

# 2024 National Campaign to Prevent Falls in Construction & Safety Stand-Down

## Welcome!

May 7, 2024



**PLAN. PROVIDE. TRAIN.**  
*Three simple steps to preventing falls.*




# Housekeeping

- Today's webinar will be recorded and automatically shared via follow-up email.
- The recording and slides will also be posted on [cpwr.com/webinars](https://cpwr.com/webinars) and [stopconstructionfalls.com](https://stopconstructionfalls.com).
- Attendees are automatically muted! Please use Chat and Q&A.
- Spanish audio is available via simultaneous interpretation



# Simultaneous Interpretation

## WINDOWS / MAC / BROWSER

1. In your meeting/webinar controls, click **Interpretation** .
2. Click the language that you would like to hear.
3. (Optional) To hear the interpreted language only, click **Mute Original Audio**.

### Notes:

- You must join the meeting audio through your computer audio/VoIP. You cannot listen to language interpretation if you use the [dial-in](#) or [call me](#) phone audio features.

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1. In your meeting controls, tap the ellipses **...**.
2. Tap **Language Interpretation**.
3. Tap the language you want to hear.
4. (Optional) Tap the toggle to **Mute Original Audio**.
5. Click **Done**.

### Notes:

- You cannot listen to language interpretation if you use the [dial-in](#) or [call me](#) phone audio features.



# 2024 National Campaign to Prevent Falls in Construction & Safety Stand-Down

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**PLAN. PROVIDE. TRAIN.**

*Three simple steps to preventing falls.*



# Welcome & Thank You for Joining!









**NATIONAL  
SAFETY  
STAND-DOWN**  
TO PREVENT FALLS  
IN CONSTRUCTION  
MAY 6-10, 2024

**Stop Falls Stand-Down**

- Plan a toolbox talk or other safety activity
- Take a break to talk about how to prevent falls
- Provide training for all workers

For more information:  
osha.gov/PreventFalls ▪ #StandDown4Safety  
1-800-321-OSHA (6742) ▪ TTY 1-877-889-5627



OSHA 3774-D 2024

- Year-round **Falls Campaign began in 2012** with the NORA Construction Sector Council
- NIOSH, CPWR, and OSHA signed on as organizing partners
- Annual **Safety Stand-Down event began in 2014** at OSHA's suggestion

## *What qualifies as a Safety Stand-Down event?*

Any workplace event that focuses on fall hazards and reinforcing the importance of fall prevention and protection. Common activities include training activities, equipment demonstrations, equipment inspections, and contests.



# Why is the Campaign & Stand-Down still so important?

- Almost half of all work-related fatal falls, slips, and trips in 2021 occurred among construction workers (46.2%).
- Since 2013, workers in the industry have suffered over 300 fatal and 20,000 nonfatal fall-related injuries annually.
- Falls to a lower level, a Focus Four Hazard, accounted for almost all fatal (95.1%) and half of nonfatal (50.2%) falls, slips, and trips in 2020.

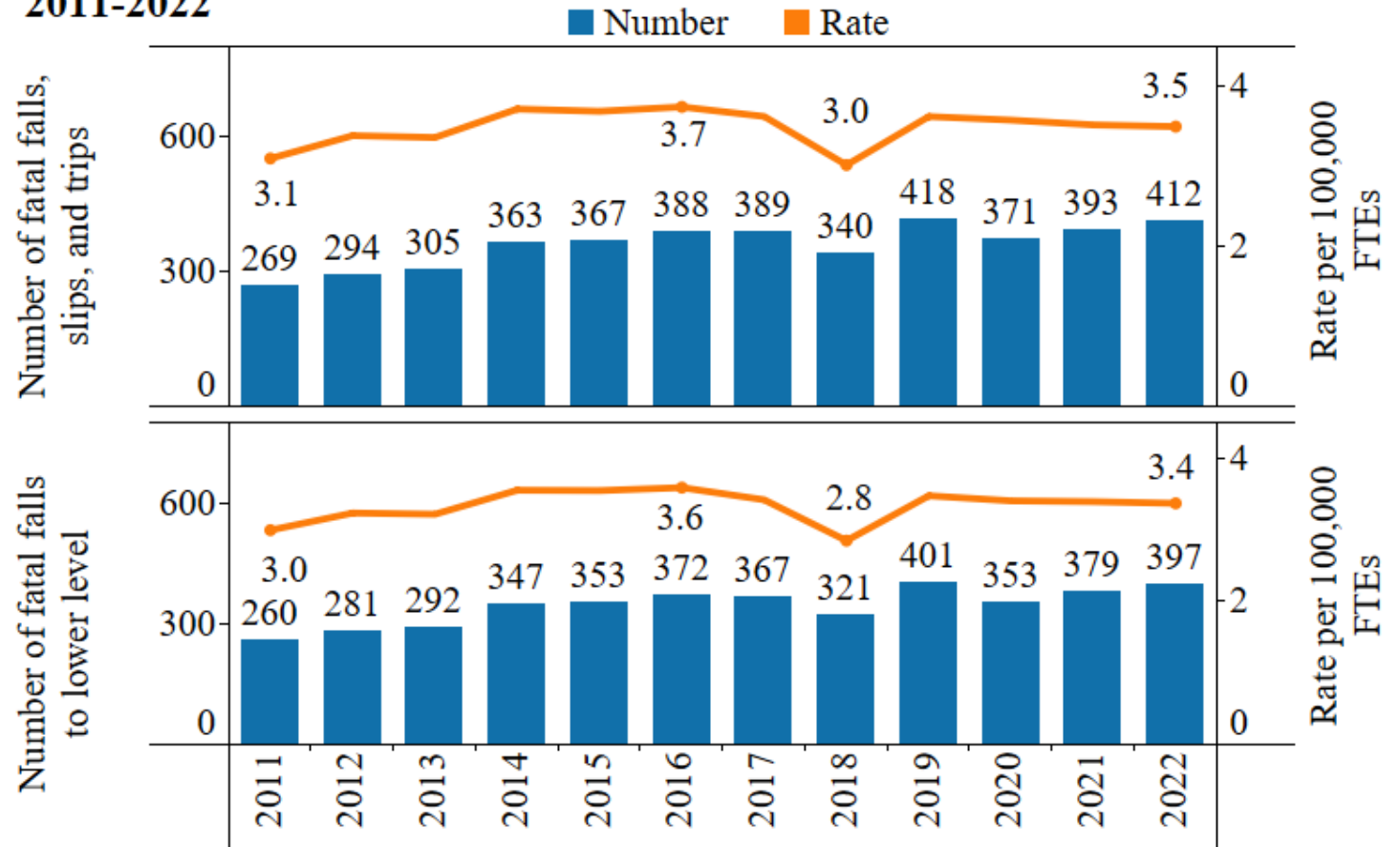
<https://www.cpwr.com/wp-content/uploads/DataBulletin-March2024.pdf>



# Fatal Falls

- In 2022, there were **412 fatal falls, slips, and trips** in construction.
- From 2011 to 2022, **the number of these fatal falls increased 53%**, while **rates increased 13%**.

