

LADDER SAFETY

TYPES OF LADDERS

Portable ladders can be readily moved or carried. They include self-supporting step ladders, single or straight ladders, twin front ladders, extension trestle ladders, extension ladders and stepstools (ladder-type).

An **orchard ladder** is a three-legged portable ladder used in orchards or garden and landscape work.

Portable ladders must be able to support at least four times the maximum intended load (shown on the ladder label), except extra-heavy-duty metal or fiberglass ladders, which must be able to sustain 3.3 times the maximum intended load.

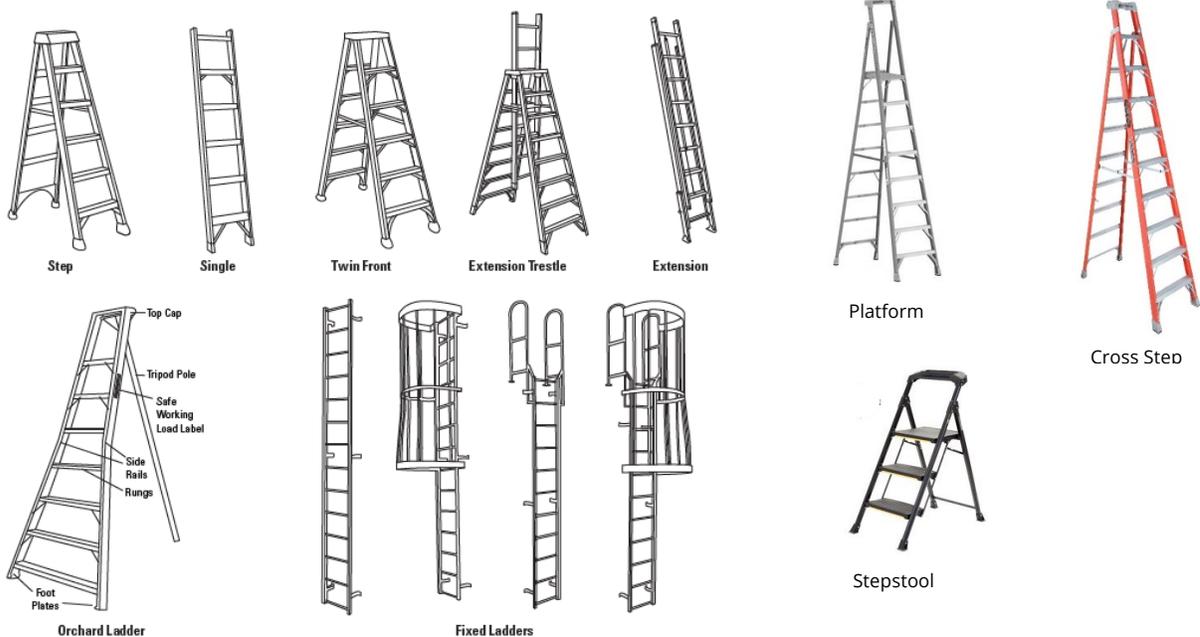
Fixed ladders cannot be readily moved or carried because they are an integral part of a building or structure.

Never subject a ladder to a load greater than its **duty rating**, which is the total load of the person's weight, equipment, tools and materials.

Duty Rating	Ladder Type	Maximum Intended Load (lbs.)
Extra Heavy (high capacity industrial)	IAA	375
	IA	300
Heavy (industrial)	I	250
Medium (commercial, painting, maintenance)	II	225
Light (household)	III	200

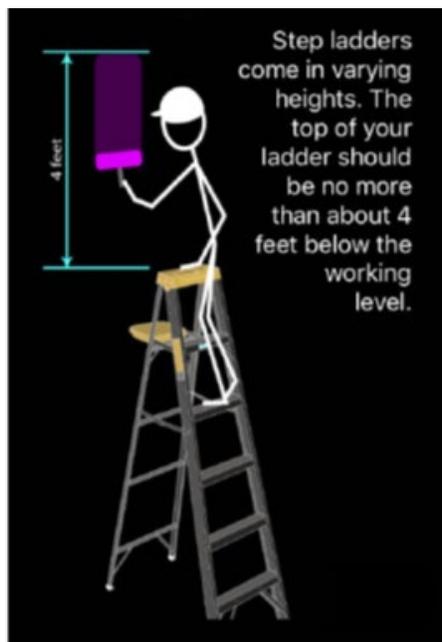
Choosing a fiberglass, aluminum or wood ladder?

