UNIVERSITY OF MANITOBA

Physical Plant

A COR™ Certified Workplace

Ladder Safety

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Ladder Safety

CAUTION: To complete this workshop, you will need to refer to the booklet “Trust: 3 Steps to Ladder Safety” (Featherlite Industrial Ladders). It is available through Reception.

Ladder Safety

Contact the Training and Safety Coordinator (474-7460) to write the Competency Check after completing this online workshop.

References

- WS&H Regulation Part 14 (Fall Protection)
- "Trust: 3 Steps to Ladder Safety" by Featherlight Industrial Ladders
- Physical Plant SWP "Working With A Portable Stepladder"

References

- Physical Plant Workshop “Scaffolding, Roof Work and Guardrail Safety”
- “Ladder Safety” Construction Safety Education Program #4, Construction Safety Association of Manitoba

Objective

This on-line workshop provides a guideline for ladder safety. It is intended to give you practical information relating to the requirements of using a portable ladder safely.

This program will help you to identify, and eliminate or manage, the majority of hazards associated with working with portable ladders.

Workshop content

- Objective
- Ladder Selection
- Ladder Set-up
- Ladder Inspection

- Competency Check

Major causes of incidents

Three basic errors common to many incidents involving falls from ladders:

1. Failure to set the ladder at the proper working angle.
2. Failure to secure the bottom of the ladder to prevent it from sliding.
3. Failure to secure the top of the ladder.

A false belief

Many workers believe that a person has to fall from the roof to sustain a serious injury. This belief is entirely false.

Injury investigation statistics reveal that fatalities and other permanent disabilities often result from falls of six feet or less.

Ladder Selection

One ladder is rarely suitable for all jobs. You must select the correct ladder for the task at hand by answering the following questions...

Type Size Duty Rating

1. What TYPE of ladder do I need? (i.e., is a step or extension ladder required?
2. What SIZE of ladder is required to perform the task?
3. What DUTY RATING do I need (i.e., how much weight will the ladder need to support?

Duty Rating Chart*

Max.	Load Rated Use	CSA
250 lbs	Heavy Duty Industrial	Grade 1
300	Extra Heavy Duty	Grade 1
375	Special Heavy Duty	Grade 1

*See “Trust” booklet, page 5 for further details

Wooden and Fiberglass

Wooden ladder - Physical Plant does not purchase this type of ladder.

Fiberglass ladder - All ladder purchases over the last 5 years have been this type since they are safe around electricity.

Getting to the work site

- If possible, go during a “quiet” time.
- Check with others in the area to ensure that you can carry out your task.
- If you are uncomfortable carrying the ladder, get some help.
- Ensure that the legs of the stepladder stay together. This may mean strapping them.

Ladder Set Up

In most users' minds, handling and using ladders is straightforward and carefree. Unfortunately some 4,000 people are hospitalized annually in Canada as a result of ladder incidents.

Incident statistics show that users regularly fail to recognize, and eliminate or manage potential hazards.

Ladder Set Up

Unless you are a qualified electrician, keep your ladder away from electrical wires.

The 1:4 Rule

Straight or Extension Ladders: The feet of a straight or extension ladder should be set at a point one foot horizontally outward from the upper support, for every four feet of vertical distance between the ladder feet and the upper support point.

In other words, one foot out for every four feet up.

Consider before climbing...

1. Conduct an hazard assessment.
2. Read and follow all the labeled warnings and instructions specific to that ladder.
3. Wear clean, sturdy shoes with slip-resistant soles.

Consider before climbing...

4. Always secure a ladder from movement.
5. A ladder is designed for one person.
6. Do not exceed the labeled duty rating.

General Guidelines

1. If working in a high-traffic area, try to schedule your work when the pedestrian traffic is lighter.
2. If working in a ‘public’ area such as a hallway, you must barricade (you might consider using chairs) the area to prevent pedestrians from accidently bumping into the ladder with you on it.
3. Never leave a ladder set up and unattended.

General Guidelines

4. Remove foreign substance such as mud and dirt from ladder before climbing.
5. Always face the ladder when climbing up or down.
6. Maintain a 3-point contact at all times.
7. Keep your body centered between the side rails.

General Guidelines

8. Do not “walk” or “shift” the ladder while on it. Climb down and move the ladder to its desired location.

9. Do not overreach. Get down and move the ladder as needed.

General Guidelines

Straight or Extension Ladder

1. Never work higher than 3 feet from the top.
2. Do not use the ladder in a horizontal position as a scaffold plank or runway.
3. Grasp the rung when climbing a ladder, not the side rails. If your foot slips on a ladder, holding onto rungs is easier than holding onto the side rails.

General Guidelines

Fixed Ladders

A fixed ladder is permanently attached to a supporting building or structure.

It is designed by a professional engineer and meets recognized safety requirements for fixed ladders including WS&H Regulation Part 14 (Fall Protection).

Ladder Inspection

Once you have selected the correct ladder for the job, it must be carefully inspected before each set-up and use. **Never use a damaged ladder**.

Many incidents are caused by the use of damaged or otherwise unsafe ladders, and result in severe injury or death.

Ladder Inspection

Damaged ladders are to be tagged and reported to your supervisor.

Inspection considerations

1. Side rails that have been damaged, bent, or twisted are never to be straightened.

2. Loose or cracked rungs are normally caused by severe over stressing of a ladder. The ladder is not to be used.

3. Under no circumstances should loose rungs be welded unless the ladder is designed with welded rungs.

Inspection considerations

4. Inspect the top of the ladder for cracks or dents. Inspect all side rails for cracks, dents, bends or any other blemishes.

5. Ensure that all fasteners are present and tight.

6. Ensure that the safety-feet are tight and working properly.

7. Ensure spreader arms move freely and lock properly.

Completing your task

1. Do not stand on pipes, chairs or tables to reach the work. This is a violation of a Physical Plant Safety Rule (Safety and Health Manual, Chapter 5). Get a ladder.

2. Be mindful of arm fatigue when the work requires you to look up and reach above your head.

Completing your task

Don’t be too casual at the job site. Complete your task in a professional manner.

Your best defence

Best practices suggests that your best defence against ladder injuries is to practice Due Diligence.

Competency Check

follows on the next slide - click here