1. Number and rate of fatal falls, slips, trips and falls to lower level, 2011-2022



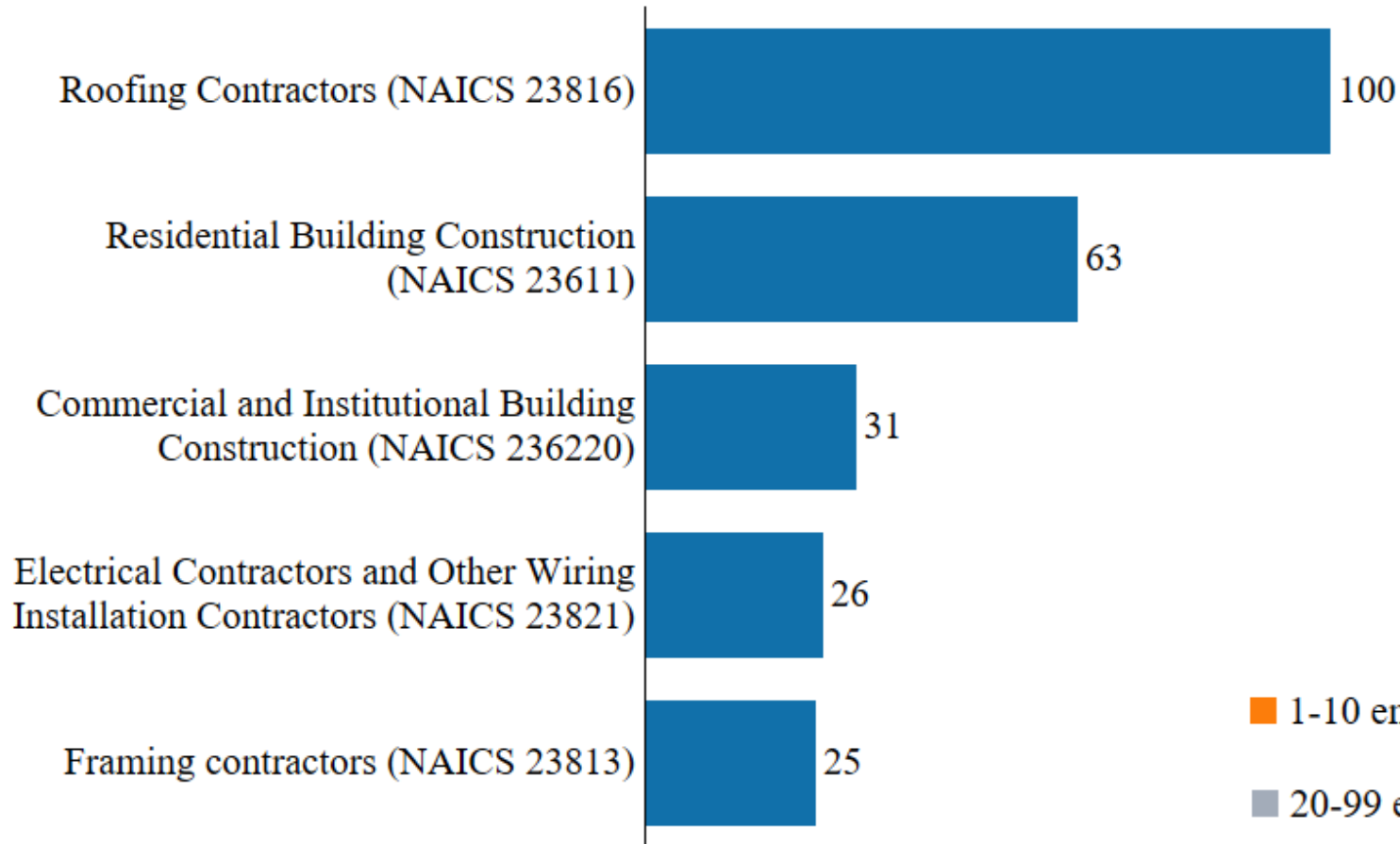
Source: U.S. Bureau of Labor Statistics, 2011-2022 Census of Fatal Occupational Injuries and 2011-2022 IPUMS Current Population Survey. Calculations by the CPWR Data Center.



