

# A toolbox talk on leaning ladder and stepladder safety



# Introducing the toolbox talk

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- Why talk about ladders?
- Every year around:
  - 14 people die
  - 1200 are seriously injured

## Examples of accidents

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- A joiner working from a leaning ladder to replace a gutter applied force to the guttering to free it from a bracket, lost his balance and fell 4 m. He broke a bone in his back resulting in 10 days in hospital and 6 months off work. He can now only do light work that does not involve heavy lifting.

## Examples of accidents

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- A self-employed electrician was working from the second from top rung of a 2 m-high industrial aluminium stepladder. He was over-reaching while operating a power drill and lost his balance, falling onto the concrete floor. He fractured his skull and right heel, and was off work for three months.

## 3 Sections

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The talk is made up of three sections:

- Hazards and pre-use checks
- Positioning
- Safe use

# Section 1



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## Hazards and pre-use checks

# Hazards

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- Has anyone here fallen from a stepladder or a leaning ladder, witnessed a colleague have such a fall or been made aware of such an incident?

# Hazards

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- What are the reasons people fall from leaning ladders and stepladders?
  - *the leaning ladder slipping either at the top or bottom;*
  - *the leaning ladder flipping over or coming away at the top;*
  - *overstretching;*
  - *a fault with the ladder;*
  - *slipping or loosing your footing;*
  - *stepladder wobbles due to missing feet or not being correctly open;*
  - *stepladder being used side-on to the work task.*



# Hazards

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- You do not need to fall from a great height to be badly injured.
- More people get injuries such as broken arms or legs falling less than 2 m from a ladder than falling from above this height.

## Pre-use checks

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- All the company's ladders have been individually identified.
- Don't use any other ladder, including any brought from home or belonging to other companies.

# Pre-use checks

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- Every time you use a ladder check it beforehand to make sure it is safe to use.
- Frequently used ladders only need one such check a day - except for checking the feet when moving from soft/dirty ground to a clean area.

# Pre-use checks

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- Do you know what to look for?
  - *missing, damaged or worn anti-slip feet on metal and fibreglass ladders*
  - *items stuck in the feet such as swarf, stones, grease or dirt, preventing the feet from making direct contact with the ground;*
  - *mud, grease or oil either on the rungs or the stiles (the sides);*
  - *cracks in the rungs or stiles of the ladder;*
  - *missing, broken or weakened rungs;*
  - *missing or damaged tie rods;*
  - *check metal ladders for cracked or damaged welds and missing or loose screws or rivets*

## Pre-use checks

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- If you see any of these do not use the ladder or try and repair it yourself.
- Remove it from use and report it.

## Pre-use checks

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- It is important to have clear on-site arrangements for storing ladders safely.
- Discuss and agree what your storage arrangements are - they should meet the manufacturer's recommendations.

# Section 2



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## Positioning

# Positioning all types of ladder

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Do not position a ladder:

- where it can be knocked by a door or window – unless the door or window is secured;
- where it may get struck by a passing vehicle;
- within 6 m of an overhead power line (unless the lines have been temporarily disconnected or insulated).

