physical factors like cleaning up spills to mental factors like distraction. You need to **both** address physical factors **and** give your employees safety skills that reduce their chance of slipping, tripping and falling. Wet floor signs are important but they don't work if workers aren't paying attention. And rules about housekeeping are no good if employees are in a rush and forget to follow them.

As you'll see in this guide, when the chance of slipping or tripping is the greatest your employees need a reliable way to avoid distraction and stay focused on where they're walking.

### Room for Improvement

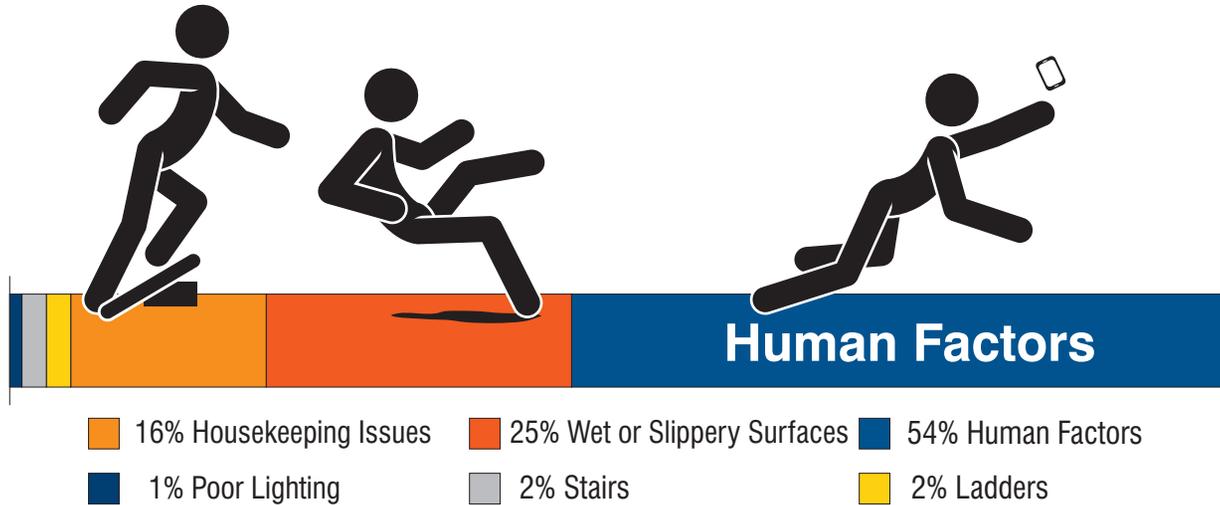
Most workplaces have a specific plan to address slip, trip and fall hazards, but only 2.2% of respondents\* said they have completely eliminated these types of incidents. If your workplace is one of the 97.8% where people are still getting hurt like this then you need to do something more—like addressing the human factors that are causing workers to get injured.

\*From Safety Daily Advisor's December 2014 survey "Understanding How Human Factors Affect Slips, Trips, and Falls." Available for download at: [www.safestart.com/blr](http://www.safestart.com/blr)

## The 3 Big Causes of Slips, Trips and Falls

A 2014 survey of 1,294 safety professionals\* revealed the most frequent factors in slip, trip and fall incidents at their workplaces—and a whopping 95% of respondents cited one of three causes.

### Most Frequent Factors in Slip, Trip & Fall Incidents



The main characteristic the three biggest causes have in common is they're the result of the errors or errors in judgement that people make every day, like how tidy to keep their work area, whether to report a wet surface, how fast to walk and whether to move blindly around corners. People tend to perceive these causes (and especially human factors) as being a lot less risky than they actually are, which makes it challenging to find effective and permanent solutions.

Because these factors require constant attention, they can be avoided entirely (or made worse) by employees' mental states throughout the day.

