



## SLIPS, TRIPS AND FALLS



McMaster University 
Environmental & Occupational Health Support Services (EOHSS)

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## SLIPS, TRIPS AND FALLS (STF)

- You take hundreds of steps every day, but how many of those steps do you take seriously?
- By taking a few minutes to understand how slips, trips, and falls (STF) happen, you can prevent needless and painful injuries.




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## Slips, Trips and Falls: Agenda

- Hazards and Control, including Industrial Regulations
- RMM# 312: Foot Protection Program
- Statistics, WSIB and McMaster University
- Effective Housekeeping Program
- Reducing Falls at Work, Office Safety
- Ladder Safety
- Reporting




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**SLIPS!! :**  
**to slide along smoothly resulting in a sudden mishap.**

- Too little friction or traction between footwear and walking surface
- Transition between flooring types (carpet to tile)
- Weather (rain, snow, ice)
- Spills (water, oil, chemicals, food)
- Loose, unanchored rugs




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**RMM# 312: Foot Protection Program**

- To reduce the potential for foot injury and risk of slipping
- To provide guidance for the selection of protective footwear
- Faculty, Staff, Students and Volunteers shall wear protective footwear prescribed by the supervisor as being appropriate for the involved tasks
- Close-toed shoes shall be the minimum standard for foot protection wherever there is a potential for foot injury in the workplace
- Only CSA approved protective footwear will be used on campus when such footwear is deemed necessary
- Appendix B: Types of Foot Hazards and Required Protection

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**TRIPS!! :**  
**to catch the foot on something so as to stumble.**

- Damaged steps or misplaced items are major factors in trips.
- Uneven flooring
- Obstructions (cables)
- Equipment; clutter
- Use handrails when ascending or descending stairs.




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**FALLS!! :**  
**to descend freely by the force of gravity.**



Eliminate the hazard when possible (i.e. broken chair, unstable ladder, etc...)  
 Practice good judgment - Don't lean back in chairs, don't climb on shelving or tables.

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**WSIB Statistics**

- ▶ Falls from heights (1 cm to 120 stories) account for 35% of all WSIB fall injuries
- ▶ Same level falls (slips and trips) account for 65% of all WSIB fall injuries

Each year in Ontario:

- ▶ WSIB receives 17,000 lost time injuries (LTI) due to falls in the workplace (1/5 are caused by falls)
- ▶ 80 Ontario workers are injured every day because of a fall---- that's 1 every 20 minutes!

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**(STF) Cost Us All:**

In 1996, the average Ontario WSIB claim resulted in 6 weeks off work at a direct cost of \$ 19,560.

For every dollar spent, an estimated \$5.00 is spent in "hidden costs"

The hidden costs increase this amount to \$ 98,000 per WSIB claim (2006)

Are STF a cost of doing business?

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## Regulation 851 for Industrial Establishments

11. A floor or other surface used by any worker shall,

- (a) Be kept free of
  - (i) obstructions,
  - (ii) hazards,
  - (iii) accumulation 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.

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## Elements Of An Effective Housekeeping Program

**Dust and Dirt Removal**

- In some jobs, enclosures and exhaust ventilation systems may fail to collect dust, dirt and chips adequately.
- Dampening floors or using sweeping compounds before sweeping reduces the amount of airborne dust.

**Employee Facilities**

- Employee facilities need to be adequate, clean and well maintained.
- Lockers are necessary for storing employees' personal belongings.
- Smoking, eating or drinking in the work area should be prohibited where toxic materials are handled.

**Surfaces**

- Poor floor conditions are a leading cause of accidents so cleaning up spilled liquids at once is important. Mop or sweep debris.
- Keeping floors in good order also means replacing any worn, ripped, or damaged flooring that poses a tripping hazard.
- Securing mats (Lack, tape)
- Covering temporary cables across walkways

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## Elements Of An Effective Housekeeping Program, continued...

**Aisles and Stairways**

- Aisles should be wide enough to accommodate people comfortably and safely.
- Warning signs and mirrors improve sight-lines in blind corners.
- Keeping aisles and stairways clear is important. They should not be used for temporary "overflow" or "bottleneck" storage.

**Spill Control**

- The best way to control spills is to stop them before they happen. When spills do occur, it is important to clean them up immediately.
- Mark the wet area with signs

**Waste Disposal**

- The regular collection, grading and sorting of scrap contribute to good housekeeping practices.
- All waste receptacles should be clearly labelled (e.g., recyclable glass, plastic, scrap metal, etc.).

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## Elements Of An Effective Housekeeping Program, continued...

**Storage**

- Good organization of stored materials is essential for overcoming storage problems whether on a temporary or permanent basis.
- Stored materials should not obstruct aisles, stairs, exits, fire equipment, emergency eyewash fountains, emergency showers, or first aid stations.
- Close file cabinets and storage doors.

**Maintain Light Fixtures**

- Dirty light fixtures reduce essential light levels. Clean light fixtures can improve lighting efficiency significantly. Replace faulty switches.

**Maintenance**

- The maintenance of buildings and equipment may be the most important element of good housekeeping.

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## Elements Of An Effective Housekeeping Program, continued...

