



Preventing slip and trip incidents in the education sector

Education Information Sheet No 2

Introduction

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 1999/2000 figures it is estimated that they cost employers £368 million and society as much as £763 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.

Table 1 Slip and trip incidents in education for 1999/2000

	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	6898	2296	33%	4032	1382	34%
Higher and further education	1484	358	24%	2093	599	29%

* ie pupils, students and visitors

** fatal and major injuries

*** fatal, major and over-three-day injuries

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 sufficient attention is given to the nature of the work environment and the organisation affords them sufficient importance.

The control measures needed are often simple and low-cost, but will bring about significant reductions both in human suffering and costs.

Legal requirements

The Health and Safety at Work etc Act 1974 (HSW Act) requires employers to ensure the health and safety of their employees and others who may be affected by their work activities. 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. 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.

The Management of Health and Safety at Work Regulations 1999 require 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. 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. 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.

The Workplace (Health, Safety and Welfare)

Regulations 1992 contain requirements relating to the construction of floors and traffic routes and to the need to keep them clean and free of obstructions:

A major refurbishment or new building work is an opportunity to eliminate slip and trip hazards. The work may be subject to the **Construction (Design and Management) Regulations 1994 (CDM Regulations)**.

Safety representatives appointed under the **Safety Representatives and Safety Committees Regulations 1977** must be consulted on health and safety matters. 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.

The Health and Safety (Consultation with Employees) Regulations 1996 require employers to consult with workers, either directly or indirectly through elected representatives, on matters relating to their health and safety at work. 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.

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.

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 be taken 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 on page 5 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. Research¹ 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. This in turn lowered the incidence of falls on the level throughout the university. Such modifications to an area may also be necessary if it is shown that other control measures are not working. A number of test methods are available for measuring slipperiness of floors but care must be taken in doing such tests and you should ensure that expert advice on this is sought.

Table 2 Slip and trip risk controls

Area	Practical measures for slips risk control
External steps, paths and parking areas	Suitable lighting – replace, repair or clean lights before levels become too low to be safe Ensure steps and paths are suitable for the volume of pedestrian traffic Ensure paving slabs are secure and tarmac paths in good condition to give a flat, even surface Maintain parking area so that it is free of potholes Mark the nosing of steps using anti-slip coating, as smooth, gloss paint will make the surface slippery under wet conditions Provide handrails where appropriate and maintain in good condition Discourage short cuts across grassed/muddy areas Clean leaves, mud etc from surfaces Remove algal growth Put in place effective procedures to deal with snow or ice
Playgrounds and all-weather sports surfaces	Ensure surface is flat and well maintained to avoid surface water Remove accumulations of mud/water Remove algal growth Ensure users wear the appropriate footwear for the surface Ensure adequate supervision at all times
Building entrances/exits	Provide suitable non-slip, water absorbing mats at entrances Maintain mats in good condition and change when saturated Ensure that temporary matting does not pose a trip risk Display signs warning of hidden steps/changes of level Display signs warning of risk of slipping when appropriate Site door catches and door stops safely
Sports halls	Avoid overpolishing of floor surface Ensure suitable footwear is worn Maintain floor mats in good condition and ensure they remain flat Keep smooth floors clean and completely free of wet or dusty contamination
Changing rooms/swimming pools	Avoid contamination of the floor surface with mud/water from pupils entering – provide shoe-cleaning brushes/scrapers Provide non-slip tiling on floor surfaces. Ensure specialist anti-slip tiles/surfaces are sourced and specified correctly Provide drainage mats or grids in shower areas Provide handholds for people with disabilities
Internal stairs and corridors	Ensure a staggered release of students onto heavily used traffic routes Put in place measures for traffic streaming and flow management up/down stairs Put in place measures for traffic streaming and flow management along corridors Mark nosing of steps using anti-slip coating, as smooth, gloss paint will make the surface slippery under wet conditions. Provide handrails Lighting – replace, repair or clean lights before levels become too low to be safe Apply appropriate anti-slip coatings to areas of smooth flooring which may become wet
Classroom areas (including laboratories and practical areas)	Avoid trailing cables from equipment and tools Provide storage racks for pupils' bags* 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 Provide specialist anti-slip flooring in potentially wet areas Do not store materials or equipment below tables/benches Avoid overcrowding of rooms Control the entry and exit of people from classes Display art work, practical work etc safely Clear away toys in early-years classes