\*From Safety Daily Advisor's December 2014 survey "Understanding How Human Factors Affect Slips, Trips, and Falls."  
Available for download at: [www.safestart.com/blr](http://www.safestart.com/blr)

### Everyone is at Risk

No matter your industry, gender, age or job, you're at risk of slips, trips and falls. Falls are the leading cause of non-fatal injuries for people ages 25+ and account for more than 26% of injury-related visits to the emergency department.\*

\*National Safety Council Injury Facts®  
2014 Edition

## One Step at a Time

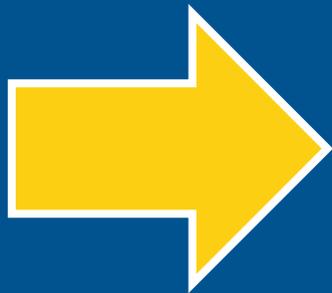
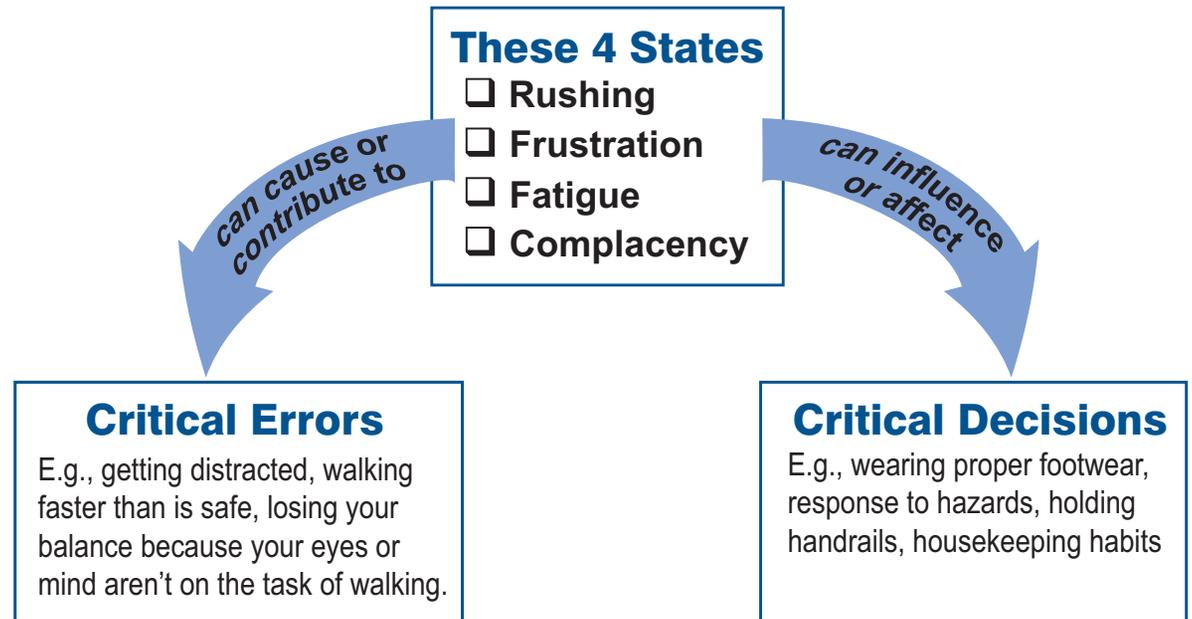
Most safety programs focus on the physical hazards of slips, trips and falls. This should always be your first priority, but you can't eliminate slips, trips and falls by only dealing with physical factors.

The truth is that many slips, trips and falls are caused or made worse by a person's state of mind. When we're rushing, frustrated, tired or complacent we tend to make errors and decisions that increase the chance of injury.

Nobody chooses to slip and fall. But no matter how effective the rest of your safety program is, your employees have a higher risk of being injured due to a slip, trip or fall when they're in one of these four states.

If you've done everything you can to minimize physical hazards, your next step is clear: you need to address human factors.

## The 4 States that Affect Slips, Trips and Falls



Addressing human factors like distraction is possible and the benefits are astounding. Strad Energy, a major player in the North American oil and gas industry, reduced recordable injuries in its manufacturing operations by 87% after implementing training to help workers learn to keep their eyes on task. They're proof of how pervasive human error is—and how effectively it can be eliminated with the right solution.

Learn more by downloading the complete case study at [safestart.com/strad](http://safestart.com/strad)

## The Danger of Human Error

As you can see, the four states are dangerous and can lead to distraction—and safety folks know that increases the risk of injury. Almost 88% of safety professionals believe that not paying attention while walking significantly increases the risk of slipping, tripping and falling when a hazard is present, and 99.5% say it increases the risk to some degree.\*

The presence of tripping hazards is not enough to cause an incident on its own. It also requires employees to take their eyes and mind off the task at hand. And when that happens hazards and human factors quickly add up to injury-causing falls.