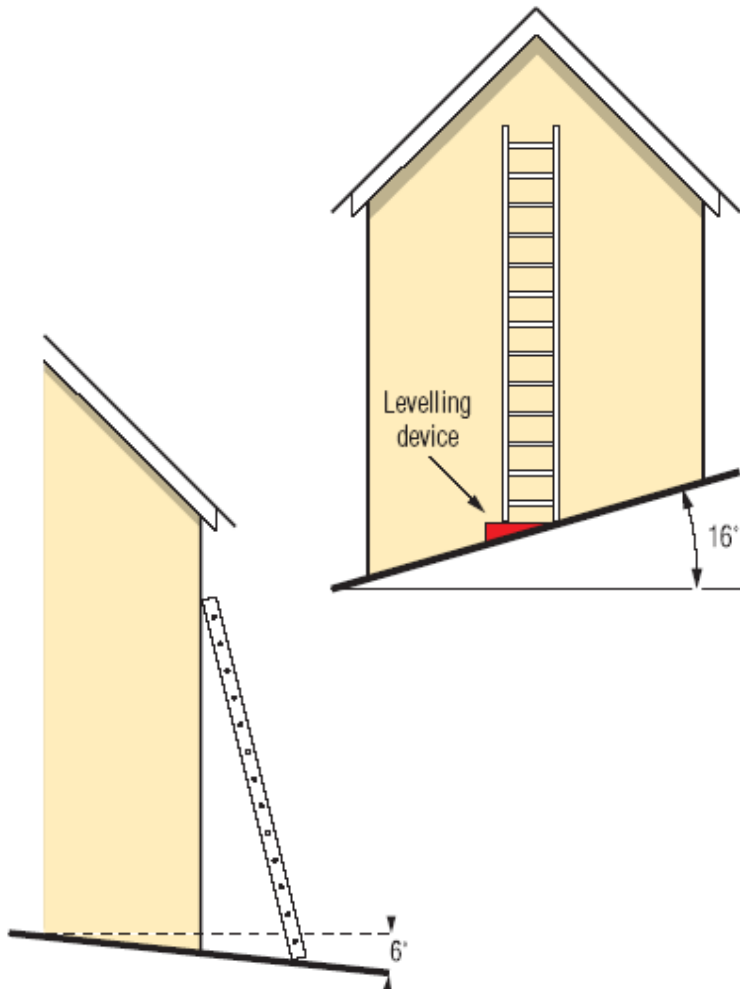


# Positioning all ladder types

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- Check each foot is on a clean, level, firm footing and look out for oil, grease or loose material.
- Make sure the ladder is at the correct height, never use boxes or bricks etc to gain extra height.

# Positioning leaning ladders



- Avoid placing ladders on side or back slopes, particularly if the surface is wet.
- Ladders should not be used on a suitable surface where the side slope is greater than  $16^\circ$  or the back slope is greater than  $6^\circ$ .
- The rungs should always look horizontal and appropriate levelling devices may be used.

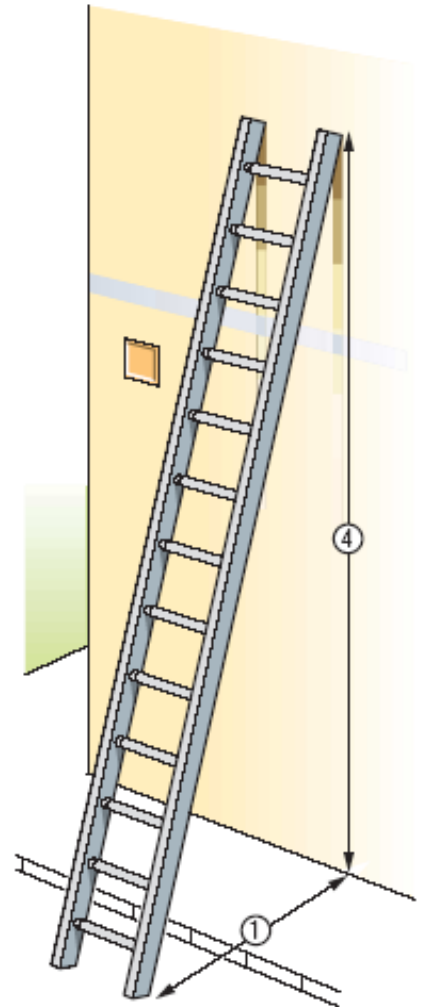
# Positioning leaning ladders

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- To erect a ladder, place its foot against a fixed object such as a wall and raise the other end by progressing hand over hand, from rung to rung, until it is upright.
- Make sure the ladder is erected the right way up. If it is wooden ensure the tie rods are underneath the rungs, if it is aluminium check the rung profile is the right way round.

# Positioning leaning ladders

- When erected, the ladder must be at an angle of  $75^\circ$ . Use the 1 in 4 rule
- If you cannot achieve this angle, because the ladder is too short, too long or something is in the way, then don't use it.
- If the top of a ladder is 6 m up a wall how far out from the wall should the base be?



# Positioning leaning ladders

- Do not place the top of a ladder against a fragile surface such as plastic guttering or glazing.
- Don't stand on the top three rungs. Make sure a ladder extends at least 1 m (or three rungs) above where you will be working.
- If you are using a ladder for access, make sure it rises to at least 1 m (or three rungs) above the landing place.

