

# Preventing slip and trip incidents in the education sector

## HSE information sheet

### Education Information Sheet No 2 (revised)

#### Introduction

This information sheet is aimed at head teachers and school managers.

Slips, trips and falls on the level are the most common cause of major injuries in workplaces and the second highest cause of over-three-day injuries. They occasionally cause fatalities, for example from head injuries. The financial costs of slip and trip incidents are considerable. Based on 2004/05 figures it is estimated that they cost employers £500 million and society as much as £800 million.

#### Slips and trips in education

Although slips and trips can happen to anyone, it is older people, and particularly women, who are often injured more severely. A simple slip can even lead to death. In one accident, a school meals employee slipped on custard spilt on the wooden parquet flooring of a school dining room just as the clearing away and cleaning operations were beginning. She broke her leg and died later from a blood clot. This illustrates the potential severity of these incidents and the importance of immediate action to prevent them.

The majority of people in schools, colleges and universities are not employees but students and

pupils. Education employers also have responsibilities to protect them from slips and trips. Sites are often busy and crowded. Structured timetables may lead to large numbers of people moving around at the same time, increasing the potential for slip and trip incidents.

HSE statistics suggest that slips and trips are a major cause of accidents to education employees, pupils/students and others (see Table 1).

Slip and trip incidents can be controlled, provided the subject is given sufficient attention. The control measures needed are often simple and low-cost, but will bring about significant reductions both in human suffering and costs.

Developing and implementing a successful policy to control slip and trip risks will require the support of everyone, including senior managers, employees, contractors and others. Schools and colleges may wish to take a 'whole school' approach and also involve the pupils/students in practical discussions on the risks and how they can be controlled. They may also wish this approach to include disability issues that affect staff, pupils and visitors to the premises. Linking it to topics in the curriculum can form part of the process of educating pupils in risk awareness.

**Table 1** Slip and trip incidents in education for 2004/05

	Members of the public*			Employees		
	Reported injuries**	Injuries due to slips and trips	Percentage of injuries due to slips and trips	Reported injuries***	Injuries due to slips and trips	Percentage of injuries due to slips and trips
Primary and secondary education	1066	337	32%	1281	497	39%
Higher, further and adult education	726	139	19%	2387	822	34%

\* ie pupils, students and visitors

\*\* fatal and non-fatal injuries to members of the public

\*\*\* fatal, non-fatal major and over-3-day injuries

## Control measures

In order to effectively control slip and trip risks, employers should:

- identify the hazards – look for slip and trip hazards around the site;
- decide who might be harmed and how – look at who comes onto the site, and whether they are at risk;
- consider the risks and decide if precautions already being taken are enough, or if more needs to be done;
- record the findings;
- review the assessment regularly and revise it if necessary.

Education premises are varied and often complex sites. The measures to control the risks will vary according to the different areas of the site and the different activities being undertaken. Each will need to be assessed separately and a range of practical measures adopted to control the risk depending on the assessment. The risk factors to consider include:

- environmental (floor, steps, slopes etc);
- contamination (water, food, litter etc);
- organisational (task, safety culture etc);
- footwear (for example, footwear worn for evening events may not always be in line with a daytime 'sensible shoe' policy);
- individual factors (eg information and training, supervision, pedestrian behaviour etc).

Education employers should consider these factors in order to determine how to manage slips and trips. Some of the publications listed in Further reading contain checklists to evaluate these factors in turn. A range of measures will be required to control the risks. Guidance on possible control measures in representative parts of education premises/education activities is given in Table 2.

Where changes or modifications to premises are to be made, education employers should ensure that consideration is given to eliminating slip and trip risks during the design stage of the changes – for example, installation of a slip-resistant floor. Research<sup>1</sup> into the high incidence of falls on the level recorded in a university refectory suggests that the replacement of the floor surface with an improved slip-resistant surface achieved a permanent reduction in the number of falls in the refectory building.

