

Guidelines for Slip, Trip, and Fall Prevention



November 2011

Human Resources and
Environment, Health & Safety

TABLE OF CONTENTS

Slip, Trip and Fall Introduction	Page 3
Risks/Hazards of Slips, Trips and Falls	Page 4
Control Measures	Page 5
Proactive Planning	Page 5
General Precautions	Page 6
Supervisor Guidelines for Preventing Injury	Page 6
Employee Guidelines for Preventing Injury	Page 7
Common Problems and Solutions	Page 8
Appendix 1: Slip, Trip and Fall Hazard/Control Inspection Tool	Page 9
Appendix 2: Slip, Trip and Fall Supplementary Report	Page 10

SLIPS, TRIPS, and FALLS

Introduction

Injuries resulting from Slips, Trips and/or Falls (STF) are among those most commonly reported by employees, students and guests at Brock. STFs are the highest in frequency and severity of all injuries that occur on campus. This is consistent with provincial statistics from the WSIB, which show 1 in 5 Lost Time Injuries in Ontario result from a STF.

STFs occur due to a loss of balance or instability potentially created by a number of factors, including the environment. With more than 20,000 people traveling the University's 31 acres of parking, 11km of walkways and 35000 square meters of hallway daily, the prevention of slips, trips and falls presents both a challenge and a need.

What is a Slip, Trip or Fall?

- Slip: A sudden sliding motion when the foot (or shoe) loses traction with the walking surface potentially resulting in a loss of balance.
- Trip: Temporary instability generated when the movement of the foot is momentarily interrupted.
- Fall: An instantaneous drop in height of the human body.

What does the law say?

The Occupational Health and Safety Act (OHSA) specifically refers slips, trips and falls;

11. A floor or other surface used by any worker shall,
- (a) Be kept free of,
 - (i) Obstructions,
 - (ii) Hazards, and
 - (iii) Accumulations of refuse, snow or ice; and
 - (b) Not have any finish or protective material used on it that is likely to make the surface slippery. R.R.O. 1990, Reg. 851, s. 11.
15. A cover on an opening in a floor, roof or other surface shall be,
- (a) Secured in place; and
 - (b) Constructed to meet the structural requirements for loads due to the use of floors and roofs as set out in the Building Code. R.R.O. 1990, Reg. 851, s. 15.
21. Where natural lighting is inadequate to ensure the safety of any worker, artificial lighting shall be provided and shadows and glare shall be reduced to a minimum. R.R.O. 1990, Reg. 851, s. 21.

RISKS/HAZARDS OF SLIPS, TRIPS and FALLS

Common slip, trip and fall hazards result from:

1. Wet or contaminated floors or walking surfaces (e.g. grease, liquids, ice, oil, dust, fine powders, etc.).

Contaminant	Source
Rain water, Snow, Ice	<ul style="list-style-type: none">• Transmitted internally from open external doors or from feet, coats, or umbrellas of pedestrians• Building leaks
Water, other fluids	<ul style="list-style-type: none">• From spills, plumbing leaks, cleaning, ice machines, floor cleaning products
Floor cleaning products	<ul style="list-style-type: none">• Resulting from failure to follow appropriate cleaning protocol
Body fluids	<ul style="list-style-type: none">• Blood, vomit
Condensation	<ul style="list-style-type: none">• Variations in temperature
Dusts	<ul style="list-style-type: none">• Natural or from stored materials
Debris or clutter	<ul style="list-style-type: none">• Bags, paper, food residues, soil, cardboard boxes, leaves, rocks, grass clippings

2. Uneven walking surfaces, holes, changes in level, broken or loose floor tiles, defective or wrinkled carpet or uneven steps/thresholds.
3. Mats or rugs not laying flat on the floor.
4. Damage to interior or exterior walking surfaces (eg. cracks, holes, bumps, depressions).
5. Obstructions and accumulation of objects in walkways (e.g. hoses, cords, cables, debris, etc.).
6. Unguarded platforms, walkways, and work areas 30 inches above ground.
7. Inappropriate footwear or ill-fitted clothing
8. Behaviours such as rushing or carrying objects which obstruct vision and limit hand guarding
9. Inattention due to distraction by mobile communication devices, conversation or other activities
9. Inadequate illumination (refer to Appendix B for specific requirements).