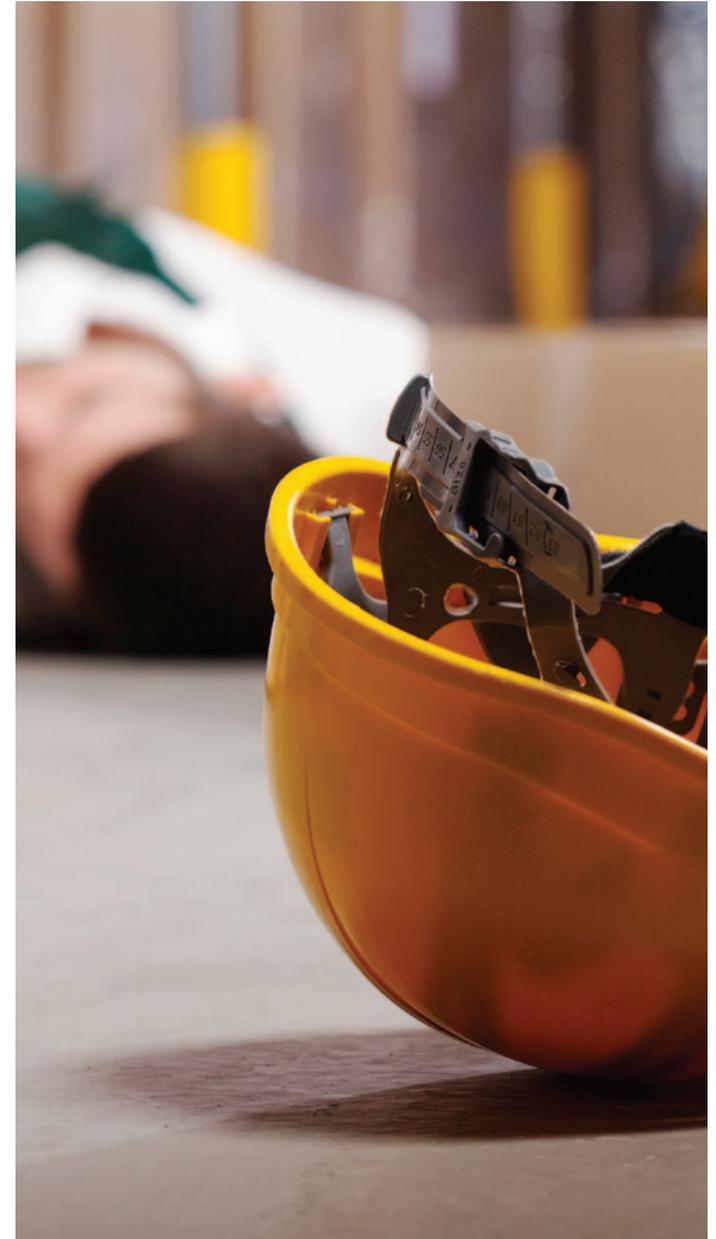
### The Role of Inattention in Slipping and Tripping Incidents



Just because there's a hazard doesn't mean workers will fall—and just because there's a sign doesn't mean they're safe.

Fortunately, human factors training has been proven to increase personal safety skills and risk awareness—and that can lead to a lot fewer injuries.

\*From Safety Daily Advisor's December 2014 survey "Understanding How Human Factors Affect Slips, Trips, and Falls." Available for download at: [www.safestart.com/blr](http://www.safestart.com/blr)



## Balancing Responsibility

Safety professionals have a major responsibility for keeping people safe. And while they can provide traction aids like mats and do their best to maintain good housekeeping, it's impossible to look out for every worker 24/7 wherever they are.

