

Ladders

Hazards

Injury statistics show that the use of ladders presents many hazards. Injuries involving ladders frequently cause permanent disability.

The hazards associated with ladders include:

- ▶ falls from ladders
 - ▶ struck by falling ladders
 - ▶ struck by materials falling from ladders
 - ▶ tripping over ladders (erect or lying on floor)
 - ▶ lifting heavy ladders
 - ▶ striking persons or objects when carrying ladders
 - ▶ contact with electrical equipment
- ▶ Get help when moving heavy or long ladders.
 - ▶ Make sure that your shoes are safe. If they are wet or muddy, you could slip.
 - ▶ Put the ladder up correctly. Follow the "4 to – 1" rule: One foot back for each four feet up. When you set up the ladder, count the number of rungs up to the point where the ladder touches the wall. The bottom of the ladder must be one rung's length out from the wall for every four rungs up the wall.

Controls

Develop a policy on ladders which covers use, inspection, repair, and disposal. Emphasize compliance with the legal requirements covering ladders.

Establish safe practices for the use of ladders. Make sure they are followed.

Straight Ladders

- ▶ Use the right ladder for the job.
- ▶ Inspect the ladder before and after use.
- ▶ Tag and remove defective ladders for repair.

Figure 1
A properly raised ladder

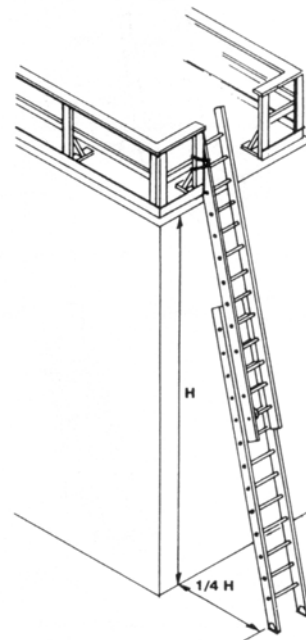
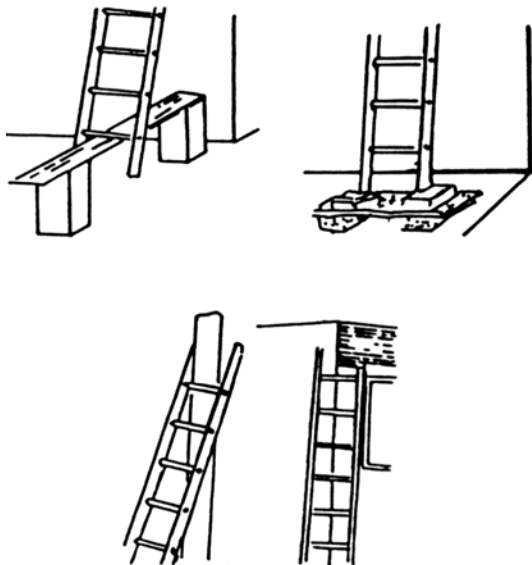


Illustration: courtesy of the Construction Safety Association of Ontario.

- ▶ Secure the top of the ladder, as needed.
- ▶ In aisles or where there may be the danger of traffic, have someone hold the ladder. Post a warning sign, if necessary.
- ▶ Secure the top and bottom of a ladder when using it to access a platform or scaffold.
- ▶ Face the ladder when ascending or descending. Maintain 3 point contact.
- ▶ Hoist materials or attach them to a belt. Do not carry materials in your hands.
- ▶ Make sure that only one person at a time is on the ladder.
- ▶ Don't stretch or reach beyond the side rails of a ladder. You could lose your balance.
- ▶ Never stand any higher than on the third rung from the top of a ladder.
- ▶ Keep metal and wet wooden ladders away from live electrical circuits.
- ▶ Avoid the dangerous practices shown below.

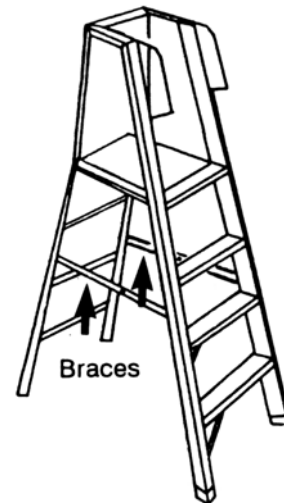
Figure 2
Dangerous Practices



Stepladders

- ▶ Many of the rules for straight ladders apply to stepladders as well.
- ▶ Never use a step ladder as a straight ladder.
- ▶ Use a platform type stepladder with side rails. It provides safer support and a more stable working surface.
- ▶ Lock the stepladder – spread the legs to their limit and ensure the braces are locked.

Figure 3
A Platform Type Stepladder



Maintenance

Establish a program for regular maintenance of ladders, which includes:

- ▶ inspecting for common defects such as broken rungs, split side rails, worn or broken safety feet, and oil or grease which can make climbing surfaces slippery
- ▶ destroying ladders that cannot be safely repaired
- ▶ prohibiting repairs which include tying or binding with wire
- ▶ prohibiting the painting of ladders, as this can hide cracks or other weak points

Inspection Checklist

The following checklist covers many areas of potential problems. It may be used as a maintenance, department or pre-shift check. Modify it to suit your needs.

Ladder No.: _____

Location: _____

Date Purchased: _____

Type of Ladder: _____

Length of Ladder: _____

Material: ☐ Wood ☐ Metal

✓ Acceptable ✗ Unacceptable	Dates of Inspection											
Rungs (loose, moveable by hand)?												
Nails, screws, bolts or other metal parts (loose)?												
Uprights, braces, and rungs (in good condition)?												
Wooden parts (smooth, no splinters)?												
Non-slip safety feet (in proper condition)?												
Ladder (stable)?												
Hinge spreaders (tight, straight)?												
Hinge spreader stops (functioning correctly)?												
Hinges (tight)?												
Extension locks (in place, in good condition)?												
Rope (undamaged)?												
Identification marks (legible)?												
Ladder (stored properly when not in use)?												
Certification:												
Initials of person making inspection												
Notes: 												

Training

Your employee training program should include the following:

- ▶ choosing the right ladder for the job
- ▶ assessing the area where the ladder will be used, the condition of the floor or ground
- ▶ how to level
- ▶ inspecting for defects
- ▶ using ladders safely
- ▶ dangers of overreaching
- ▶ awareness of unsafe practices such as:
 - setting ladder on boxes, steps, etc.
 - climbing with wet or greasy shoes
 - removing the safety feet
 - leaning the ladder against unstable support

Use the safe practices in this guideline to supplement your training.

Legislation

Regulations for the Industrial Establishments (Reg. 851) made under the **Occupational Health and Safety Act:**

- ▶ Sections 18 & 19: Access Ladder
- ▶ Section 73: Portable Ladder

References

CSA Can 3-Z11-M81 (R2003) (Portable Ladders)

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