

# Slips, trips and falls.

## The costs associated with slip, trip and fall accidents?

Despite slips, trips and falls (STFs) accidents costing employers £500 million per year, [hse.gov.uk/slips/costs.htm](https://hse.gov.uk/slips/costs.htm) STFs are often not taken seriously, causes are often poorly understood and risk assessment and management controls deficient.

Employers are faced with visible and hidden costs:

### Visible costs

- > Insured costs, civil claims

### Hidden costs

- > Production delays
- > Costs of overtime, temporary labour and additional training needs
- > Loss of expertise and experience
- > Management time investigating accidents and dealing with the aftermath
- > Regulatory prosecution and fines
- > Reputational damage

The effects on the individual involved in a slip, trip and fall accident can result in loss of income, pain & suffering, reduced quality of life, worry and stress.

## Risk Insight

### Impact on employers

The Health & Safety Executive (HSE) 2018/19p statistics show that slips, trips or falls on the level were the most common cause of non-fatal injuries to employees in UK workplaces.

| Main industry  | Number of reported non-fatal injuries to employees 2018/19p |             |            |
|--|---|-------------|------------|
|  | Total reported non-fatal injury                             | Of which... |            |
|  |   | Specified   | Over-7-day |
| All industry   | 20,022  | 7,910       | 12,112     |
| Agriculture, forestry and fishing  | 180   | 77          | 103        |
| Mining and quarrying   | 66  | 26          | 40         |
| Manufacturing  | 2,683   | 955         | 1,728      |
| Electricity, gas, steam and air conditioning supply  | 78  | 35          | 43         |
| Water supply; sewerage, waste management and remediation activities  | 619   | 210         | 409        |
| Construction   | 1,223   | 509         | 714        |
| Wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities  | 3,774   | 1,361       | 2,413      |
| Transportation and storage   | 2,999   | 945         | 2,054      |
| Information and communication; financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities  | 1,507   | 643         | 864        |
| Public administration and defence; compulsory social security; education; human health and social work activities  | 6,364   | 2,874       | 3,490      |
| Arts, entertainment and recreation; other service activities; activities of households as employers; undifferentiated goods-and services-producing activities of households for own use; activities of extraterritorial organisations and bodies | 529   | 275         | 254        |

### Legal duties.

**The Health and Safety at Work etc Act 1974** (HSWA etc) requires employers to ensure the health and safety of all employees and anyone affected by their work, so far as is reasonably practicable. Employees have a duty to take care of their own health and safety and that of others.

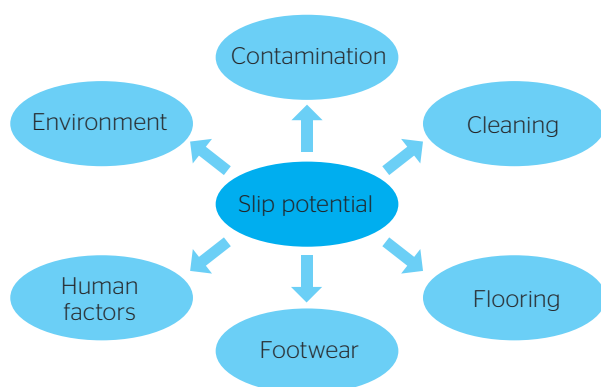
**The Management of Health and Safety at Work Regulations 1999** build upon the HSW Act and include duties for people in control of workplaces to assess risks (including STF). They also require appropriate arrangements for planning, organisation, control, monitoring and review of any measures to safeguard health and safety as identified by the risk assessment.

Occupiers have a duty to visitors covered by the **Occupiers' Liability Act 1957**. The Act places a duty on occupiers of premises to ensure all reasonable steps are taken to safeguard persons from known dangers or dangers the occupier should reasonably know exist. The common duty of care is: **'A duty to take such care as in all the circumstances is reasonable to see that the visitor will be reasonably safe in using the premises for the purpose for which he is invited or permitted to be there'**.

### HSE slip potential model.

This model provides a summary of the elements to be considered during a slip risk assessment (i.e. Is the floor surface suitable for the environment it is in, for the intended users and the behaviour they may exhibit?).