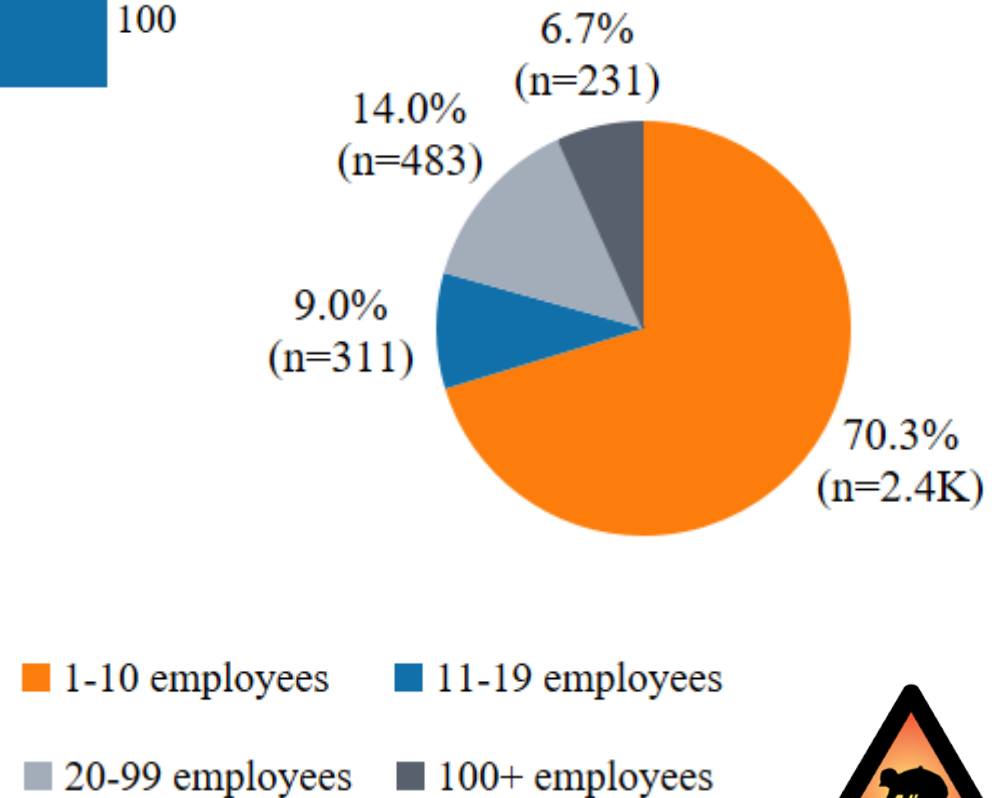


# Target Audiences

## 3. Detailed subsectors with the highest number of fatal falls, slips, and trips, 2022



## 7. Fatal falls in construction by establishment size, sum of 2011-2022



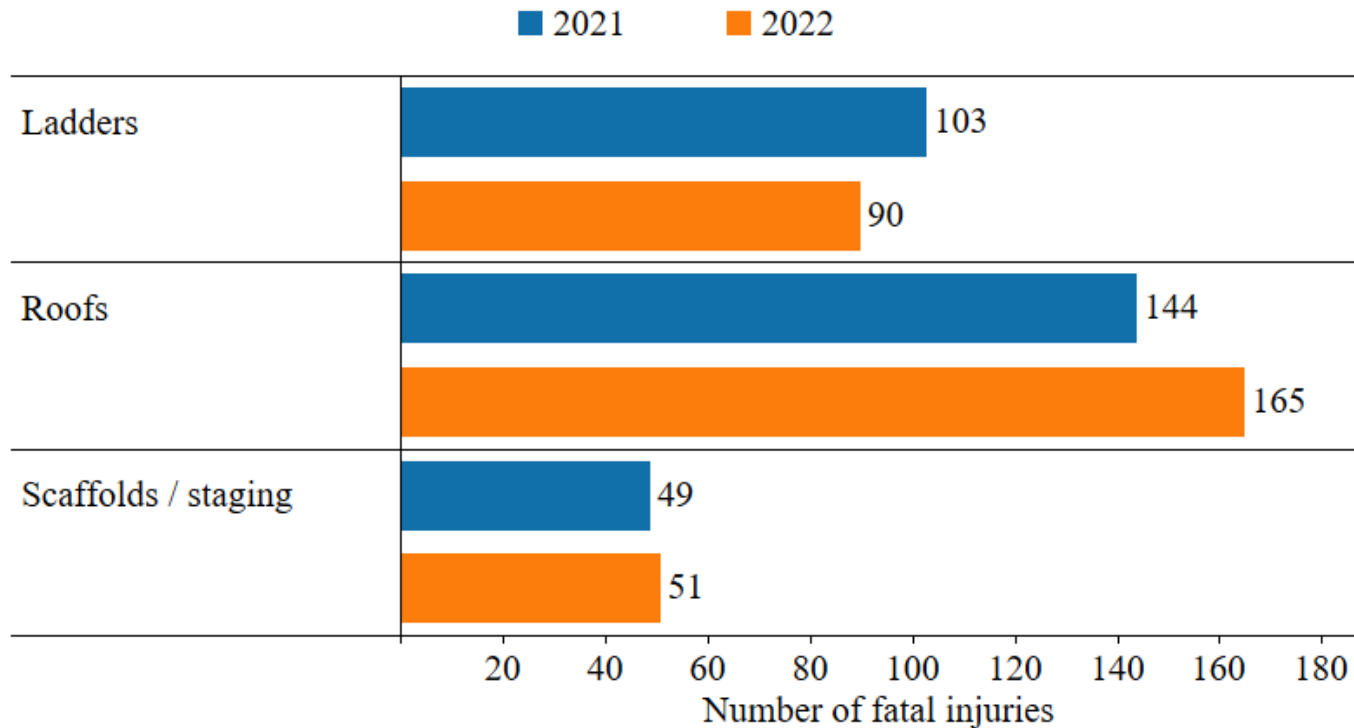
See Data Bulletin for sources





# Factors Responsible for Injury

## 6. Injury sources\* common to fatal falls, slips and trips, 2021 versus 2022



**Source:** U.S. Bureau of Labor Statistics, 2021-2022 Census of Fatal Occupational Injuries.  
Calculations by the CPWR Data Center.

\*All injuries shown. Sources shown commonly result in falls, slips, and trips ( $\geq 50\%$  of primary source injuries).

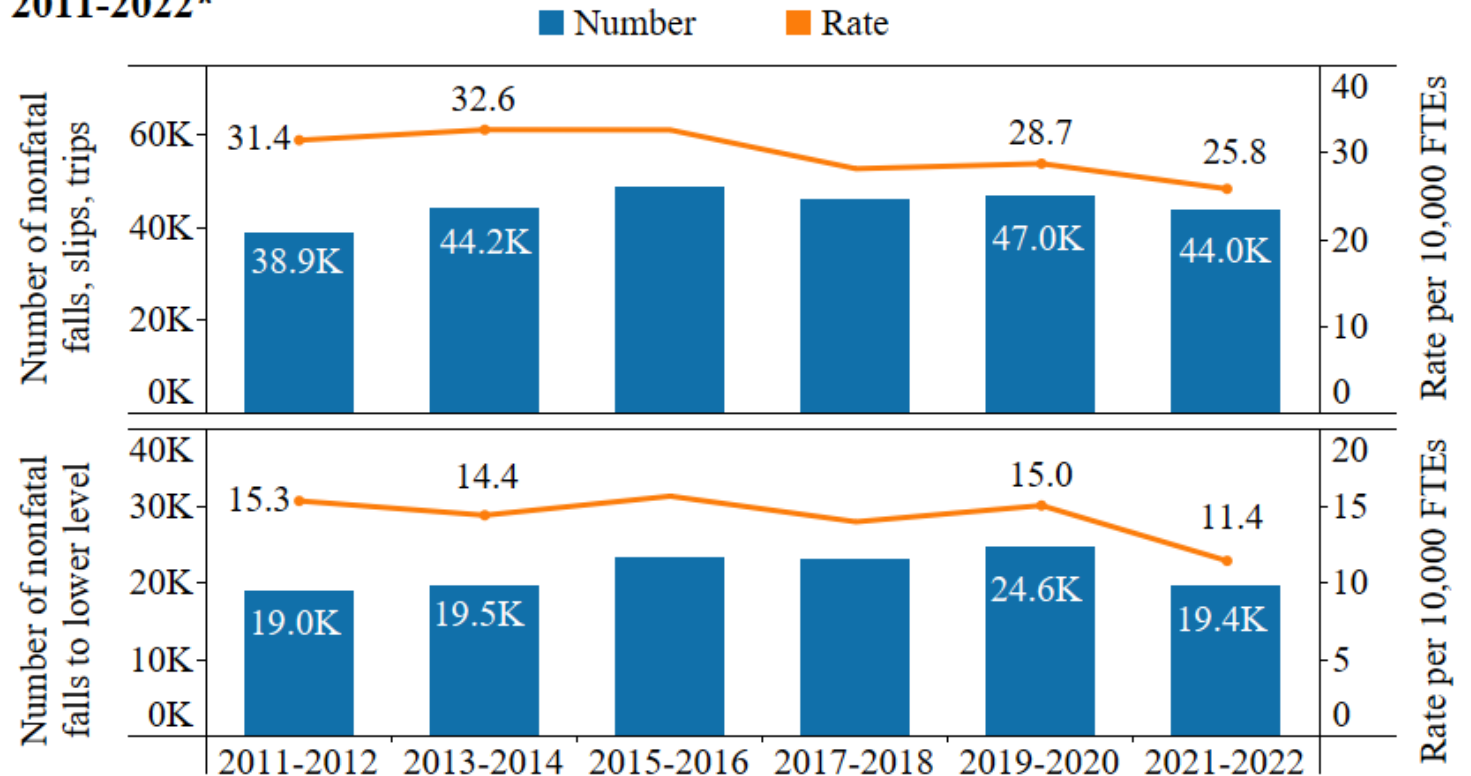
- From 2021 to 2022, the **number of injuries involving roofs increased 14.6%** (144 to 165), while **injuries due to scaffolds and staging rose 4.1%** (49 to 51).
- In contrast, **injuries due to ladders decreased 12.6%** from 2021 to 2022 (103 to 90)



# Non-fatal Falls

- Compared to 2011-2012, the **number of falls, slips, and trips in 2021-2022 increased 13.1%** (38.9K to 44.0K),
- while **the rate per 10,000 FTEs decreased 17.8%** (31.4 to 25.8).
- The **number of falls to a lower level** between the two periods **increased 2.1%** (2011-2012:19.0K and 2021-2022:19.4K),
- while **the rate decreased 25.5%** (2011- 2012:15.3 and 2021-2022:11.4).