Higher Risk Areas

For purposes of this Guide, an area where slip, trip, or fall hazards may likely arise during a typical work shift, is considered a “higher risk area”. Examples of higher risk areas include:

- a) Dining halls and kitchens - wet floor
- b) Pool, locker and wash rooms - wet floor
- c) Loading docks - elevated locations
- d) Parking lots - especially winter/wet conditions, potholes or taking short-cuts over barriers/berms

CONTROL MEASURES

“At the Source” Slip, Trip and Fall Controls

- Avoid areas where STF hazards have been identified (i.e. construction or repairs occurring).
- Remove potential tripping hazards (e.g. backpacks, computer cords, debris)
- Maintain surfaces free of potential slip, trip and falls hazards
- Design/Install engineered walkways to prevent the accumulation of snow, ice or water eg. with shelter, heat or graded for drainage
- Repair water leaks/run-off/puddling impacting pedestrian routes
- Thoroughly brush snow and ice from boots and pants before entering a building

“Along the Path” Slip, Trip and Fall Controls

- Barricade/mark areas where STF hazards have been identified (eg. a large spill indoors or a section of sidewalk under repair outdoors)
- Provide direction to alternative safe routes of travel
- Place mats at entrances to absorb water and debris tracked in by pedestrians.

“At the Person” Slip, Trip and Fall Controls

- Pedestrian awareness and education campaigns on STF recognition and avoidance
- Use signs/pylons/caution tape for potential STF hazards and alert to floor conditions
- Personal apparel & behaviour modification with respect to pace, load, vision, attention and footwear. (eg. wearing sunglasses in summer or boots in winter).
- Report hazards and incidents for future prevention

PROACTIVE PLANNING

Improve the safety of the workplace by taking a proactive problem solving approach. Being proactive simply means finding the challenges first by looking around the workplace rather than waiting for problems to occur. Then assess and implement ways to improve the fit between the work and the worker.

The process involves workers, supervisors, and managers observing jobs, communicating the hazards, making decisions on effective options, and then taking action.

There are 4 steps to a proactive action plan:

1. Look for clues

Conduct a physical examination of the workplace. Record all slip, trip and fall hazards and collect information from workers using a questionnaire approach. Review all reports such as accident and injury reports, property damage reports, JHSC minutes, etc.). Talk to Environment, Health & Safety about general material handling hazards at Brock.

2. Assessment and prioritization

Determine the type and severity of each potential hazard. Consider things such as footwear being worn while working with the hazard, the type of hazard, the distance someone must travel through the hazard, the visibility of the hazard, physical abilities of the worker to work within the hazard, and education and training needs. Then consider; how can these tasks be improved? List the tasks in order of importance.

3. Make improvements

To reduce or eliminate the risk, determine and implement the most effective and feasible controls. Brainstorming with employees can be a helpful tool during this process. When possible, control hazards at the source or along the path. Consider the following:

- *Do new work practices need to be implemented, such as footwear or clothing policies?*

- Does the workplace need to be corrected (such as floor treatments, sandblasting, paint etc.)
- Are the warning signs being effective? How can they be made more effective?
- Do tasks need to be redesigned so that loads do not need as much force?
- Does equipment need to be replaced or updated?

4. Follow up

Use an assessment tool to see if new steps are being effective. This can include reviewing recent injury/incident reports, talking with employees, etc.

General STF Safety Precautions

- Avoid running or walking too fast, especially in higher risk areas.
- Avoid carrying items that will obstruct one's view of their walking pathway.
- Avoid walking through potential slip, trip and fall hazards.
- Use extra caution when traveling both outdoors and indoors during/following wet weather.
- Individuals who frequent potentially slippery higher risk areas should wear slip-resistant footwear.

When selecting footwear, consider the following:

- Level of slip-resistance (Polyurethane and microcellular urethane soles provide the best resistance)
- Tread design, tread hardness, and shape of sole and heel (rough flat soles will not provide good traction)
- Proper comfort and support
- NOTE: The use of slip-resistant footwear alone is not adequate in preventing slip-related accidents. General housekeeping procedures and safe work practices) must be used.
- Report all hazards you are unable to contain yourself to the appropriate party.
- Use all and any equipment provided to you for the purpose of reducing the risk of a slip, trip or fall (such as mats, footwear, etc.)