Further guidance on this topic can be found in the Risk Essentials – Slip Potential Model information sheet, [qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-slip-potential-model/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-slip-potential-model/)



### Human factors.

Falls are often attributed to human error. Though human error is likely to have been a factor, it is rare that human error is the sole cause. Things such as medical conditions, age, alcohol and drugs should be factored in. Studies have shown that if individuals are distracted by a conversation, perhaps on the phone, they will be less aware of their surroundings.

Employees should raise concerns and identify solutions and employees should be aware of all the existing procedures, processes and risk assessments that are relevant and should be encouraged to look for improvements. Their ideas should be involved in the development of any new or revised procedures, processes or risk assessments.

Further guidance on this topic can be found in the Risk Essentials – Human Factors information sheet, [qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-human-factors/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-human-factors/)

### Flooring – slip resistance.

The HSE and CIRIA guidance describes testing equipment to determine Slip Resistance Value (SRV) of floor surfaces. The most reliable and accurate way to test for slip resistance is using the “Pendulum Test”. The method is based on a swinging, imitation heel (using a rubber sole sample), which sweeps over a set area of flooring in a controlled manner. The slipperiness of the flooring has a direct and measurable effect on the pendulum test value (PTV) given.

**Table 1** Slip potential classification, based on pendulum test values (PTV), (from UKSRG, 2011)

|                         | PTV<br>(Pendulum Test Value)<br>or SRV<br>(Slip Resistance Value) |
|-------------------------|---|
| High slip potential     | 0-24  |
| Moderate slip potential | 25-35   |
| Low slip potential      | 36 +  |

Further research has indicated that the relative risk of slipping from surfaces with a specific Slip Resistance Value may be as follows:

| Pendulum test value | Probability of slip on a horizontal surface |
|---------------------|---|
| 36                  | 1 in 1 million                              |
| 34                  | 1 in 100,000                                |
| 29                  | 1 in 10,000                                 |
| 27                  | 1 in 200                                    |

The message here is that floors with an SRV greater than 36 are preferable to minimise slip incidents.

A simpler test and one which forms part of the HSE Slip Assessment Tool (SAT), is to measure surface roughness. This data can be used to supplement pendulum test data. Slips will be minimised if the surface roughness of the floor is greater than 20 microns. These benchmarks generally apply where water is the floor contaminant and will need to be uplifted depending on the type of contamination. This is not to say all “smooth” floors need to be replaced. Typically, all dry floors provide a suitable SRV, but the type of floor needs to be selected in line with its use, the contamination foreseeable and the cleaning that is practicable to remove contamination.

The SRV of common floor surfaces can be seen below. Further guidance on this topic can be found in the Risk Essentials – Slip Resistant Flooring information sheet [qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-slip-resistant-flooring/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-slip-resistant-flooring/)

| Floor               | SRV dry floor | SRV wet floor | Roughness/ microns |
|---------------------|---------------|---------------|--------------------|
| Parquet             | 74            | 10            | 1.6                |
| Unpolished terrazzo | 52            | 27            | 6.4                |
| Quarry              | 55            | 41            | 12.5               |
| Vinyl               | 56            | 33            | 16.5               |
| Cork                | 65            | 50            | 54.9               |
| Vitrified ceramic   | 53            | 20            | 2.5                |
| Polished terrazzo   | 52            | 17            | 1.3                |
| Carborundum quarry  | 65            | 57            | 22.6               |
| Profiled ceramic    | N/A           | 21            | 8.4                |

### Environment.

Workplaces should be suitably lit to help avoid slip and trip accidents. Where trip hazards cannot be removed, such as changes in level, these should be highlighted using visual contrast.

Further guidance on this topic can be found in the Risk Essentials – Entrances, and Stairs and Steps information sheet,

[qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-entrances/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-entrances/)

[qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-stairs-and-steps/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-stairs-and-steps/)

### Contamination.

Contamination can be any substance on the floor surface, whether it is a wet or dry substance. By removing the contamination and returning the floor to a dry state, the risk of slipping will be significantly reduced. Preferably the risk assessment process will identify all sources of potential contamination and introduce controls to prevent the contamination reaching the floor or to prevent its spread e.g. building canopies, entrance matting, drip trays around machines & conveyors.