10. Number and rate of nonfatal falls, slips, trips and falls to lower level, 2011-2022\*

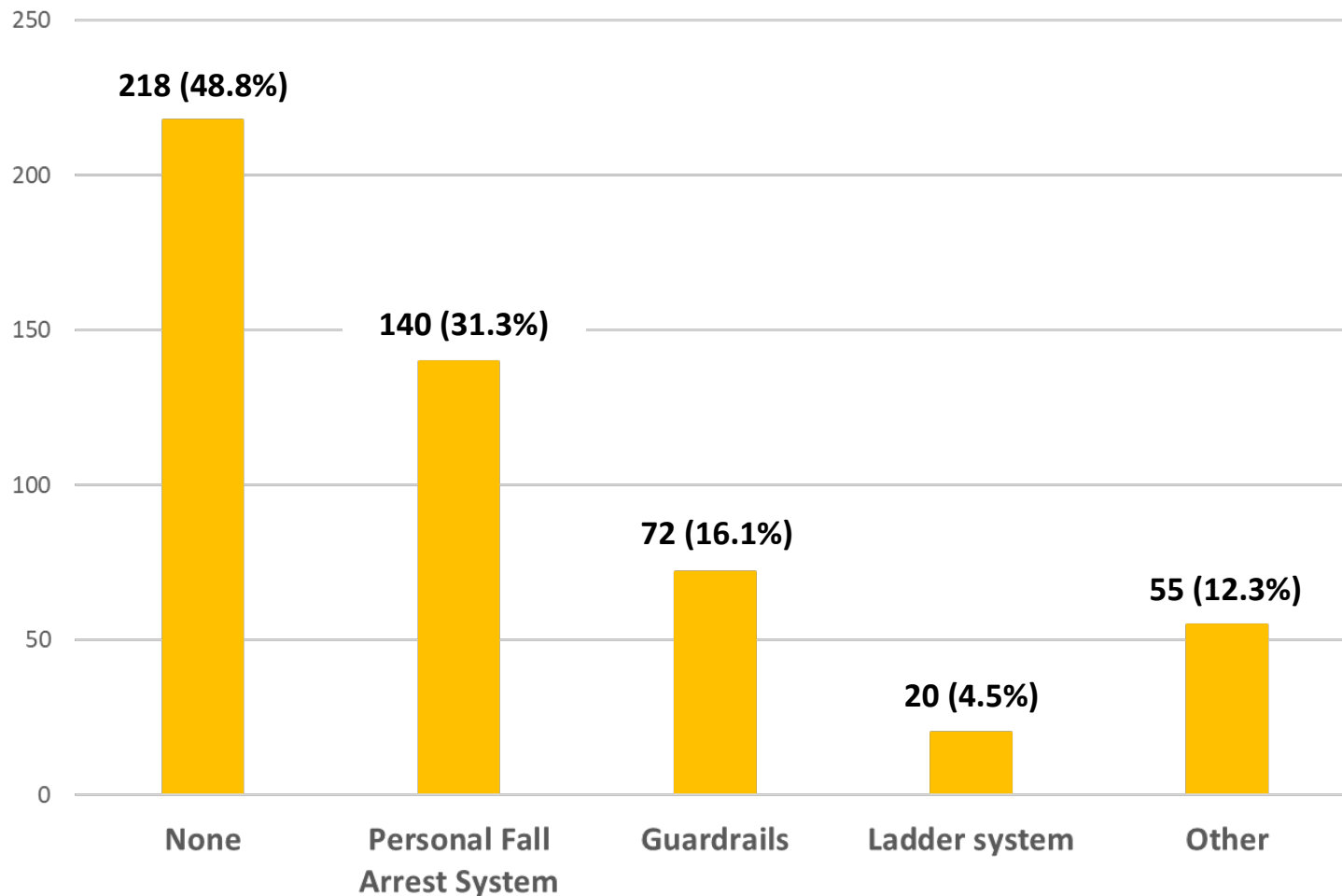


Source: U.S. Bureau of Labor Statistics, 2011-2022 Survey of Occupational Injuries and Illnesses and 2011-2022 IPUMS Current Population Survey. Calculations by the CPWR Data Center.  
\*Sum is shown for each two-year period to produce comparable statistics following BLS data change to biennial estimates for 2021-2022.



# Fall Protection

What type of fall protection, if any, was being used at the time of the fall? (N=447) **(Select all that apply)**

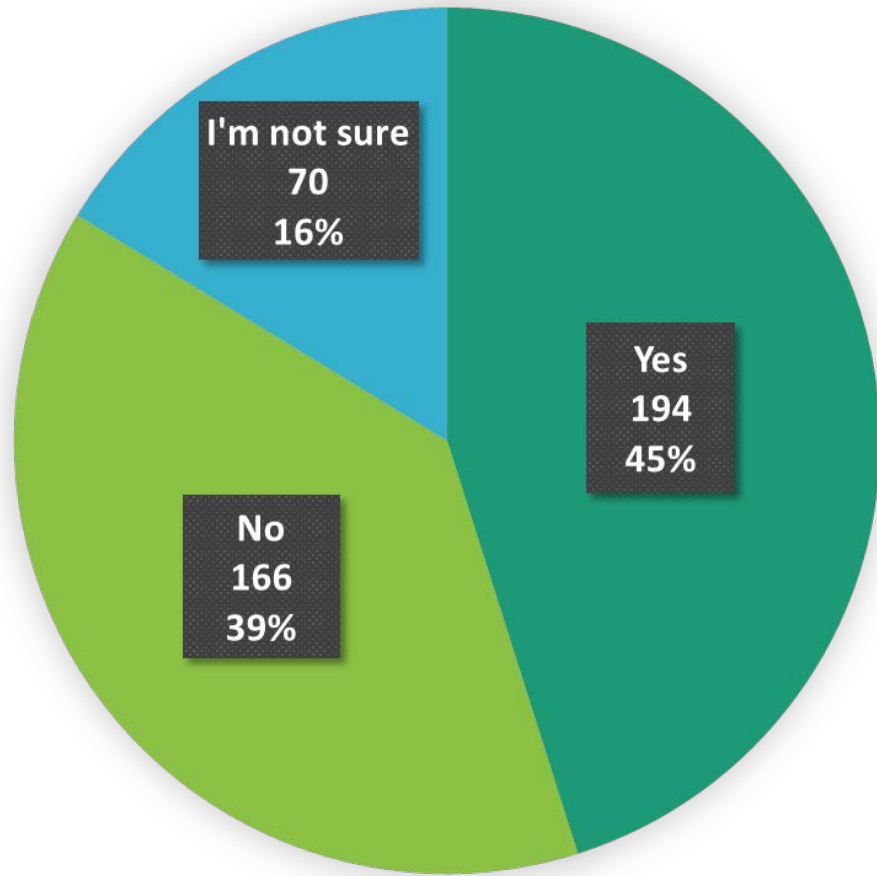


## Other:

Suspension system  
Positioning system  
Safety nets  
Travel restraint  
Hole covers  
Warning lines  
Unspecified



Did the individual who fell believe that fall protection was required by company safety policy for the task that led to the fall? (N=430)