Premises managers will need to consider the individual needs of the user population. Some pupils, students and visitors may have disabilities. Arrangements will need to be reviewed for open evenings, events,

functions etc when further precautions may be required for people with disabilities and for anyone unfamiliar with the site. (Details of the rights of the disabled and duties of service providers under the Disability Discrimination Act 1995 can be found at [www.disability.gov.uk](http://www.disability.gov.uk))

Many slip incidents occur in kitchens and food-serving areas. Kitchen equipment and work surfaces should be suitable and be adequately maintained to avoid contamination of the floor surface. The floor surface should provide a non-slip surface despite the usual kitchen contamination and be appropriate for use in kitchens.

Education employers should decide what they need to do to manage and supervise the work of any catering and cleaning contractors effectively. They should agree with the contractor how the work will be done and the precautions that will be taken to reduce the risk of slip and trip incidents occurring. Relevant issues include:

- what equipment should, or should not, be used;
- personal protective equipment to be used and who will provide it;
- working procedures;
- the number of people needed to do the job;
- reporting of incidents and keeping records;
- training of employees.

See *Use of contractors – a joint responsibility*<sup>2</sup> for further information on the general health and safety responsibilities of clients and contractors.

Cleaning and slip and trip accidents are closely linked, so for slips and trips to be tackled successfully in the workplace, safe cleaning must be considered. But it is not just a subject for cleaning managers and cleaning staff; everyone in the workplace has a job to do, for example by keeping your workspace clear, and dealing with your own spillages.

- Cleaning, as with other areas of health and safety, requires a good management system to help identify problem areas, decide what to do, act on decisions made and check that the steps have been effective.
- The process of cleaning can create slip and trip hazards, especially for those entering the area being cleaned, such as cleaners. For example, smooth floors left damp by a mop are likely to be extremely slippery, and trailing wires from a vacuum or buffing machine can present a trip hazard.
- People often slip on floors that have been left wet after cleaning. On a smooth surface, even a tiny amount of water can present a real slip problem, eg a smooth floor left wet after mopping. Warning signs and cones don't keep people out of an area and, if used incorrectly, are often ignored.

Table 2 Slip and trip risk controls

Area	Practical measures for slips risk control
External steps, paths and parking areas	<ul style="list-style-type: none"> <li>■□ Suitable lighting – replace, repair or clean lights before levels become too low to be safe</li> <li>■□ Ensure steps and paths are suitable for the volume of pedestrian traffic</li> <li>■□ Ensure paving slabs are secure and tarmac paths in good condition to give a flat, even surface</li> <li>■□ Maintain parking area so that it is free of potholes</li> <li>■□ Mark the nosing of steps using anti-slip coating, as smooth, gloss paint will make the surface slippery under wet conditions</li> <li>■□ Provide handrails where appropriate and maintain in good condition</li> <li>■□ Discourage short cuts across grassed/muddy areas</li> <li>■□ Clean leaves, mud etc from surfaces</li> <li>■□ Remove algal growth</li> <li>■□ Put in place effective procedures to deal with snow or ice</li> </ul>
Playgrounds and all-weather sports surfaces	<ul style="list-style-type: none"> <li>■□ Ensure surface is flat and well maintained to avoid surface water</li> <li>■□ Remove accumulations of mud/water</li> <li>■□ Remove algal growth</li> <li>■□ Ensure users wear the appropriate footwear for the surface</li> </ul>
Building entrances/exits	<ul style="list-style-type: none"> <li>■□ Properly positioned door canopies of good size can prevent rain and dirty water from entering the building and getting onto the floor, so preventing slip risks</li> <li>■□ Provide non-slip, water absorbing mats at entrances that are large enough to dry shoes</li> <li>■□ Maintain mats in good condition and change when saturated</li> <li>■□ Ensure that temporary matting does not curl and so pose a trip risk</li> <li>■□ Display signs warning of hidden steps/changes of level</li> <li>■□ Display signs warning of risk of slipping when appropriate</li> <li>■□ Site door catches and door stops safely</li> </ul>
Sports halls	<ul style="list-style-type: none"> <li>■□ Ensure suitable footwear is worn</li> <li>■□ Maintain floor mats in good condition and ensure they remain flat</li> <li>■□ Keep smooth floors clean and completely free of wet or dust contamination</li> <li>■□ Don't make smooth sports hall floors even smoother by polishing and buffing</li> </ul>
Changing rooms/swimming pools	<ul style="list-style-type: none"> <li>■□ Avoid contamination of the floor surface with mud/water from pupils entering by: <ul style="list-style-type: none"> <li>- providing shoe-cleaning brushes/scrapers</li> <li>- providing suitable entrance mats for pupils to clean and dry feet on</li> </ul> </li> <li>■□ Provide non-slip flooring on floor surfaces. Ensure specialist anti-slip flooring is sourced and specified correctly</li> <li>■□ Provide non-slip mats or grids in shower areas</li> <li>■□ Provide handholds for people with disabilities</li> <li>■□ Display 'no running' signs</li> </ul>