Preparation rooms, technician areas and storage rooms	<p>Provide suitable storage for goods and equipment</p> <p>Keep containers of bulk liquids in bunded areas</p> <p>Clear area around machines, kilns and other equipment</p> <p>Use slip-resistant flooring around machines</p> <p>Remove floor contamination, eg sawdust, clay, oils</p>
Kitchens	<p>Provide suitable equipment to avoid spillages (from cooking, washing etc)</p> <p>Provide edged work surfaces to contain spillages</p> <p>Ensure good ventilation to avoid smoke/steam and condensation</p> <p>Ensure staff wear suitable footwear**</p> <p>Clean spillages and pick up food contamination immediately</p> <p>Dry floors effectively after cleaning</p> <p>Ensure good housekeeping around bins</p> <p>Provide suitable floor surface</p> <p>Clean floors with appropriate products for surface after work has finished</p> <p>Display suitable warning signs re wet floors/stairs while cleaning is in progress</p> <p>Remove warning signs when cleaning/drying is complete</p>
Canteen areas	<p>Ensure staff wear suitable footwear**</p> <p>Clean spillages immediately</p> <p>Use safe cleaning methods</p> <p>Provide suitable floor surface</p> <p>Clean floors when pupils/students have left</p> <p>Display suitable warning signs re wet floors/stairs while cleaning is in progress</p> <p>Remove warning signs when cleaning/drying is complete</p>
Offices	<p>Avoid trailing cables/Use cable covers</p> <p>Provide adequate storage</p> <p>Avoid storage of materials on floors</p> <p>Ensure good housekeeping round photocopiers, printers etc</p> <p>Replace worn or damaged carpets/tiles</p> <p>Provide secure storage for bags etc</p>
Events	<p>Ensure temporary cabling is routed safely and protected from damage</p> <p>Provide sufficient lighting during set-up/dismantling</p> <p>Use temporary matting/straw coverings on grassed areas</p>
Educational visits	<p>Assess location and anticipated weather</p> <p>Modify visit depending on local conditions when on site</p> <p>Wear suitable footwear</p> <p>Ensure effective management of the visit (see DfES website: www.dfes.gov.uk/h_s_ev/ <i>Good practice guide: Health and safety of pupils on educational visits</i>)</p>

* 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.

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)

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 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 contracts - a joint responsibility* for further information on the general health and safety responsibilities of clients and contractors.

Detailed procedures for cleaning spillages and carrying out routine cleaning of floors (including the selection and use of cleaning products appropriate to the surface and or finish; chemicals; and equipment such as appropriate PPE) should be in place. Wet cleaning of floors routinely results in the presence of a very thin layer of cleaning solution on the floor which can often take over five minutes to dry, and can result in very slippery conditions which are often as slippery as a significantly wet floor. To reduce the risk of slip and trip incidents happening it is important to ensure that floors are dried as far as reasonably practicable after cleaning, before allowing pedestrians onto it - for example, before halls are used for evening classes.

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.

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)

Further reading

Preventing slips, trips and falls at work Leaflet INDG225 HSE Books 1996 (single copy free or priced packs of 15 ISBN 0 7176 1183 3)

Preventing slips in the food and drink industries: Technical update on floor specifications Food Information Sheet FIS22 HSE Books 1999

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

Slips and trips: Summary guidance for the catering industry Catering Information Sheet CAIS6 HSE Books 1996

Slips and trips: Summary guidance for the food industry Food Information Sheet FIS6 HSE Books 1996

Standards for school premises CIR22/00 DFEE (now DfES) DfES Publications, PO Box 5050, Sherwood Park, Annesley, Nottinghamshire, NG15 0DJ
Tel: 0845 602 2260, e-mail: dfes@prologistics.co.uk (free)

Stop slips: Managing slips to reduce injuries and costs
Video HSE Books ISBN 0 7176 1819 6

Workplace health, safety and welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice L24 HSE Books 1992
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

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA Tel: 01787 881165 Fax: 01787 313995 Website: www.hsebooks.co.uk (HSE priced publications are also available from bookshops and free leaflets can be downloaded from HSE's website: www.hse.gov.uk)

For information about health and safety ring HSE's Infoline Tel: 08701 545500 Fax: 02920 859260 e-mail: hseinformationservices@natbrit.com or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG.

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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