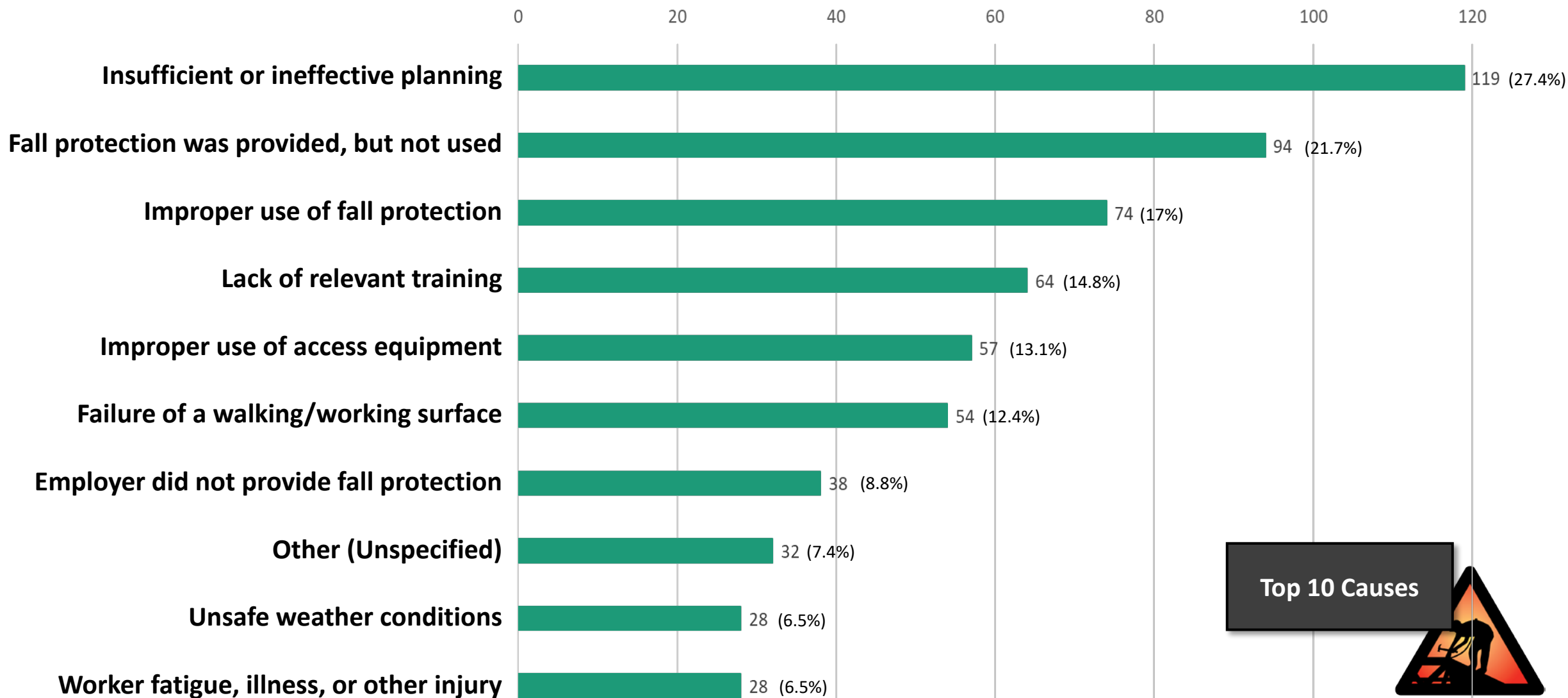
**Belief that Fall Protection was Required x Fall Protection Use (N=429)**

Believed FP to be required	Used Fall Protection		Total
	Yes	No/Incorrect Use	
Yes	154 (79.4%)	40 (20.6%)	194 (100%)
No	36 (21.8%)	129 (78.2%)	165 (100%)
Not sure	25 (35.7%)	45 (64.3%)	70 (100%)



# Underlying Causes & Other Possible Contributors

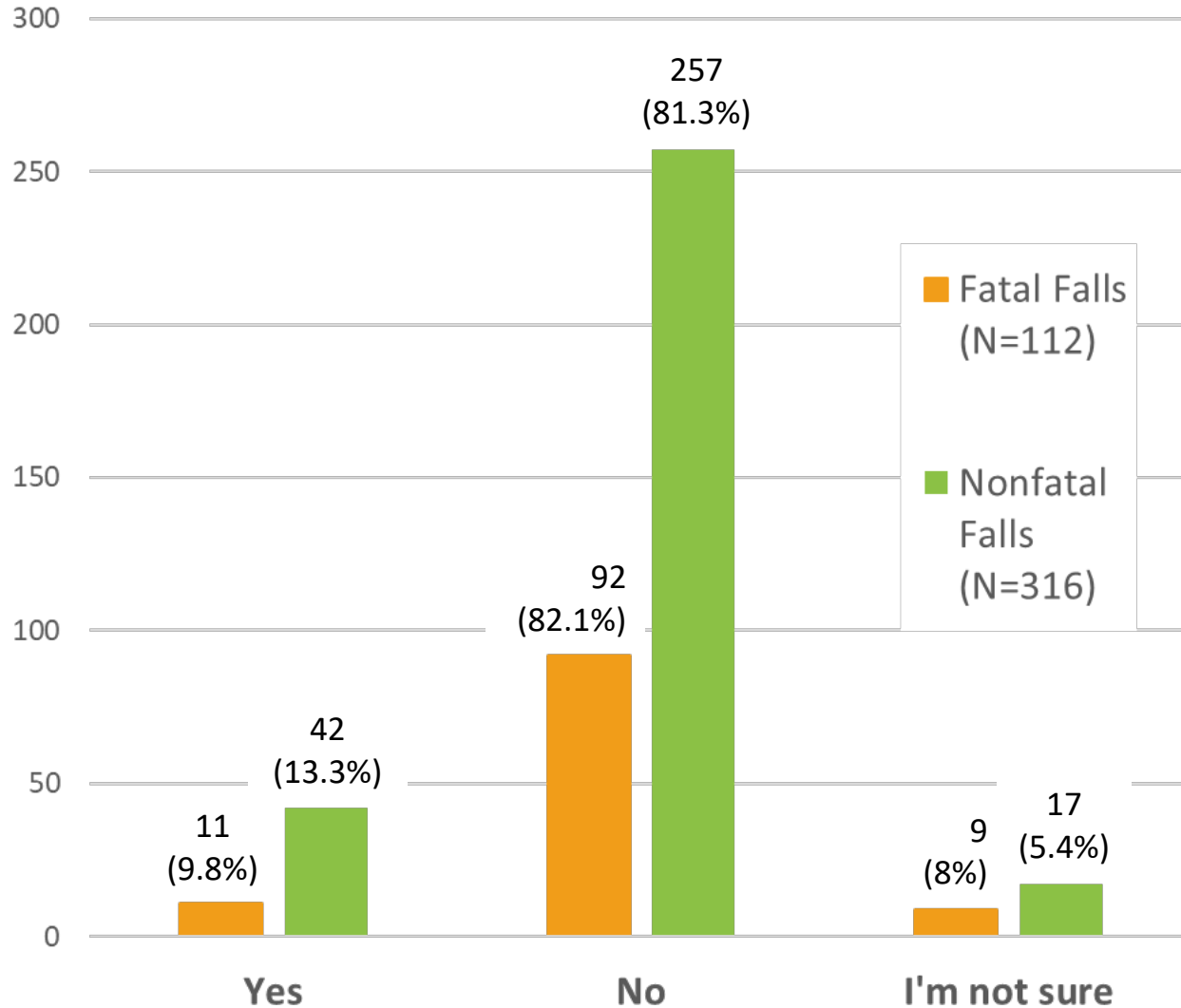
What were the primary causes of the fall? (N=434) (Select up to 3)