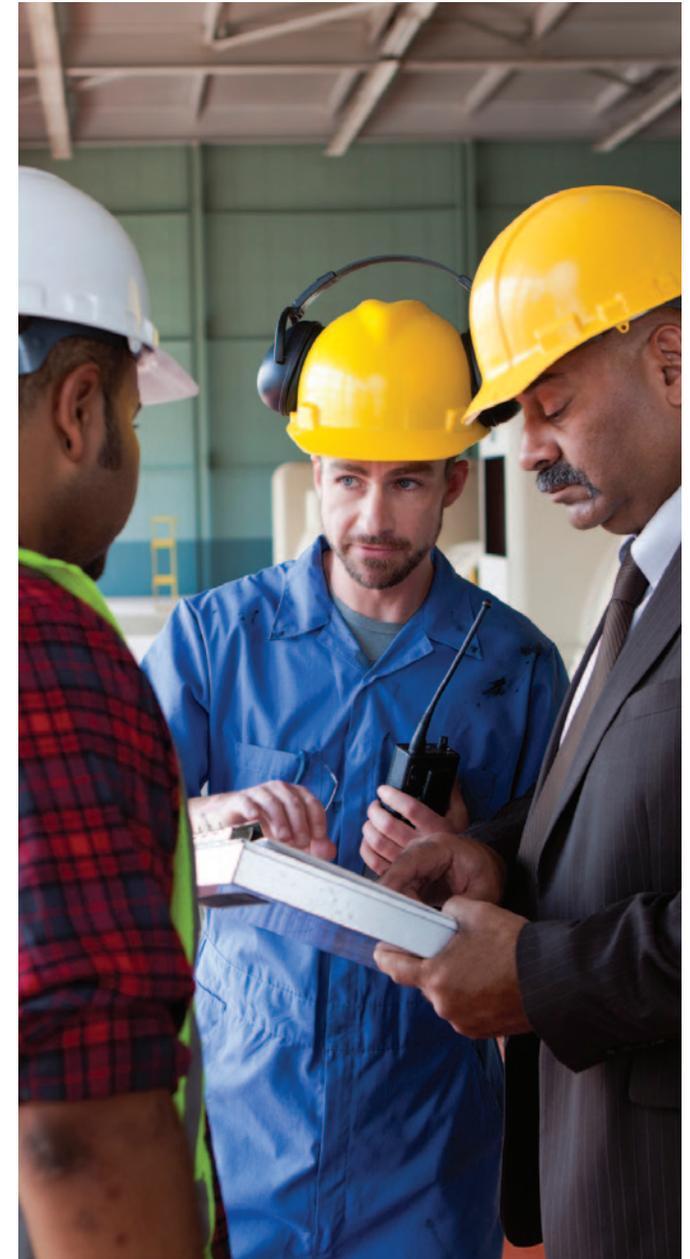
Employees have a responsibility too—just like management. It's up to them to take personal responsibility for their safety. But there are things you can do to support them in avoiding injury.

## Who Is Responsible for Preventing Slips, Trips and Falls?

<b>Human factors training encourages employees to take personal responsibility and build safety habits that, combined with a company's responsibilities, can drastically reduce the frequency of slip, trip and fall incidents.</b>	<b>Company Responsibility</b>	<b>Personal Responsibility</b>
	Provide training	Actively participate in training
	Properly maintain work sites	Report maintenance issues
	Develop policies/procedures	Follow policies/procedures
	Invest in quality housekeeping products	Follow housekeeping requirements
	Develop company safety culture	Participate in safety culture
	Provide regular reminders on safe walking habits	Analyze and improve walking habits
Improve off-the-job safety with human factors training	Apply lessons from human factors training when off the job	

You can't force employees to pay attention—but you can help them understand how their states affect their safety. And you can empower them to take personal responsibility by giving them the skills, awareness and habits they need.

If employees aren't already fulfilling all of their responsibilities 100% of the time then increasing their awareness and abilities with human factors training can help.





## Solving Slips, Trips and Falls

Slips, trips and falls are a complex problem and a complete plan to effectively combat it must include solutions for **both** physical **and** human factors.

Many safety programs already do a good job of reducing slipping and tripping hazards, and providing rules and procedures for cleaning and maintenance. But people are influenced by their state of mind and someone only needs to get distracted or sidestep the rules once to slip, fall and get seriously hurt (or worse).

Properly addressing slips, trips and falls is especially important because they are common—and potentially fatal—both at work and off the job. Falls are the third-most common cause of off-the-job deaths among workers and it's the most common cause of death in public spaces.\* Human factors training provides transferable skills that help workers avoid injury even when they're off the clock so they can return safely to work the next day.

The rest of this guide will outline how to address all the factors that contribute to slips, trips and falls so that you can make sure you're focusing on the entire issue.