- **Fiberglass** is the best choice and required for most UW work for strength, durability, weather resistance and non-conductivity.
- Never use a metal ladder if electrical contact may occur.



SELECT THE RIGHT LADDER

- **How high do you need to reach?** Top of ladder should be no more than 4 feet below the work.
- **How much weight will the ladder need to hold?** Compare it to the ladder duty rating.
- **Is it an indoor or outdoor job?** Orchard ladders should only be used outdoors for orchard, gardening or landscaping activities.
- Use a fiberglass ladder if electrical contact may occur.
- Never use a ladder for any purpose other than the one for which it was designed.
- Do not use if damaged, defective or if steps are greasy or slippery.



Step ladder proper use

Source: [NIOSH Ladder Safety App](#)

LADDER INSPECTION

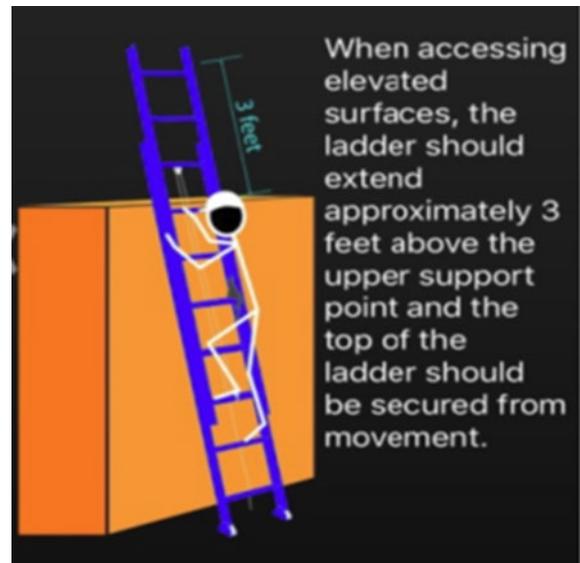
Inspect ladders before each use. After the job is done, clean and return it to storage in good condition.

- Carefully inspect for defects, cracks or corrosion, and that bolts and rivets are secure.
- Check that rungs, cleats or steps are not bent, broken or missing.
- Joints between steps or rungs and the side rails should be tight.
- Check that hardware, fittings and accessories are securely attached and working properly.
- Make sure the ladder's feet work properly and have slip-resistant pads.
- Tag and remove unsafe ladders from service.
- A documented [annual inspection](#) of all ladders must be completed by a Competent Person.

SET UP PROPERLY

No matter what kind of ladder you use, place the base on a firm, solid surface and avoid slippery, wet or soft surfaces.

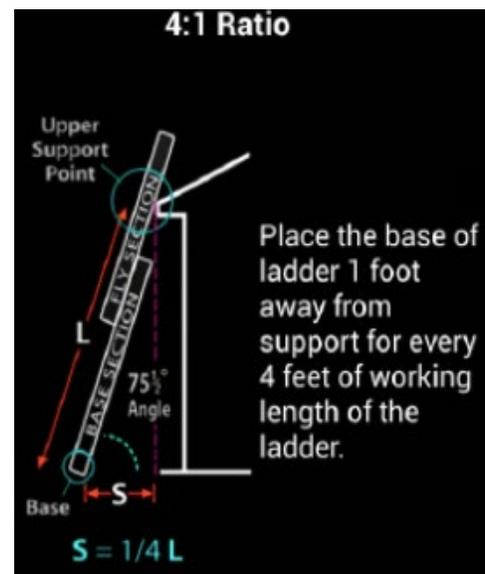
- If you must put a ladder on a soft surface, place a board under the ladder's feet.
- Never lean a straight or extension ladder against a window pane or other unstable surface.
- All straight and extension ladders must extend at least 3 feet beyond the upper level surface.