Top 10 Causes



**Was the individual new to the workforce when the fall occurred? (N=428)**



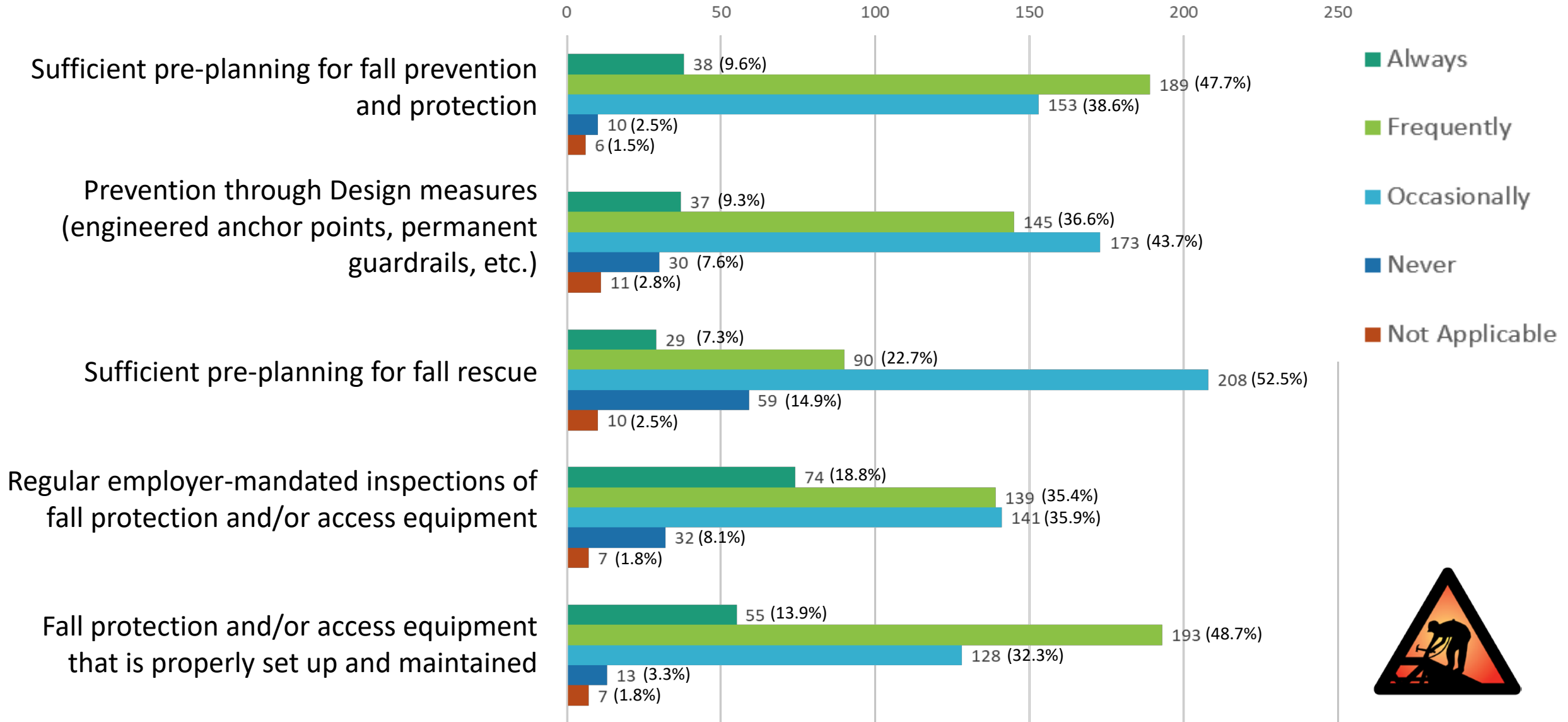
**At the time of the fall, was the individual who fell working for the general contractor or a subcontractor? (N=432)**

	Nonfatal Falls (N=319)		Fatal Falls (N=113)	
	Count	%	Count	%
General Contractor	96	30.1%	26	23%
Subcontractor	141	44.2%	72	63.7%
Not applicable	73	22.9%	11	9.7%
I'm not sure	9	2.8%	4	3.5%
<b>Total</b>	<b>319</b>	<b>100%</b>	<b>113</b>	<b>100%</b>



# Beyond this Incident: Experience & Observations

How often have you witnessed the following on a jobsite?





# The National Safety Stand-Down to Prevent Falls in Construction

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**Tim Irving,  
Acting Director, Directorate of Construction  
Occupational Safety and Health Administration**

# Fall NEP

## US Department of Labor announces national emphasis program to reduce, prevent workplace falls, a leading cause of workplace fatalities

*OSHA initiative aligns enforcement, outreach efforts to protect workers*

**WASHINGTON** – The U.S. Department of Labor today announced that its Occupational Safety and Health Administration has begun a National Emphasis Program to prevent falls, the leading cause of fatal workplace injuries and the [violation the agency cites most frequently in construction industry](#) inspections.

The [emphasis program will focus on reducing fall-related injuries and fatalities](#) for people working at heights in all industries. The targeted enforcement program is based on historical Bureau of Labor Statistics data and OSHA enforcement history. BLS data shows that of the 5,190 fatal workplace injuries in 2021, 680 were associated with falls from elevations, about 13 percent of all deaths.

"This national emphasis program aligns all of OSHA's fall protection resources to combat one of the most preventable and significant causes of workplace fatalities," said Assistant Secretary for Working together, OSHA and employers in all industries can make lasting changes to improve worker safety and save lives.

The program establishes guidance for locating and inspecting fall hazards and allows OSHA compliance safety and health officers to open inspections whenever they observe someone working at heights. Outreach component of the program will focus on educating employers about effective ways to keep their workers safe. If a compliance officer determines an inspection is not necessary after entering and observing work activities, they will provide outreach on fall protection and leave the site.

[Safety required fall protection.](#)

# Purpose

- The program provides guidance to Occupational Safety and Health Administration's (OSHA) National, Regional, Area, and State Plan offices to implement OSHA's National Emphasis Program (NEP) to reduce or eliminate workplace fall hazards associated with working at heights.
- Applies to all industries.

# Why Falls NEP?

## Fall Fatalities in All Industries (BLS 2022)

	All Industries	Construction Industry	Non-Construction Industries
All Deaths	5486		
• All fall Fatalities (Slips, trips, falls)	865 (16%)	410 (47%)	455 (53%)
➤ Falls – Same Level	144	11	133
➤ Falls – Lower Level	700 (81%)	395 (56%)	305 (44%)

SOURCE : 2022 BLS Data

# Scope

- NEP applies to all construction activities
- For General industry/non-construction inspections, this NEP will target the following processes:
  - Roof top mechanical work/maintenance
  - Utility line employee (electrical, cable)
  - Arborist/Tree Trimming
  - Holiday light installation
  - Road sign maintenance/billboard

# Scope

- non-construction activities (cont.):
  - Power washing buildings (not connected to painting)
  - Gutter cleaning
  - Chimney cleaning
  - Window cleaning
  - Communication Towers

# NEP Goal

- Reduce or eliminate unprotected worker exposures to fall-related hazards in all industries that can result in serious injuries and deaths.
- Combination of enforcement, outreach to employers, and compliance assistance.
- Enforcement:
  - Hazard-based inspection targeting.
  - Optional locally generated programmed targeting.

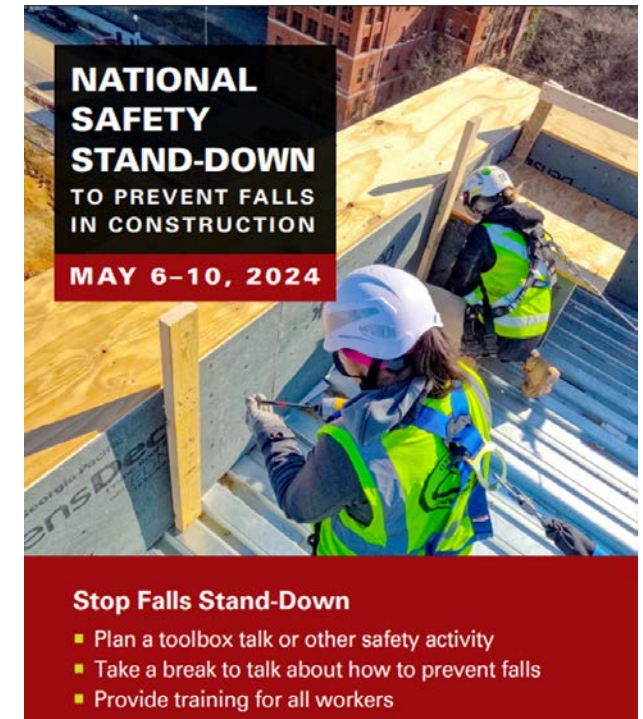


# 11<sup>th</sup> Annual National Safety Stand-Down

## May 6-10, 2024

The goal of the stand-down is to help ensure every worker returns home safely by:

- Raising awareness of fall hazards,
- Sharing how to prevent fatalities and injuries related to falls, and
- Eliminating FALLS – because they are preventable



**NATIONAL SAFETY STAND-DOWN**  
TO PREVENT FALLS  
IN CONSTRUCTION  
MAY 6-10, 2024

**Stop Falls Stand-Down**

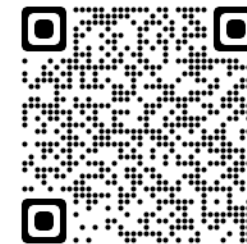
- Plan a toolbox talk or other safety activity
- Take a break to talk about how to prevent falls
- Provide training for all workers

# After the Stand-Down



Receive a “Certificate of Participation” for holding a stand-down:

- Employers go to the Stand-Down certificate webpage after conducting their stand-down and complete a short survey. Then print their certificate.
- They can share their stand-down experience and pictures with us for possible posting on the OSHA webpage.