### Your safety program needs to address:

#### Physical factors

- Regular maintenance
- Rules and procedures
- Proper equipment and guards

#### Human factors

- Proper understanding of risks
- Build and reinforce habits
- Human factors training

\*National Safety Council Injury Facts® 2014 Edition

# PHYSICAL FACTORS

## Regular Maintenance

Older floors often get more slippery as they age. And even a single improperly cleaned spill can leave a surface dangerously slick. Maintenance is about eliminating hazards like these that are created over the regular course of work.

- replace cracked, worn or aged floor surfaces immediately
- ensure walkways are clear
- use anti-slip cleaning products
- make sure all areas are well-lit to make it easier to spot hazards
- have a plan to clean wet entranceways in the winter
- clear and salt parking lots every time it snows



### The Difficulties of Hazard Control: Winter Weather and Outdoor Work Sites

Sometimes it's impossible to control some physical hazards. Sudden snowfalls, flash freezes and even heavy rain or wind are the cause of many slips and falls because they alter the environment faster than we adjust to it. And construction crews and other outdoor workers have to contend with working on constantly changing, inconsistent surfaces every day.

Because it's impossible to remove every stray rock or clear every patch of black ice, your best option is to train employees to recognize and adjust to hazards sooner as well as give them proper habits to fall back on if they're affected by one of the four states.

## Rules and Procedures

Rules and procedures are one of the best ways safety professionals can protect their employees from slips, trips and falls. However, when reviewing rules consider how workers' states of mind will make it difficult for them to comply all the time.

- make it easy to report or clean spills immediately
- regularly inspect work areas to ensure they're in good order
- provide employees with training on housekeeping

It's important to remember that if there are too many rules it will be hard for workers to remember them all in the split-seconds when they need them most (that's why habits are so important). It's also good to incorporate refreshers on rules in training and toolbox talks.

## Proper Equipment and Guards

A number of aids can help increase traction or make it easier for workers to see hazards in their path of movement.

- use high-traction mats
- provide workers with non-slip footwear
- install handrails on all stairs
- install mirrors at blind corners
- use slip-reducing cleaning products
- clearly mark off walkways

Keep in mind that these measures don't reduce human error but they can help you reduce (but not eliminate) the risk when employees are rushing, frustrated, fatigued or complacent.

These are the most common physical factors that need to be addressed to reduce slip, trip and fall incidents. Depending on your industry, there may be additional physical hazards.

Consult with OSHA (or your country's equivalent government resource) to ensure you're meeting all industry regulations and for additional tips on how to minimize slips, trips and falls in the workplace.

You can find out more by visiting the OSHA website at [www.osha.gov](http://www.osha.gov) and searching "Slips, trips and falls".

# HUMAN FACTORS

## Proper Understanding of Risk

Very few people actually believe that walking poses a risk of injury—probably because the average person safely takes over 5,000 steps a day.

When we start rushing or are frustrated or tired, the risk of slipping or tripping increases but our comfort level with walking stays the same. So before you're able to reduce slips, trips and falls you need to get your employees to recognize just how risky it can be, especially when they're in one of the four states.

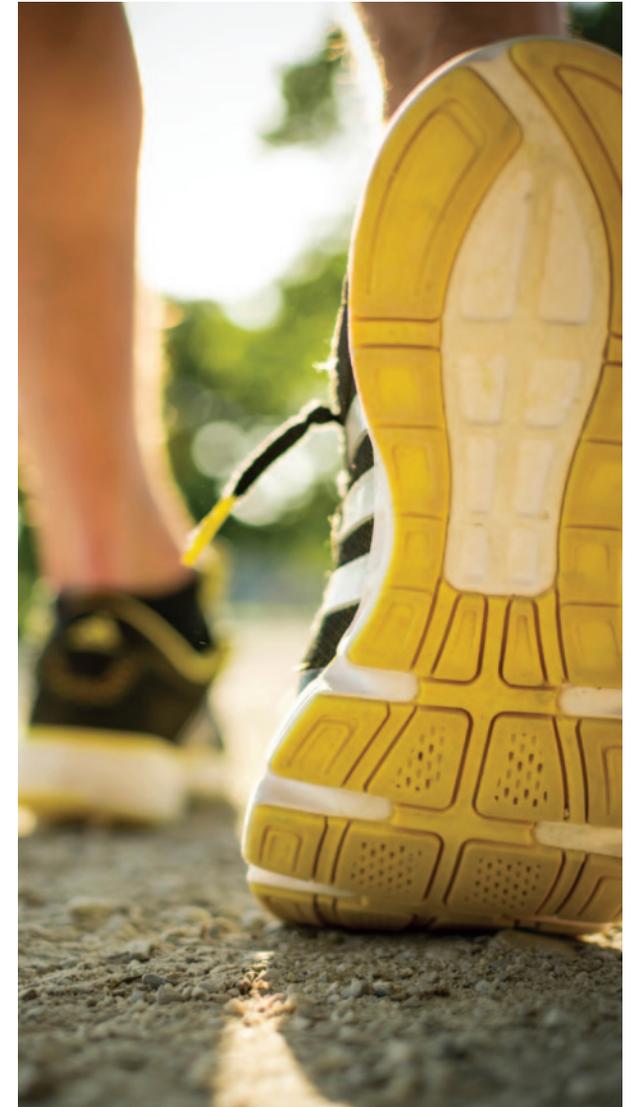
Common techniques to change risk perception include:

- play videos or share stories that show the impact of slips, trips and falls
- provide stats about the dangers and potential severity of slips, trips and falls (you could share some of the ones from this guide)
- ask how much an injury would limit them at work, at home with their family, and in sports and hobbies

But if you want them to truly understand the risk you need to get them to prove it to themselves. In your next toolbox talk ask your workers to think about the last time they stumbled over something (even if it's their own feet).

Maybe it was on a wet surface, or they weren't wearing proper footwear. But were any other factors involved? Chances are they were probably rushing, frustrated, fatigued or complacent—because that's the case in roughly 95% of incidents.

You'll quickly see a light bulb appear above their heads as they start to see—and believe—in the risk of slipping, tripping or falling when walking.



# Building Better Safety Habits

According to a survey conducted by BLR,\* almost a third of safety professionals believe that more than 80% of slip, trip and fall incidents could have been prevented with stronger safety habits, and over three quarters thought that more effective habits could have reduced slip, trip and fall incidents by at least 40%.

When workers are in a rush their ability to make good decisions is seriously compromised and they're much more likely to rely on habits and training, not on what the safety manual says. Building better habits will reduce the risk of slips, trips and falls caused by the four states.

Building and strengthening habits is a continual process of examination and reinforcement. Safety professionals can positively support workers by helping them increase habit awareness and analyze their mistakes to avoid them in the future.

Important habits to reduce slips, trips and falls include the following:

- walk at appropriate speeds
- test footing before committing weight
- use railings on stairs and mirrors at corners
- 3-point contact on ladders and equipment
- reduce over-striding when walking
- look before moving
- wear appropriate footwear
- avoid sudden pivoting/turns
- keep eyes and mind on task
- be alert for trip hazards

Learning habits like these are important but it requires motivation, support and reinforcement. That's why it's necessary to implement human factors training that has the ability to fully motivate employees to improve their safety skills. Training should also follow the proper steps to increase awareness, strengthen habits and reduce the frequency of slips, trips and falls.

\*From Safety Daily Advisor's December 2014 survey "Understanding How Human Factors Affect Slips, Trips, and Falls." Available for download at: [www.safestart.com/BLR](http://www.safestart.com/BLR)

## The Habit-Building Cycle



## Human Factors Training

Human factors training is about providing workers with the ability to recognize when they're in one of the four states and adjust their activities in the moment to avoid injury.

Most companies already have plenty of rules and engineering solutions to deal with physical hazards. Human factors training is about complementing and strengthening compliance measures by addressing the mental element.

Implementing human factors training requires a lot more than telling workers to pay more attention or walk slower. It must include a number of learning elements and blend them in a proven training format:

- effectively address rushing, frustration, fatigue and complacency with awareness, motivation, skills and habits
- include a plan to be sustainable
- provide supervisors with support in addressing human factors issues



### Frequent Reminders and Long-Term Solutions

Reminding workers of safe walking and housekeeping practices can be useful but 85% of surveyed safety folks believe it only provides a temporary improvement in safety performance.\* To prevent slips, trips and falls long-term you need to:

- 1) Regularly address human factors in toolbox talks and safety meetings. Any time there's a change in working conditions you need to remind workers about the risks of human error (a good human factors training program will help with that).
- 2) Ensure your human factors training delivers long-term behavioral changes with skills and habits workers can use in real-time to reduce errors, make better decisions and maintain focus so they're less reliant on toolbox talks.