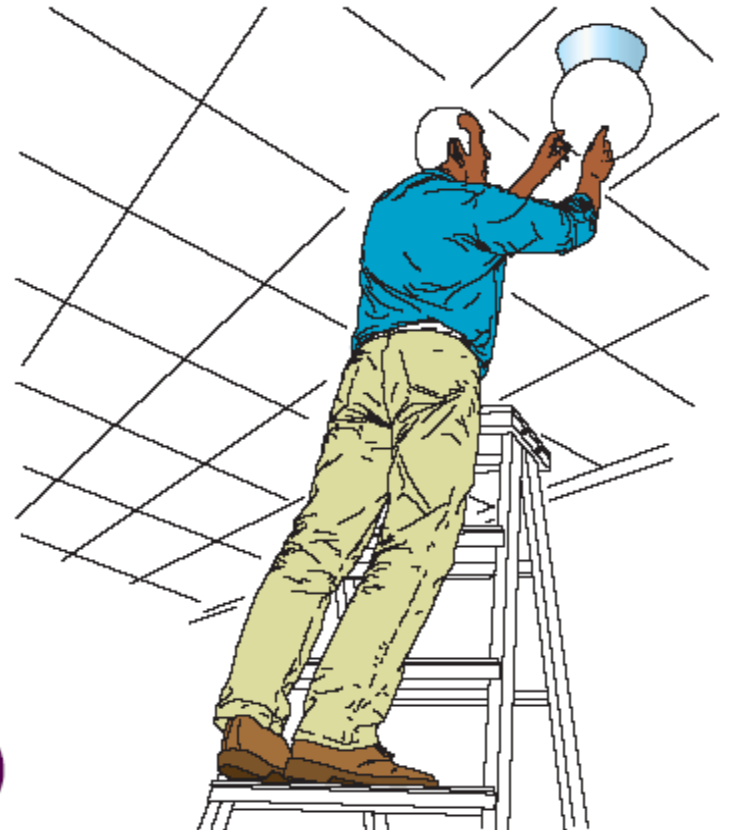
# Positioning stepladders

- Check all four feet are in contact with the ground.
- Position stepladders with the rungs facing the work activity.



# Positioning stepladders

- Make sure the stepladder is the correct length.
- Don't use the top two steps of a stepladder unless it has a suitable handrail.
- Don't use the top three steps of swing-back or double-sided stepladders where a step forms the very top of the stepladder.



# Positioning stepladders

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- When positioning a leaning ladder what should you check for?
  - *firm clean footing;*
  - *avoid side and back slope angles;*
  - *ladder angle is 75°;*
  - *placement of the top of the ladder;*
  - *the ladder extends 3 rungs above the work area.*



# Positioning stepladders

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- When positioning a stepladder what should you check for?
  - *all four feet are in contact with the ground;*
  - *rungs facing the work activity;*
  - *stepladder is the correct length;*
  - *don't use the top two or three steps.*

## Section 3

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Safe use of all types of ladder

# Safe use of all types of ladder

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- Only use ladders for light-duty, short duration work which has been approved by the responsible person.
- Do not use a ladder if you have a medical condition, or are taking medication that could affect your safety
- Make sure you have the right footwear, i.e clean, in good condition and without dangling laces.

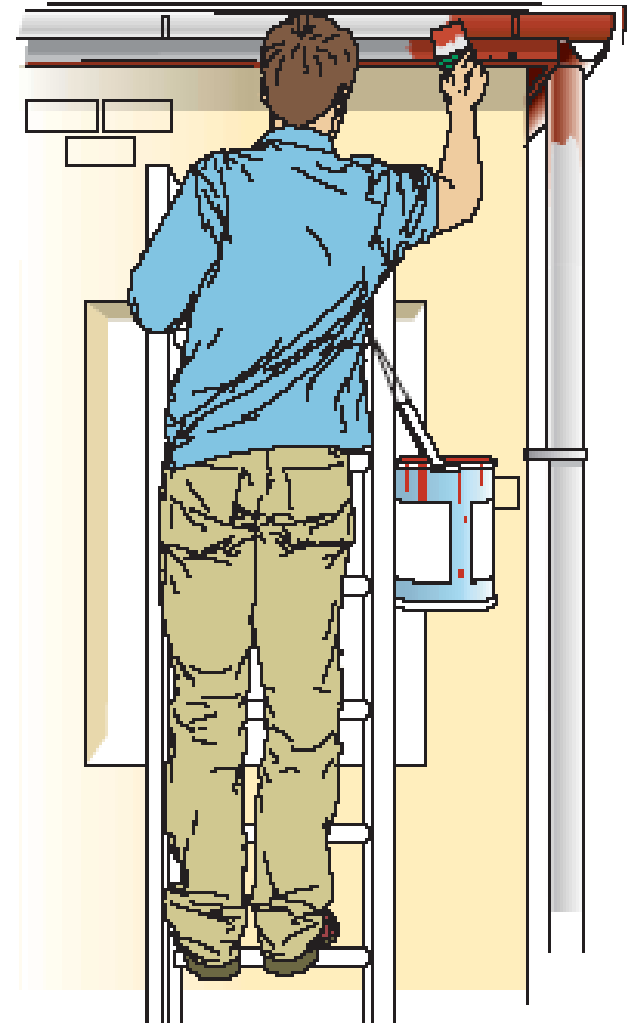
# Safe use of all types of ladder

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- When going up or down a ladder, take each rung one at a time and don't rush. Use both hands to grip the ladder whenever possible.
- On nearing the bottom, watch where you place your feet. Make sure you do not miss the lower rungs as you step off.