# Premier Partners

- Honoring alliances and stakeholders for actively participated with the of the National Safety Stand-Down to Prevent Falls in Construction since 2014.

The Falls Campaign would like to thank and recognize the following organizations for their leadership as Premier Partners.

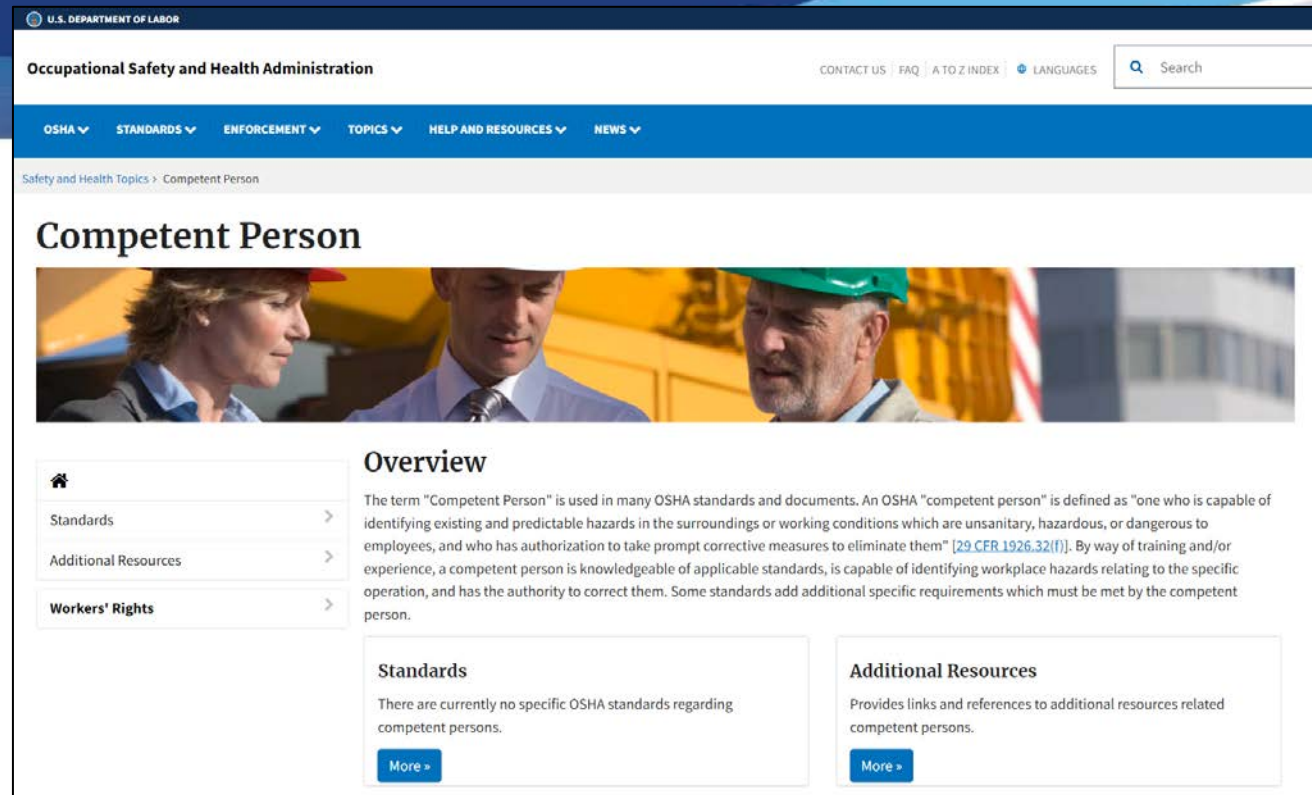


# THANK YOU, PREMIER PARTNERS!

<https://stopconstructionfalls.com/falls-campaign-leaders/>



# Fall Prevention: Competent Person



The screenshot shows the OSHA website page for 'Competent Person'. The page features a navigation bar with 'U.S. DEPARTMENT OF LABOR' and 'Occupational Safety and Health Administration'. A search bar is located in the top right corner. Below the navigation bar, there are dropdown menus for 'OSHA', 'STANDARDS', 'ENFORCEMENT', 'TOPICS', 'HELP AND RESOURCES', and 'NEWS'. The main content area is titled 'Competent Person' and includes a large image of three workers in hard hats. Below the image, there is an 'Overview' section with a definition of a 'Competent Person' and a sidebar with links to 'Standards', 'Additional Resources', and 'Workers' Rights'. At the bottom of the page, there are two boxes: 'Standards' and 'Additional Resources', each with a 'More >' button.


U.S. DEPARTMENT OF LABOR  
Occupational Safety and Health Administration

CONTACT US | FAQ | A TO Z INDEX | LANGUAGES | Search

OSHA ▾ STANDARDS ▾ ENFORCEMENT ▾ TOPICS ▾ HELP AND RESOURCES ▾ NEWS ▾

Safety and Health Topics > Competent Person

## Competent Person



### Overview

The term "Competent Person" is used in many OSHA standards and documents. An OSHA "competent person" is defined as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them" [29 CFR 1926.32(f)]. By way of training and/or experience, a competent person is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, and has the authority to correct them. Some standards add additional specific requirements which must be met by the competent person.