- Must be ongoing: not hit or miss cleanup done occasionally
- If the sight of paper, debris, clutter and spills is accepted as normal, then other health and safety hazards may be taken for granted
- Clutter may also hide other hazards
- Basic component of accident prevention and fire safety
- Identifies and assigns responsibilities for:
  - ▣ Clean up during the shift
  - ▣ Day to day clean up
  - ▣ Waste disposal
  - ▣ Removal of unused materials
  - ▣ Inspection to ensure clean up is completed

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## Elements Of An Effective Housekeeping Program, continued...

Good housekeeping, quality of walking surfaces (flooring), selection of proper footwear, and appropriate pace of walking are critical for preventing fall accidents.




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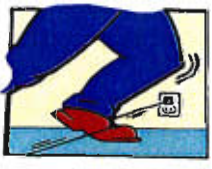


### Reducing STF at Work, Office Safety

Ensure electrical and computer cords, bags and purse straps are covered or out of the way of pedestrians.

Mats must be tacked or taped down

Use appropriate ladders or step stools to reach high items, do not stand on tables or chairs.




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### Reducing STF at Work, Office Safety



- Ensure all drawers are kept closed
- Prevent a potential injury by cleaning up spills and wet floors.
- Keep aisles and walkways clear of clutter or obstructions.
- Report hazards to your supervisor and Facility Services (24740)

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### Ladder Safety

- Industrial Regulations (sections 18, 19, 20 and 73)
- Hazards
- Inspection and Maintenance
- Storage
- Set up and Use




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## Regulations 851 for Industrial Establishments

18 (1) Subject to subsection (2), an access ladder fixed in position shall,

- (a) be vertical
- (b) have rest platforms at not more than nine meter intervals;
- (c) be offset at each rest platform;
- (d) where the ladder extends over five meters, above grade, floor or landing, have a safety cage commencing not more than 2.2 meters above grade and continuing at least ninety-centimeters above the top landing with openings to permit access by a worker to rest platforms or to the top landing;
- (e) have side rails that extend ninety centimeters above the landing; and
- (f) Have rungs which are at least fifteen centimeters from the wall and spaced at regular intervals.

18 (2) Subsection (1) does not apply to an access ladder on a tower, water tank, chimney or similar structure which has a safety device which will provide protection should a worker using a ladder fall. R.R.O. Reg. 851, s 18.

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## Regulations, continued...

19. Where frequent access is required to equipment elevated above or located below floor level, permanent platforms shall be provided with access by a fixed,

- (a) stair; or
- (b) access ladder

20. Barriers, warning signs or other safeguards for the protection of all workers in an area shall be used where vehicle or pedestrian traffic may endanger the safety of any worker. R.R.O. 1990, REG. 851, s.20

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## Regulations, continued...

73. A portable ladder shall,

- (a) Be free from broken or loose members or other faults
- (b) Have non slip feet
- (c) Be placed on a firm footing
- (d) Where it,
  - (i) exceeds six meters in length and is not securely fastened, or
  - (ii) is likely to be endangered by traffic,
 be held in place by one or more workers while being used; and
- (e) When not securely fastened, be inclined so that the horizontal distance from the top support to the foot of the ladder is not less than ¼ and not more than 1/3 of the length of the ladder. R.R.O. 1990, Reg. 851, s. 73.

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### LADDER HAZARDS

- Ladders with missing or broken parts.
- Using a ladder with too low a weight rating.
- Using a ladder that is too short for purpose.
- Using metal ladders near energized electrical equipment.
- Using ladders as a working platform.
- Objects falling from ladders.

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### LADDER INSPECTION/MAINTENANCE

- All rungs and steps are free of oil, grease, dirt, etc.
- All fittings are tight.
- Spreaders or other locking devices are in place.
- Non-skid safety feet are in place.
- No structural defects, all support braces intact.
- Keep ladders clean.
- Never replace broken parts unless provided by the original manufacturer.
- Do not attempt to repair broken side rails
- Implement a basic inspection schedule

DO NOT use broken ladders. Contact Maintenance to have broken ladders tagged "Do Not Use" and removed from service.

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### LADDER STORAGE

- Store ladders on sturdy hooks in areas where they cannot be damaged.
- Store to prevent warping or sagging.
- Do not hang anything on ladders that are in a stored condition.

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## LADDER SETUP

Procedure to prevent ladder incidents:

- Place ladder on a clean slip free level surface.
- Extend the ladder 3 feet above the top support, if used to access roof or other elevated surface.
- Anchor or secure the top of the ladder when the 3 feet extension is not possible.
- Place the ladder base  $\frac{1}{4}$  the height of the ladder from the wall when using a straight ladder.

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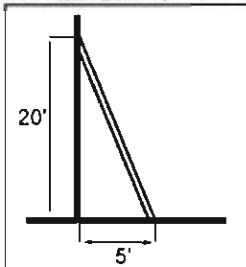


Figure 2. Use a 4:1 ratio for setting ladders

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## LADDER SETUP, continued

- Never allow more than one person on a ladder.
- Use tool belts or hand lines to carry objects.
- Do not lean out from the ladder in any direction.
- Do not allow others to work under a ladder in use.
- Be aware of possible pedestrian traffic in the area. Have someone guard the area if necessary




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