\*From Safety Daily Advisor's December 2014 survey "Understanding How Human Factors Affect Slips, Trips, and Falls."  
Available for download at: [www.safestart.com/blr](http://www.safestart.com/blr)

## SafeStart Is Your Solution to Slips, Trips and Falls

Effectively dealing with all these issues requires more than adhering to compliance measures. That's because in the middle of a busy workday or at the end of a long shift when workers are most prone to slipping into distraction, your employees have only one thing to rely on: their personal safety skills.



That's where SafeStart comes in.

SafeStart is designed to address the four states that cause errors like losing balance or traction—and addressing the root cause of slips, trips and falls is exactly what you need to drastically reduce your injury rate.

It takes dedicated, proven training like SafeStart to develop workers' safety habits to prevent incidents in the future.

SafeStart provides workers with the understanding, awareness and habits that other safety programs don't cover. When integrated with your other safety initiatives, it will give employees well-rounded protection against slips, trips and falls. As you can see on the SafeStart Card, you can prevent a lot of other errors and injuries too.

### The SafeStart Card



#### *These four states...*

- Rushing
- Frustration
- Fatigue
- Complacency

#### *can cause or contribute to these critical errors...*

- Eyes not on Task
- Mind not on Task
- Line-of-Fire
- Balance/Traction/Grip

*...which increase the risk of injury.*

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## Summary

To solve slips, trips and falls you need to address **both** physical **and** human factors.



- If you're already addressing the physical causes of slips, trips and falls then you're only dealing with half the problem.
- Wet floor signs and other hazard warning systems don't work if employees are distracted and fail to notice them or heed their warning.
- Human factors like an employee's state of mind play a huge role in risk of unintentional injuries. If you don't address human factors then injuries will continue to happen, no matter what other measures you take.
- Employers and employees both have a role to play in dealing with slips, trips and falls. Getting employees to accept their share of responsibility starts with a human factors training program that fosters a strong safety culture, instills personal responsibility and re-adjusts people's perception of risk.
- It's possible to train workers to develop personal safety skills and be more aware of where and how they're moving, which can drastically reduce the number of human factors-related incidents.
- Employees are much more likely to improve their safety-related habits if they receive human factors training and ongoing support from management.
- Human factors training is especially important when slip and trip hazards can't be eliminated entirely, such as on construction sites, during the winter, at home or on the road.
- Human factors training can be integrated into existing safety programs and will augment your current compliance measures.
- SafeStart is the best way to dramatically reduce injuries like slips, trips and falls by addressing human factors and helping workers pay more attention.

## Support the Safety Community By Sharing This with Others

If you found this guide interesting then please pass it on to others.

Slips, trips and falls are one of the most challenging safety issues to solve and sharing this information with other safety professionals will ensure they—and their employees—are safer.

Download an electronic copy to share with others or direct them to [safestart.com/stf](http://safestart.com/stf)

Visit our website to download the guide and sign up to receive email notifications about useful safety information, including future guides like this about pressing safety topics and human factors information.



**Providing the best PPE  
*is no guarantee***

A guide to addressing the human factors in your PPE program

If you found this guide useful you may also enjoy our PPE guide. It provides helpful tips on how to reduce PPE noncompliance and address human factors in your PPE program. Download it at [safestart.com/ppe](http://safestart.com/ppe)



## Next Steps

If you've read this far then you should be congratulated for being serious about combating slips, trips and falls in the workplace.

Take the next step in protecting your workers by attending a SafeStart webinar. These free webinars will provide further information about how human factors affect every aspect of your safety program. You'll also learn about the personal safety skills employees need to avoid making mistakes when it matters most and to solve slips, trips and falls ***once and for all***.



### About SafeStart

SafeStart is the most successful safety training process in the world for developing personal, 24/7 safety skills that address human factors in safety—**proven** to reduce injuries 50% on average by more than 3,000 **clients** in 60+ countries. Reducing slip, trip and fall incidents is only one of the many **benefits** SafeStart provides.

### Learn More:

The best way to learn about SafeStart is at one of our [workshops](#), but you will also find other options on our website, including:

- Introduction [Webinar](#)
- Beyond Compliance [Video](#)
- Overview [Brochure](#)
- [Case Studies](#)

Visit us online at [safestart.com](http://safestart.com) or call us toll-free at 1-800-267-7482.

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