<p>Internal stairs and corridors</p>	<ul style="list-style-type: none"> <li>■□ Ensure a staggered release of students onto heavily used traffic routes</li> <li>■□ Put in place measures for traffic streaming and flow management up/down stairs</li> <li>■□ Put in place measures for traffic streaming and flow management along corridors</li> <li>■□ Mark nosing of steps using anti-slip coating, as smooth, gloss paint will make the surface slippery under wet conditions. Provide handrails at a useable level (for children and adults)</li> <li>■□ Lighting – replace, repair or clean lights before levels become too low to be safe</li> <li>■□ Apply appropriate anti-slip coatings to areas of smooth flooring which may become wet</li> </ul>
<p>Classroom areas (including laboratories and practical areas)</p>	<ul style="list-style-type: none"> <li>■□ Avoid trailing cables from equipment and tools</li> <li>■□ Provide storage racks for pupils' bags*</li> <li>■□ Provide coat hooks/racks for drying wet clothing* – consider siting such areas on specialist anti-slip flooring as even drips of rain water on smooth surfaces can be enough to result in slips</li> <li>■□ Provide specialist anti-slip flooring in potentially wet areas</li> <li>■□ Avoid overcrowding of rooms</li> <li>■□ Control the entry and exit of people from classes</li> <li>■□ Provide a clear walkway around the room</li> <li>■□ Don't let displayed art work, practical work etc obstruct the walkways</li> <li>■□ Clear away toys in early-years classes so they do not obstruct the walkways</li> </ul>
<p>Preparation rooms, technician areas and storage rooms</p>	<ul style="list-style-type: none"> <li>■□ Provide suitable storage for goods and equipment</li> <li>■□ Keep containers of bulk liquids in banded areas, as spills cause slips</li> <li>■□ Keep a clear area around machines, kilns and other equipment</li> <li>■□ Use slip-resistant flooring around machines</li> <li>■□ Remove floor contamination, eg sawdust, clay and oils quickly and effectively</li> </ul>
<p>Kitchens</p>	<ul style="list-style-type: none"> <li>■□ Provide suitable equipment to avoid spillages (from cooking, washing etc)</li> <li>■□ Provide edged work surfaces to contain spillages</li> <li>■□ Ensure good ventilation to avoid smoke/steam and condensation</li> <li>■□ Ensure staff wear suitable footwear**</li> <li>■□ Spot clean small spillages and pick up food contamination immediately</li> <li>■□ Ensure good housekeeping around bins</li> <li>■□ Ensure floor surface is non slip, and that it is rough enough to cope with greasy contamination</li> <li>■□ Thoroughly clean floors with products appropriate for surface and contamination removal after work has finished</li> <li>■□ Prevent anyone from walking on the wet floor eg use segregation barriers, lock doors</li> <li>■□ Only use cones as a temporary warning device, they do not prevent people from walking on spills or wet floors.</li> <li>■□ Remove warning signs as soon as hazard has been removed</li> </ul>