General Housekeeping Prevention Procedures

- Clean up spills immediately. If you are unable to clean up a spill for any reason, report to Facilities Management Customer Service x3717
- Do not leave floors wet after cleaning - clean them to a completely dry finish if possible. If "clean-to-dry" is not possible, then use barriers and "wet floor" warning signs to keep people off the wet area.
- Use cleaning methods that do not spread the problem. Small spills are often better dealt with using a paper towel instead of a mop that wets a larger area of floor.
- Do not use cardboard to soak up spills.

Supervisor Guidelines

- Regularly inspect work areas to recognize STF or other hazards
- Identify and develop solutions to address priority areas
- Prevent STF hazard generation through departmental activities
- Maintain equipment which is used for the prevention of slips, trips and falls (such as floor mats, ladders, etc)
- Communicate all potential hazards and take measures to reduce the distance and/or frequency (ie. rotating tasks, providing equipment, etc) of travel in high risk areas
- Ensure the work environment is kept in a clean condition (ie. no clutter on the floors, no obstructions)
- Encourage reporting of all hazards and any incidents

- Take all reasonable precautions to address issues and control STF hazards
- Conduct incident investigation for root cause
- Inform/educate employees to recognize and prevent slips, trips and falls in the workplace
- Develop procedures to communicate work practice, equipment, apparel, behaviour and environmental expectations for STF prevention as warranted.
- Provide work and hazard-specific training for prevention as needed
- Evaluate compliance with procedures, work practices, equipment use and appropriate apparel and footwear
- Recognize and reward compliance, acknowledge and learn from non-compliance
- Review department/unit's success in STF prevention annually, and change internal practices and procedures as warranted
- Keep and maintain records and/or documentation on employee training, incidents, and inspections

Employee Guidelines

- **The use of stretching is appropriate as part of a comprehensive ergonomic program. Stretching may reduce the risk of severe injury in the event of a slip, trip, or fall.**
- Wear appropriate clothing and footwear
 - Clothes that are comfortable around hips, knees and shoulders that do not have exposed buttons or flaps
 - Non-slip shoes with broad based low heels.
- Recognize the circumstances and environments that contribute to STF hazards
- Protect oneself from STF hazards by taking time while traveling, avoiding short-cuts, ensuring the path is visible and hands are kept free
- Prevent the creation of slip, trip and fall hazards by adhering to recommended housekeeping and other safe work practices
- Report, de-mark and/or clean up spills immediately
- Remove debris and other hazards from floors
- Keep work areas free from clutter
- Report all potential/actual STF hazards beyond one's ability to solve to the work or area Supervisor
- Report any injuries or close calls using the Brock University Injury/Incident form

COMMON PROBLEMS & SOLUTIONS

COMMON PROBLEMS	SOLUTIONS
Inappropriate footwear	<p>Ensure suitable anti-slip footwear is worn. Refer to supplier's and manufacturers specifications for selection of footwear for different surfaces and risk factors.</p> <p>If your job does not require special footwear, bring two different pairs of shoes to work anyway; one for travelling safely outside in the parking lots and walkways, and your stable indoor footwear.</p>
Spills	Clean up the spill if you can. If you are unable to clean up the spill, mark the area and report to Facilities Management Customer Service x3717.
Uneven surfaces	Report visible hazards to Facilities Management x3717 or to an area's supervisor. Take a photo of the hazard and give a detailed description.
Behaviour	<p>Do not take short cuts and take your time when travelling. Give yourself an extra 10-15 minutes of travel time from parking lots to buildings in the mornings when the weather conditions are poor.</p> <p>Use all equipment provided to you to prevent injury from slips, trips, and falls.</p> <p>Do not use chairs or tables as ladders.</p> <p>Pay attention to signs which communicate a slip, trip or fall hazard. Do not cross barriers which mark an area as unsafe.</p>
Poor visibility	<p>Walk in well-lit areas. If you notice a light is burnt out, report to Facilities Management Customer Service x3717.</p> <p>Do not carry objects in your hands while walking which restrict visibility of the ground and surface in front of you.</p>
Stairs	Use handrails while using stairs. Always keep to your right and ensure you have full visibility of the stairs in front or below you.

