



## Fall Protection

*Watch your step!*

Injuries from falls are one of the most common and severe workplace accidents resulting in broken bones, paralysis, brain damage, and death. In 2016, there were 370 fatal falls, all preventable, according to the Bureau of Labor Statistics. Most fatal falls from heights are from 20 feet or less, and the most common falls are from roof edges and openings, scaffolds, and skylights.

For the past six years, the fall protection standard is the most frequently cited standard by the Occupational Safety and Health Administration (OSHA). Approximately one in every five cited violations is related to the fall protection standard.

### When do you need fall protection equipment?

When you are working within fifteen feet of a fall hazard, OSHA requires that you be protected from falls to lower levels at or above four feet. Working on a rooftop is an obvious example, but consider other environments where fall hazards exist, such as loading docks, dockboards, unprotected wall or floor openings, hoist areas, uncovered holes, skylights, stairways, elevator openings, unprotected ramps and runways, excavations, wells, pits, and scaffolds.

The most effective way to keep you safe is by eliminating the fall hazard completely. This can be accomplished in a number of ways, such as relocating equipment, changing the design of equipment, covering holes and pits, changing work locations, altering schedules, or using extension tools or other equipment to eliminate the need for fall protection.

### Types of fall protection equipment

When eliminating a fall hazard is not possible, a fall protection system is required. There are various forms of fall protection systems and they all have the same basic function - to keep you safe!

Passive fall protection systems, such as permanent guardrails, are the preferred method of fall protection as they require no special training to use and require minimal maintenance. If a passive system is not available, an active fall protection system, also known as a personal fall arrest system, or PFAS, must be used. PFAS's vary, but will always have three main components: an anchor point, a body harness, and a connecting device, such as a shock-absorbing lanyard or self-retracting lifeline (SRL). Some systems will physically restrain you from reaching the fall hazard, while other systems will arrest your fall and reduce your fall distance. It's important to understand the differences and limitations when selecting fall protection equipment - your life may depend on it!

### Know before you go

Planning is one of the most important aspects of working at heights. Determine the height(s) at which you'll be working and calculate your potential fall distance in order to select the correct equipment. For example, many shock-absorbing lanyards are six feet in length, and will extend up to three and a half feet if subjected to a fall. When combined with your height and a three foot safety factor, you would need to be working at least eighteen and a half feet from a lower level in order for your fall protection system to be effective (see figure 1).

In addition to knowing your fall clearance, consider the swing hazard if a fall were to occur, where you could end up swinging into hard surfaces or equipment. This can be avoided by ensuring your working position is always under or near the anchorage point.

Once you have identified the right equipment, take into account these additional guidelines to ensure your safety:

- Prior to starting any work at heights, you must be trained in the recognition of fall hazards, identifying fall clearances, and equipment limitations, inspection, use, storage, and maintenance
- All work at heights must be supervised by a competent person, who has the authority and knowledge to take prompt, corrective measures to eliminate fall hazards and develop procedures
- If in doubt, don't chance it! Contact your supervisor or Risk Management for guidance

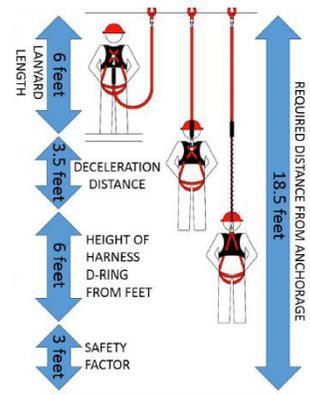


Figure 1

## Tips for Talking to Your Team

- **Preparation is Key:** Keep the topic relevant to your work. With your team, review the different types of potential fall hazards in your workplace and discuss the control methods to stay safe when working at heights is necessary
- **Stay Positive:** Keep the focus on what can be done to create a safe workplace, instead of focusing on what has gone wrong in the past
- **Share a Story, Ask for a Story:** Story-telling is a powerful method to convey information. Stories from your employees make the topic even more relatable

## Safety at Home – Don't Fall Into Bad Habits

Falls are a leading cause of deaths at home. Cleaning the gutters is a common task for many homeowners. Far too many things can go wrong if you attempt to clean your gutters without taking necessary safety precautions. The following guidelines can prevent potentially life-threatening injuries:

- Use extension tools from the ground or install gutter guards to eliminate the need to access the roof
- Never work near unprotected roof edges without a proper fall protection system in place
- Never over-reach when working at heights and always ensure that your footwear has a non-slip sole
- Avoid working in hazardous environments, such as high winds, rain, or snowy/icy conditions

## For Additional Information

Please contact [Gwen Butler](mailto:gwen.butler@northwestern.edu), Director of Environmental Health and Safety, at 847.491.4936 with any questions. Risk Management Services can be reached at 847.491.5610.