Canteen areas	<ul style="list-style-type: none"> <li>■□ Ensure staff wear suitable footwear**</li> <li>■□ Spot clean small spillages and pick up spilt food immediately</li> <li>■□ Ensure floor surface is rough enough to cope with greasy contamination</li> <li>■□ Clean floors only when pupils/students have left the area</li> <li>■□ Use the right cleaning product for the floor and for contamination removal</li> <li>■□ Prevent anyone from walking on the wet floor eg use segregation barriers, lock doors</li> <li>■□ Only use cones as a temporary warning device, they do not prevent people from walking on spills or wet floors</li> <li>■□ Remove warning signs as soon as hazard has gone</li> </ul>
Offices	<ul style="list-style-type: none"> <li>■□ Provide a clear, safe walkway within the office</li> <li>■□ Avoid trailing cables – use cable covers</li> <li>■□ Provide adequate storage</li> <li>■□ Do not store or leave materials in the walkways and around equipment eg around photocopiers, printers, desks etc</li> <li>■□ Replace worn or damaged carpets/tiles</li> <li>■□ Provide secure storage for bags etc</li> </ul>
Events	<ul style="list-style-type: none"> <li>■□ Ensure temporary cabling is routed safely and protected from damage</li> <li>■□ Provide sufficient lighting during set-up/dismantling</li> <li>■□ Use temporary matting/straw coverings on grassed areas</li> </ul>
Educational visits	<ul style="list-style-type: none"> <li>■□ Assess location and anticipated weather</li> <li>■□ Modify visit depending on local conditions when on site</li> <li>■□ Wear suitable footwear</li> <li>■□ Ensure effective management of the visit (see <i>Health and safety of pupils on educational visits. A good practice guide</i><sup>2</sup>)</li> </ul>

\* The Education (School Premises) Regulations 1999 require adequate facilities to be provided in school buildings for the storage and drying of pupils' outdoor clothing and for the storing of their other belongings. The Regulations apply in England and Wales but are not administered by HSE. Further guidance on the application of these Regulations can be obtained from the Local Education Authority and/or the Department for Education and Skills (DfES). In Scotland, similar requirements are contained in the School Premises (General Requirements and Standards) (Scotland) Regulations 1967 (as amended).

\*\* The Personal Protective Equipment at Work Regulations 1992 (PPE) deal with the provision and use of PPE where there are risks that cannot be controlled in other ways. Where footwear is provided specifically as a means of controlling the risk of slipping it should be considered PPE under these Regulations and as such it should be provided free of charge to employees.

■ Contamination is implicated in almost all slip accidents; it can be introduced by the work activity or by cleaning. Choosing the right cleaning regime for the contamination type and floor is essential. If a floor is not properly cleaned and according to manufacturers instructions it may lose its slip resistance.

See the HSE information sheet *The importance of floor cleaning*<sup>4</sup> for more information.

Footwear plays an important role in preventing slip incidents. Establishing a 'sensible shoe' policy (for example, flat shoes that enclose the whole foot, not sandals or sling-back shoes) has been shown to make a significant impact on reducing slip and trip injuries. Ideally, such a policy should cover all staff, including cleaning and catering staff, and pupils.

Adequate lighting is also an important factor in preventing slips and trips. Poor lighting can obscure slip and trip hazards while excessively bright or incorrectly placed lights can cause glare and can again obscure hazards. See Table 2 for more guidance on lighting in specific areas.

Visitors should be advised about any specific risks in particular areas.

### Conclusion

Slip and trip incidents can be prevented; they are not inevitable.