**Where constant or frequent contamination on a floor, with a poor Slip Resistance Value (SRV), is foreseeable and users cannot be prevented from using such a floor, the use of warning signs or cones will not absolve a duty of care and employers and/or occupiers in these circumstances should plan to replace or treat the floor so that the SRV or surface roughness of the floor is suitable for the type of contamination expected.**

Further guidance on this topic can be found in the Risk Essentials – Contamination information sheet, [qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-contamination/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-contamination/)

### Cleaning and inspection.

**A clearly defined cleaning regime and inspection system is a crucial element in preventing accidents and claims. Systems need to be created to maintain floors in a dry and clean state. It is essential that documentation is maintained to demonstrate these systems have been adhered to.**

Practical systems to consider and adapt to your circumstances include:

- Appropriate methods and materials should always be used.

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- > Employee training is provided to ensure the correct cleaning technique is applied for the flooring type and contamination encountered.
- > All employees participate in a “Clean as You Go” regime where the methodology should be “dry cleaning”.
- > Thorough ‘wet cleans’ are designed to cleanse a floor and remove all contamination.
- > Where practicable, such cleans should be cordoned off until the floor has returned to a dry state.
- > Cleaning is done at time of day when pedestrian movements are at their lowest.
- > Active monitoring techniques are recorded to demonstrate employees are working to “clean as go” routine. These can be included in manager/supervisor’s KPI’s and more formally by departmental audits.

**The value of active monitoring systems that record the cleaning and inspection regimes can help to demonstrate that at the time of the accident, all had been done that one could reasonably expect to maintain the floor in a clean and safe condition.**

- > In premises which the public have access to, regular inspections of the thoroughfares and toilets should be recorded at least hourly.
- > Warning signs should be used to alert pedestrians to slip risks, for example during cleaning, after a spill or during wet weather and removed after.
- > When selecting specialist Cleaning Contractors, a process of due diligence will assist in the selection of competent firms and their ability to carry out the work required. In addition, clients should ensure that they hold current insurance protection with sufficient financial cover to indemnify them in the worst-case scenario. Additionally, verification of a contractor’s safety policy, safety performance and accident rates should be included in any due diligence programme. Look for evidence of personnel being well trained in safety management, such as an accredited IOSH qualification and trade qualifications, like The British Institute of Cleaning Science (BICS). Contractors should be provided with enough information to undertake the contract safely.

Further guidance on this topic can be found in the Risk Essentials – Cleaning Regimes information sheet, [gb.europe.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-cleaning-regimes/](http://gb.europe.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-cleaning-regimes/)

### Footwear.

The selection of footwear for employees will form part of the Personal Protective Equipment risk assessment. The risk of slipping needs to be considered alongside other risks to the foot such as falling objects or materials piercing the sole. Research into the slip resistance of footwear highlights:

- > The properties of the shoe sole are highly relevant in determining slip resistance.
- > The wear rate and cleanability of the sole influences the surface roughness levels throughout the life of a shoe sole.
- > Wearing flat shoes that maximize the area of contact with the floor, especially at the heel, can reduce the number of slip accidents.
- > To improve the slip resistance in contaminated conditions, the shoe sole should generally have deeper cleating and a well-defined tread pattern.

GRIP is a footwear slip resistance rating scheme developed by the HSE to actively reduce slips. Footwear manufacturers who have signed up to the scheme will be able to display the rating, from 1 to 5 stars, on their product packaging, allowing footwear buyers to select the most appropriate footwear for their work environment.

Further guidance on this topic can be found in the Risk Essentials – Footwear information sheet, [gb.europe.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-footwear/](http://gb.europe.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-footwear/)

### Trip risk management.

The difference between slips and trips is the causative element. Primarily, trips are caused by poor housekeeping. Risk assessments need to address common causes of tripping (e.g. trailing cables, uneven edges to flooring or gratings/covers, loose mats/carpet tiles, temporary obstructions, unseen changes in floor level). By removing these obstructions, or making them more visible to the person, tripping incidence should reduce.

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Many companies have achieved considerable success and improved housekeeping conditions by utilising the “5S Philosophy”.

**Sort:** Neatly arrange all equipment and production materials, remove unnecessary items.

**Set in Order:** All items should be positioned in the most appropriate location so they can be easily accessed, removing clutter and avoiding obstructions.