# Safe use of all types of ladder

- When working from a ladder, try and maintain three points of contact with it at all times (eg both feet and one hand).
- Don't carry heavy or awkward shaped objects on a ladder. Never carry loads heavier than 25 kg - any over 10 kg should be avoided if possible.
- If you have to carry an item up or down, you must keep one hand free to grip the ladder.



# Safe use of all types of ladder

- Do not overreach. Move the ladder so that you can keep your belt buckle (navel) inside the stiles and both feet on the same rung throughout the task.
- Do not place a foot on another surface, such as a window frame, to extend your reach.



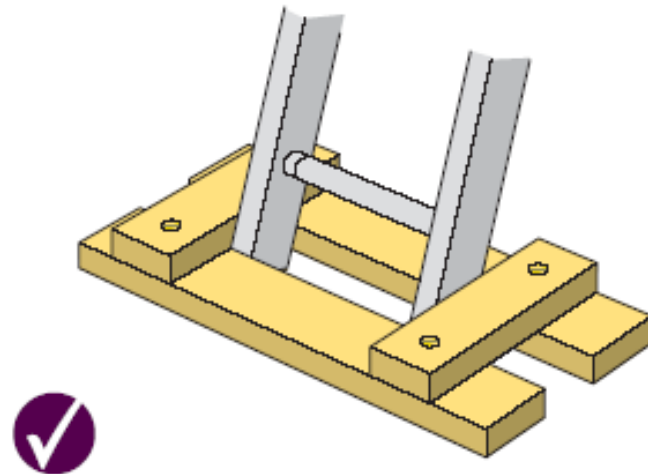
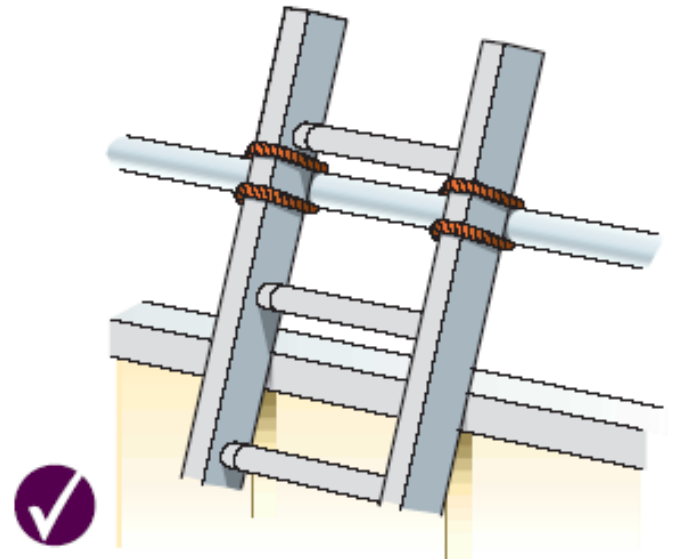
# Safe use of all types of ladder

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- When working on or close to electrical equipment that is live or may become live, use ladders that will not conduct electricity, such as those with fibreglass stiles.
- Do not throw things from ladders.

# Safe use of leaning ladders

- Wherever possible, tie a ladder to prevent it from slipping.
- This can either be at the top, the bottom or both, making sure both stiles are tied.
- Never tie a ladder by its rungs.





# Safe use of leaning ladders

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- If you can't tie the ladder use an 'effective ladder' or one with an 'effective ladder-stability device'.
- If the precautions suggested in this section are not possible then you can wedge the stiles against a wall or other similar heavy object or, as a last resort, have a second person foot the ladder.

# Safe use of leaning ladders

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- Remember to check that all the basic conditions for safety have been met. This is particularly important if the ladder is not tied.
- Can you remember what they are?

# Safe use of stepladders

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- Make sure the legs are fully open before you go up.
- When working from a stepladder, always make sure you have an available handhold.

# Safe use of stepladders

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- Avoid working side-on from a stepladder, especially when applying force, such as when drilling.
- Where this cannot be avoided, you should prevent the steps from tipping over, for example by tying the steps to a suitable point.

# Safe use of stepladders

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- Stepladders should not be used as a means of access to another level, such as a roof (unless they have been designed for this) as they can become unstable when you are stepping on or off them.