**Table 3** Legal requirements

<p>The Health and Safety at Work etc Act 1974 (the HSW Act)</p>	<p>Requires employers to ensure the health and safety of their employees and others who may be affected by their work activities.</p> <p>This includes taking measures to control slip and trip risks. Under the HSW Act employees are required not to endanger themselves or others, to co-operate with their employer and to use any safety equipment provided by their employer.</p> <p>Manufacturers and suppliers have a duty to ensure that their products are safe. Adequate information about the appropriate use of products must also be provided. More recent regulations emphasise the importance of such measures.</p>
<p>The Management of Health and Safety at Work Regulations 1999 (the Management Regulations)</p>	<p>Requires employers to assess risks (including slip and trip risks) to their employees and other people (pupils, students, contractors, visitors to the premises etc) arising from work activities.</p> <p>Education employers should be able to demonstrate they have effectively considered the risks and instituted suitable control measures. They also need to ensure that the measures they have taken are effective. They should investigate any significant slip and trip incidents.</p> <p>Employees have a duty to report any situation that might present a serious and imminent danger and they should also notify employers of any shortcomings in the health and safety arrangements.</p>
<p>The Workplace (Health, Safety and Welfare) Regulations 1992</p>	<p>Contains requirements relating to the construction of floors and traffic routes and to the need to keep them clean and free of obstructions.</p> <p>A major refurbishment or new building work is an opportunity to eliminate slip and trip hazards. Such work may be subject to the Construction (Design and Management) Regulations 1994 (CDM Regulations).</p>
<p>The Safety Representatives and Safety Committees Regulations 1977</p>	<p>Safety representatives appointed under these Regulations must be consulted on health and safety matters.</p> <p>They must also be given access to information relevant to the health and safety of the workers they represent, including any information relating to potentially hazardous conditions, such as slip and trip risks.</p>
<p>The Health and Safety (Consultation with Employees) Regulations 1996</p>	<p>Requires employers to consult with workers, either directly or indirectly through elected representatives, on matters relating to their health and safety at work.</p> <p>Safety representatives can help employers with both the development and implementation of a slip and trip risks policy. They will be able to identify risks in the workplace and bring the workers' perspective to the policy-making process.</p>

## References

- 1 'Operational experience with a portable friction testing device in university building' *Ergonomics* 1985 28 (7) 1043-1054
- 2 *Use of contractors: A joint responsibility* Leaflet INDG368 HSE Books 2002 (single copy free or priced packs of 10 ISBN 0 7176 2566 4) Web version: [www.hse.gov.uk/pubns/indg368.pdf](http://www.hse.gov.uk/pubns/indg368.pdf)
- 3 *Health and safety of pupils on educational visits. A good practice guide* HSPV2 DfES 1998 ([www.teachernet.gov.uk](http://www.teachernet.gov.uk))
- 4 *The importance of floor cleaning* Slips and trips information sheet HSE 2005 Web-only: [www.hse.gov.uk/pubns/web/slips02.pdf](http://www.hse.gov.uk/pubns/web/slips02.pdf)

## Further reading

*Preventing slips and trips at work* Leaflet INDG225(rev1) HSE Books 2003 (single copy free or priced packs of 15 ISBN 0 7176 2760 8) Web version: [www.hse.gov.uk/pubns/indg225.pdf](http://www.hse.gov.uk/pubns/indg225.pdf)

*Slips and trips: Guidance for employers on identifying hazards and controlling risks* HSG155 HSE Books 1996 ISBN 0 7176 1145 0

*Slips and trips: Guidance for the food processing industry* HSG156 HSE Books 1996 ISBN 0 7176 0832 8

*Preventing slips and trips in kitchens and food service* Catering Information Sheet CAIS6(rev1) HSE Books 2005

*The assessment of pedestrian slip risk* Slips and trips Information Sheet HSE 2004 Web-only: [www.hse.gov.uk/pubns/web/slips01.pdf](http://www.hse.gov.uk/pubns/web/slips01.pdf)

*Standards for school premises* 0029/2000 DFEE (now DfES) DfES Publications, PO Box 5050, Sherwood Park, Annesley, Nottinghamshire NG15 0DJ Tel: 0845 602 2260, e-mail: [dfes@prolog.co.uk](mailto:dfes@prolog.co.uk) (free)

*Safer surfaces to walk on - reducing the risk of slipping* C652 CIRIA 2006 ISBN 0 86017 652 5 ([www.ciria.org](http://www.ciria.org)) (Also available free as a pdf from: [www.hse.gov.uk/slips/information.htm](http://www.hse.gov.uk/slips/information.htm))

*Stop slips: Managing slips to reduce injuries and costs* Video HSE Books 2000 ISBN 0 7176 1819

*Workplace health, safety and welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice* L24 HSE Books 1996 ISBN 0 7176 0413 6

While every effort has been made to ensure the accuracy of the references listed in this publication, their future availability cannot be guaranteed.

## Further information

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**This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.**

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