

# Fall Protection

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Use fall protection anytime you are working on an unprotected or elevated work surface from which you could fall. Fall protection is required when working 4 to 6 feet (1.2 to 1.8 meters) or more above the ground. Use fall protection when guardrails are removed, guardrails/covers are not able to be installed and/or you are working hands-free. Ask your manager or supervisor for guidance about using fall protection on your worksite.

## Common Fall Hazards

Common fall hazards include:

- Floor holes
- Open-sided floors
- Roof edges
- Unprotected skylights
- Ladders (for example, standing on the top rung)
- Mobile elevated work platforms such as scissor lifts and aerial lifts

Mistakes that may cause a fall include not respecting fall hazards or not paying attention, equipment/tool failure, slips, overreaching, and complacency.

## Reporting Unsafe Conditions

If there are any improperly constructed, loose, missing or damaged guardrails or hole covers, follow procedures to report unsafe conditions to your supervisor or competent person. Be aware that you may be asked to guard or barricade the area until repairs can be made.

## Methods of Fall Protection

Your **first line of defense** against fall hazards includes solid footing, balance, handholds, stable work surfaces and positioning equipment.

**Backup** fall protection will keep you from falling to a lower level if your first line of defense fails. There are passive and active systems.

### *Passive Systems*

Some systems like guardrails, covers and safety nets are considered passive systems and work automatically once installed. Guardrails can be made of wood, pipe, wire rope or manufactured systems. Ensure they are properly installed and are solid and not loose. The top rail needs to be between 99 and 114 centimeters (39-45 inches) above the work surface. The mid-rail needs to be halfway between the working surface and the top rail. Guardrails need to support 200 pounds (90 kilograms) of force. Floor and hole covers need to be able to support 2 times the potential load, be secured and be marked "hole" or "cover".

### *Active Systems*

Other systems require workers to take action. These include:

- **Work positioning**, which allows you to work hands-free
- **Fall or travel restraint**, which prevents you from falling off an edge or into an opening
- **Fall arrest**, which catches your body after you have fallen (for example, an energy-absorbing lanyard)

When planning to use personal fall protection, consider free fall, clearance and swing fall. **Free fall** is the distance traveled from the point where you start falling to the point where your fall protection system begins to slow you down. **Clearance** is the distance required for your personal fall arrest equipment to activate, decelerate and then completely stop your fall. **Swing fall** can occur when you walk away from under your anchor point. When you fall, you will swing back under your anchor point like a pendulum.

### **Fall Protection Equipment**

Personal fall protection includes the following components:

- **Body support** – a full body harness
- **Connectors** – lanyards, snap hooks or carabiners
- **Anchor points** – the points at which you attach your anchorage connector

Use anchor points that are as high as possible and located at least at D-ring level. Anchor to a structure (like an I-beam or concrete column) that can handle a 5,000-pound (2,268-kilogram) load or that a qualified person has identified for you. Make sure you have enough clearance for your fall protection system to stop you before your body strikes an object below.

**Self-Retracting Lifelines (SRLs)** require much less clearance than a lanyard and allow more freedom of movement. **Vertical** and **horizontal lifelines** are also used on some worksites.

### **Inspecting and Maintaining Equipment**

You must inspect fall protection equipment before every use. Inspect body support more frequently when welding or working with chemicals or sharp edges. Inspect connectors periodically throughout the day. A qualified person must also inspect equipment annually.

If equipment is ever involved in a fall, even if it does not indicate signs of damage, remove it from use and return it to your supervisor.

To keep your fall protection equipment working, you must:

- Store equipment properly
- Never throw it into a storage box
- Keep it dry and clean
- Keep it out of direct sunlight

### **Rescue**

The recommended hierarchy of rescue after a fall is:

1. Self-rescue – Climb or pull yourself to safety
2. Assisted self-rescue – Suspension trauma safety straps and ladders
3. Mechanically aided rescue – Lifts
4. Rescue pick-off (in very rare situations)