# Ladder Safety — study guide



Ladders look simple and hurt people every day. Choosing the right material, erecting it correctly and using it properly are what keep a climb safe. This guide covers ladder types, set-up and safe use.[1][2]

## Ladder materials

- **Wood** — low cost, but tends to age quickly and can become wobbly.
- **Aluminium** — light weight, but can bend easily and **cannot** be used near electricity.
- **Fibreglass** — expensive, and resilient in harsh weather; can be used near electricity.

## Erecting and using a ladder

When erecting a long ladder, the **heaviest person** should stand at the base. Set the ladder at the correct angle: if a ladder is supported 12 feet off the ground, its base should be about **3 feet** from the wall (a 1-in-4 ratio). Always face the ladder during ascent and descent, allow only one person at a time on a ladder, keep your body aligned with the centre of the steps, avoid over-reaching, and maintain **three points of contact** while climbing.

## Different ladder types

A **step ladder** is self-supporting. **Extension ladders** are made up of a **base**, which sits on the ground, and a **fly**, the extendable movable piece; they are most often used to reach high places, particularly when a single ladder is not long enough. Extension ladders should **not** be stored in a vertical position.

## Inspection

A ladder should **always** be checked before use and inspected on a regular basis. Guidelines stipulate that ladder inspections should take place at regular intervals, based on the frequency of **use** and the **loads** carried.

## Fixed ladders

Safety features associated with fixed ladders include a ladder safety device, a well, and a cage.

## Key facts to remember

- Wood ages and wobbles; aluminium bends and must avoid electricity; fibreglass is costly but robust and safe near electricity.
- Erecting a long ladder: heaviest person holds the base.
- 12 ft high → base 3 ft out. Face the ladder, one person at a time, keep centred, no over-reaching.

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- 3 points of contact while climbing.
- Step ladder = self-supporting. Extension ladder = base + fly; store it non-vertically.
- Always check before use; inspect at intervals set by frequency of use and loads.
- Fixed ladder features: ladder safety device, well, cage.

## Sources

1. Code of Safe Working Practices for Merchant Seafarers (COSWP) — Maritime and Coastguard Agency (MCA) (ladders and access).
2. BS EN 131 — Ladders (specification, angles and safe use).