Appendix 1: SLIP, TRIP AND FALL HAZARD/CONTROL INSPECTION CHECKLIST

Building:	Floor:	Area/Room#:
Department:	Supervisor:	High Risk: Y <input type="checkbox"/> N <input type="checkbox"/>

Floor Conditions		Yes	No	NA	Comments
1	Floor is kept free from slip hazards such as food or liquid spills, and other debris				
2	Walkway is kept free from trip hazards such as torn carpets, electrical cords, fallen articles, broken tiles, etc.				
3	Carpet/rugs are in good condition & secured to the floor.				
4	Floors are properly designed to allow for good drainage.				
5	Floors drains are not plugged/ allow adequate drainage.				
6	Floor mats are in good condition, free of grease, and used appropriately (i.e. mat is not a trip hazard).				
7	Floor mats have beveled edges, and where appropriate, are grease resistant and promote drainage.				

Controls/Environment		Yes	No	NA	Comments
1	Portable signs, and equipment used for spills cleanup are available for use.				
2	Slip-resistant footwear is worn by employees.				
3	Illumination is adequate.				
4	Stepladders are in good condition and have non-skid feet.				

Building Perimeter/Stairways/Special Areas		Yes	No	NA	Comments
1	Sidewalks & ramps are free of defects (e.g. cracks, breaks, holes).				
2	Sidewalks & ramps do not show signs of surface upheaval or unevenness.				
3	Stairway's surface and nosing (leading edge of stair tread) are free of defects (e.g. broken steps, cracks).				
4	Handrail is present and secured at stairways & ramps.				
5	Guardrails are present and secured on working surfaces that are more than 30 inches above floor or other working areas (Exception: loading dock).				
6	Restroom floors free from defects and properly maintained. No evidence of plumbing leaks.				
7	Other:				

Other Comments/Notes:



SLIP, TRIP, AND FALL SUPPLEMENTARY REPORT

For Environment, Health & Safety
Use Only

Acc. Ref. # _____

Classification

- ☐ Cm Hlth Care ☐ Lost Time
☐ Incident ☐ No Treatment
☐ First Aid ☐ Br Athl Clinic
☐ Br Hlth Ser ☐ Health Care

Fill out in addition to an Injury/Incident Report

Date of Slip, Trip, and Fall (D/M/YY) / /		Time of Injury/Incident (HH:MM) <input type="checkbox"/> am <input type="checkbox"/> pm		<input type="checkbox"/> Brock Employee <input type="checkbox"/> Brock Student <input type="checkbox"/> University Visitor <input type="checkbox"/> Other:	
Last Name		First Name		Gender <input type="checkbox"/> Male <input type="checkbox"/> Female	Phone Number
Address City Postal Code				Age: <input type="checkbox"/> 0-10 <input type="checkbox"/> 21-39 <input type="checkbox"/> 11-20 <input type="checkbox"/> 40-59 <input type="checkbox"/> 60+	
Location of Slip, Trip, and Fall: <input type="checkbox"/> Outdoors <input type="checkbox"/> Indoors		Where did the slip, trip and fall occur? (include all specific information including parking lot number, building, floor number, or all that applies. Attach photo of footwear and incident area if possible and mark the attached map with location information) <div>Included: <input type="checkbox"/> Photos <input type="checkbox"/> Map</div>			
Incident was related to (check all that apply): <input type="checkbox"/> Uneven surface <input type="checkbox"/> Indoor or outdoor tripping hazard (clutter on floor, cords not taped down, etc.) <input type="checkbox"/> Behaviour (rushing, inhibited vision, etc.) <input type="checkbox"/> Mis-step <input type="checkbox"/> Fall from height <input type="checkbox"/> Footwear Specify: _____ <input type="checkbox"/> Other Specify: _____				Is there a departmental policy/procedure that could have prevented the slip, trip, or fall? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes please list and provide policy/procedure location:	
Precisely outline the sequence of events and conditions that lead up to the slip, trip, or fall. If an object was being carried during the incident, detail the size, weight, and type of material.					
Environment Canada's Weather Report during incident (www.weatheroffice.gc.ca)					
Personal Weather Observations during incident					

Name of person who completed this form

Department/Extension

Date

I hereby confirm all information provided above is correct to my knowledge

Signature

Date

Filled form must be photocopied 3 times (1 for HR-EHS, 1 for person/department of origin, 1 for the supervisor). This form must be completed and returned to HR-EHS within 2 business days.