Straight and extension ladder setup

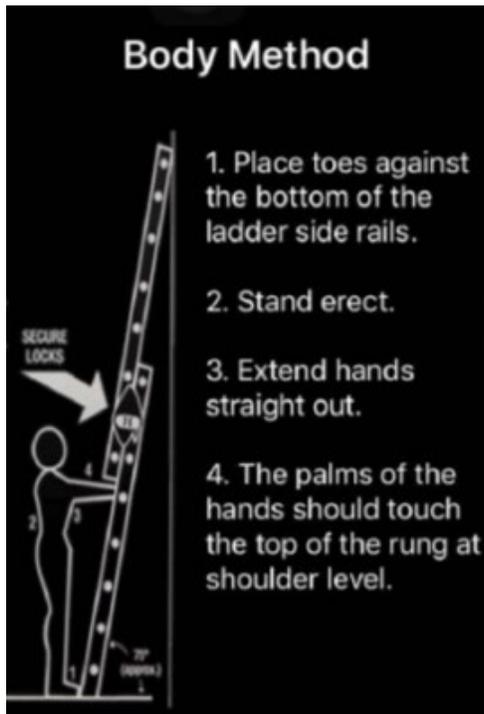
Source: [NIOSH Ladder Safety App](#)

- For safe placement, place a straight or extension ladder 1 foot away from the surface it's resting on for every 4 feet of the ladder's height (see **4:1 Ratio** method below); or use the **Body Method** (see page 3).



Straight and extension ladder setup - 4:1 Ratio method

Source: [NIOSH Ladder Safety App](#)



Straight and extension ladder setup – Body method
 Source: [NIOSH Ladder Safety App](#)

- Securely fasten straight or extension ladders to an upper support.
- Ensure all portable ladders are level and secure at the base.
- Make sure step ladders are fully open and spreaders locked.
- Guard doorways near any type of ladder work so no one can open a door and knock you off.
- Never place a ladder on a box, barrel or other object to gain additional height.
- Secure area from people, traffic and equipment that may bump you off a ladder.

SAFE LADDER USE

- Never use a ladder if you feel dizzy or ill.
- Face the ladder and always grip the rungs, not the side rails.
- Always keep three points of contact with the ladder: two hands and one foot or two feet and one hand.
- Never get off a ladder from the side.
- Do not stand higher than the third rung or step from the top.
- Don't lean or overreach; reposition the ladder instead.
- Don't climb while carrying tools; use a tool belt or pull up bucket on rope from below.

- Wear slip-resistant shoes.
- Never have someone climb up to bring you something; only one person should be on a ladder at a time (unless ladder design allows).
- Keep area clear near top and bottom of ladder.
- Do not use extension ladders in windy or inclement weather.
- If bad weather arises, climb down immediately and wait for it to pass.
- Clean the ladder after each use to prevent dirt buildup.

FIXED LADDERS

Safety precautions similar to portable ladders are required on fixed ladders. Cages and wells on existing fixed ladders taller than 24 feet are being phased out by regulations now through November 2036. New fixed ladders will require personal fall arrest or other systems at certain heights.

WHEN TO USE FALL PROTECTION

A personal fall protection system may be required on any ladder when the height in feet is 10 or greater above the floor or ground depending on the work to be done. The system may be a fall arrest, fall restraint, positioning system or other approach. A [Fall Protection Work Plan](#) is required to fully assess the hazards and determine controls and safeguards.

LADDER TRAINING

- See the EH&S [website](#) for online and classroom courses on ladder safety.
- EH&S will assist with department-specific training.

RESOURCES

- [EH&S Fall Protection webpage](#) and [Fall Protection Program Manual](#)
- [Ladder Safety Guide](#) WA Labor and Industries
- [Ladder Safety App](#) National Institute for Occupational Safety and Health (NIOSH) mobile application to improve ladder safety

Contact EH&S at ehsdept@uw.edu or 206.543.7388 for more information about ladder safety.