**Shine:** Conduct cleaning regularly.

**Standardise:** The process across departments and locations for a consistent approach.

**Sustain:** The 5S philosophy for continuously improvement.

Further guidance on this topic can be found in the Risk Essentials – Managing Trips information sheet, [qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-managing-trips/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-managing-trips/)

### Accident investigation.

For slips and trips, it is important that all mitigating factors are recorded as part of the accident investigation including the condition of the floor, any contamination present, what the person was doing, the environmental conditions, quality of lighting, footwear worn etc. It is important the investigator records facts and does not express opinions.

Maintain adequate data on STF accidents to include accident and near miss numbers, accident frequency, accident severity (days lost), root cause of accident, location of accident, time of day etc.

Further guidance on this topic can be found in the Risk Essentials – Incident Investigation information sheet, [qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-incident-investigation/](http://qbееurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-incident-investigation/).

### Winter weather – snow and ice.

An occupier or employer can be liable if they take no reasonably practicable steps to guard against the risks of snow and ice on their premises. Practical action to deal with winter weather should include the implementation of a cold weather policy. Steps must be taken to follow that policy – training on implementation and use. Identify who is responsible for doing what, for example, caretaker, owner of a business, manager or supervisor. Checklists should be used to include action on arriving at a premise to eliminate or reduce the risk of slips and falls due to snow or ice. Weather forecasts should be reviewed regularly. Signage should be displayed for known slippery areas.

Signage should be erected by the first person on site. Ensure there is an ample supply of grit available.

#### Winter weather policy – key features

1. This must be proactive so anticipate the formation of ice.
2. Regular review of weather forecasts – not too far in advance.
3. Staff must be trained to do the following:
  - a. Consider forecasts.
  - b. Make decisions on whether to treat.
  - c. Consider how to treat.
  - d. Decisions must be tailored to the location.
5. Review decisions regularly and as close in time as possible. Assessing the risk is key.
6. Allocate appropriate resources to treat.
7. If likely to be a delay in treating take interim measures to address the risk. e.g.
  - a. Cordon off hazardous areas.
  - b. Install signage.
  - c. Make announcements.
  - d. In the case of a school it may be appropriate to close the premises until the worst of the weather is over.
8. Consider the type of treatment:
  - a. Effectiveness.
  - b. Cost.
  - c. Time to deploy.
  - d. Method to apply.
  - e. Err on over treatment.
  - f. Retain evidence of the decision-making process

#### The policy must be monitored

1. Is compliance with the weather forecasts effective?
2. Are there any features peculiar to location?
3. Record accidents and near misses.
4. Consider other factors such as lighting (particularly relevant in car parks).
5. Have appropriate investigative steps:
  - a. Ensure a copy of weather forecast is kept for a specific period.
  - b. Log any decision in relation to treatment and response to it.
  - c. When was the decision made?
  - d. When was that decision communicated and actioned?
  - e. Why was it actioned in a particular way at a certain location?

Further guidance on this topic can be found in the Risk Essential - Winter Weather Management information sheet, [qbeeurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-winter-weather-management/](http://qbeeurope.com/document-library/risk-solutions/risk-essential/slips-trips-risk-essential-winter-weather-management/)

### Conclusions.

A structured risk managed approach to addressing slip, trip and fall accidents should be developed within all organisations. If followed, this should lead to improvements in accident frequency rates and improved claims defence ability.

The QBE Risk in Practice - Slips Trips and Falls Toolkit is designed to assist businesses in establishing risk management policies and systems to prevent slip and trip accidents and to develop documentation that can be used in the effective management of slip and trip claims. The toolkit is intended as a template for a business to adapt to its own business activities and premises [qbeeurope.com/document-library/risk-solutions/risk-in-practice-slips-trips-and-falls-toolkit/](http://qbeeurope.com/document-library/risk-solutions/risk-in-practice-slips-trips-and-falls-toolkit/)

The QBE Slips Trips and Falls Self-Assessment Questionnaire is aimed at assisting you to manage slip and trip liability exposures and key claims drivers. Where you feel you cannot answer a question positively or are not adhering to 'best practice', we will provide recommendations to help you manage your risk issues. Once you have completed and submitted the questionnaire a report with your recommendations will be available for instant download. For more information please speak to your QBE Risk Manager.

### QBE European Operations

30 Fenchurch Street  
London EC3M 3BD  
tel +44 (0)20 7105 4000  
**QBEurope.com**