- Standards >
- Additional Resources >
- Workers' Rights >

**Standards**  
There are currently no specific OSHA standards regarding competent persons.  
[More >](#)

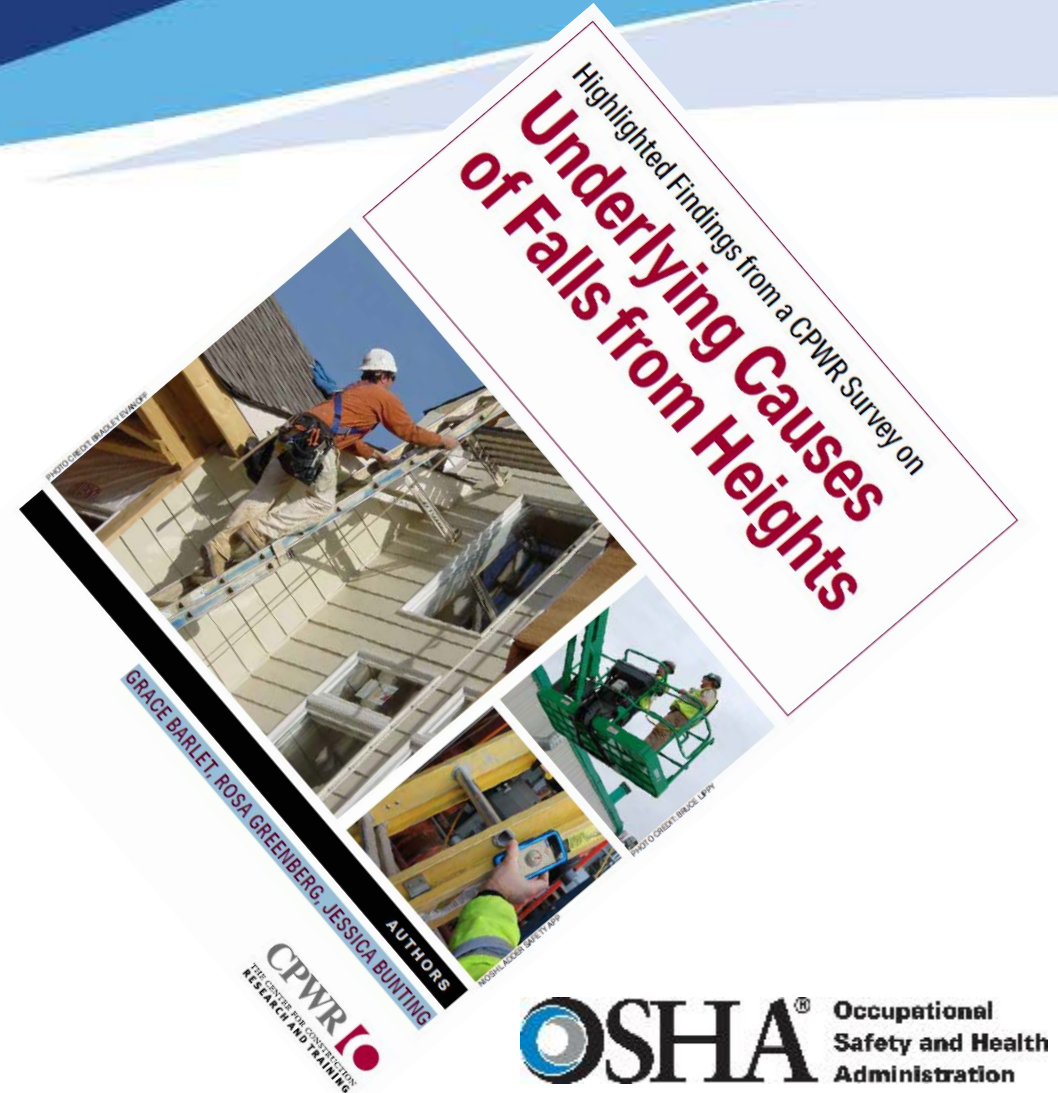
**Additional Resources**  
Provides links and references to additional resources related competent persons.  
[More >](#)

<https://www.osha.gov/competent-person>

# Competent Person

## 1926.32(f)

- **Competent person** means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.



# Questions?



[www.osha.gov](http://www.osha.gov)

**DOC: 202-693-2020**





# Campaign to Prevent Falls in Construction

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**PLAN. PROVIDE. TRAIN.**

Three simple steps to preventing falls

## Rescue Planning

Rich Trewyn

Chair, NORA Construction Sector Council Falls Work Group



# Fall Rescue Plan

- Rescue should be addressed in your company written safety program as a part of its fall-protection plan.
- OSHA's 1926 Subpart M requires prompt post-fall rescue.
- Workers should be trained in available rescue equipment and specific techniques, along with the hazards of rescue operation.

# First Step, Call 911

- After a fall, call 9-1-1
- But many rescue workers are not trained in high-angle rescue
  - High-angle rescue involves rescuing people from places that can't be reached by aerial ladders
- Implement your rescue plan



# Rescue

Two basic elements of rescue:

- ① Delay orthostatic shock
- ② Bring the fallen worker to a supporting surface

# Harness-induced Injury or Death

## *Suspension Trauma*

(a.k.a. orthostatic intolerance, orthostatic incompetence or orthostatic shock)



**Some researchers say death can occur after a short time suspended in a harness!**

# Suspension Trauma

1. Fall arrested by a harness
2. Blood flow impeded by leg straps and gravity
3. Blood collects in large leg muscles
4. Blood return to heart decreases
5. Heart rate increase and hormone release from pain and danger response
6. Heart pumping action reduced because of decreased blood return
7. More blood collects in legs
8. Heart rate and blood pressure decrease
9. Blood flow to brain decreases
10. Victim loses consciousness
11. Blood flow to brain continues to decline dangerously
12. Brain damage
13. Death



- Can occur when legs don't move and legs are lower than the heart
- May be complicated by other injuries from a fall, such as a neck trauma, broken bones, cuts, etc.

# Signs of Suspension Trauma

- Fainting
- Shortness of breath
- Nausea
- Dizziness
- Sweating
- Hot flushes
- Paleness
- Narrowing of field of vision or loss of vision
- Increased heart rate





# Rescue Equipment

- Equipment already on-site: ladders, scaffolds, personnel lifts
- Pulleys, winches or descending devices



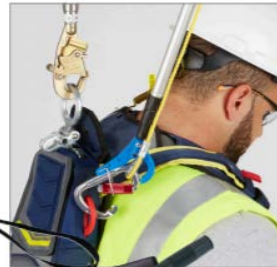
# Other Rescue Equipment



*Free yourself with the help of a colleague.*

#### **Assisted-Rescue Ring & DBI-SALA Rescue Pole accessory.**

In the event you're incapacitated during a fall and are unable to activate DBI-SALA Self-Rescue, the assisted-rescue ring allows for remote access and deployment by a colleague. For added efficiency, the telescoping DBI-SALA Rescue Pole accessory extends your reach and easily hooks into the ring, providing for a safe, efficient assisted-rescue.



# Rescue

Two basic elements of rescue:

- ① Delay orthostatic shock
- ② Bring the fallen worker to a supporting surface

# Self-rescue Strategies

- Cell phone or two-way radio
- Boatswains Technique
- Prussic Loop
- Suspension trauma straps and slings
- Lifeline loop
- Foot wrap



# Single Workers

- A single worker needs a way to call for help.

But he or she may be injured after a fall and unable to perform self rescue—or even call for help. A better policy is not to have workers work alone.



# Boatswains Chair



# Prussic Loop

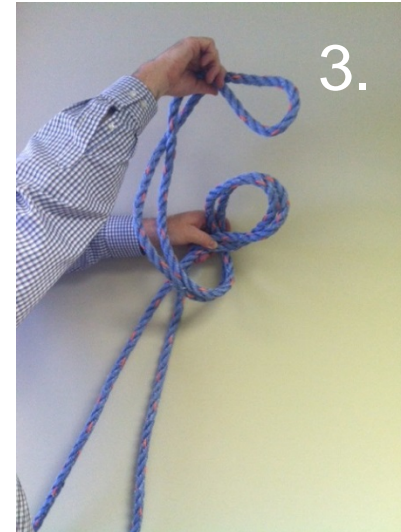
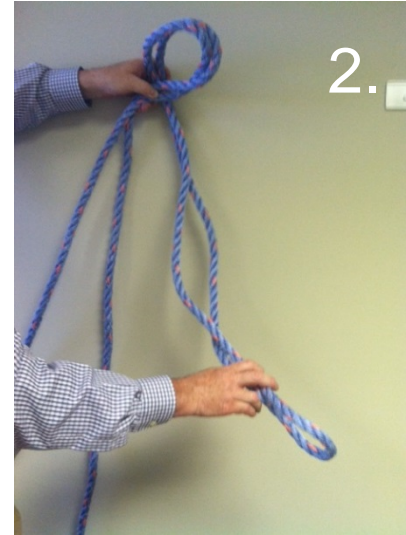


# Suspension Trauma Straps





# Making a Lifeline Loop

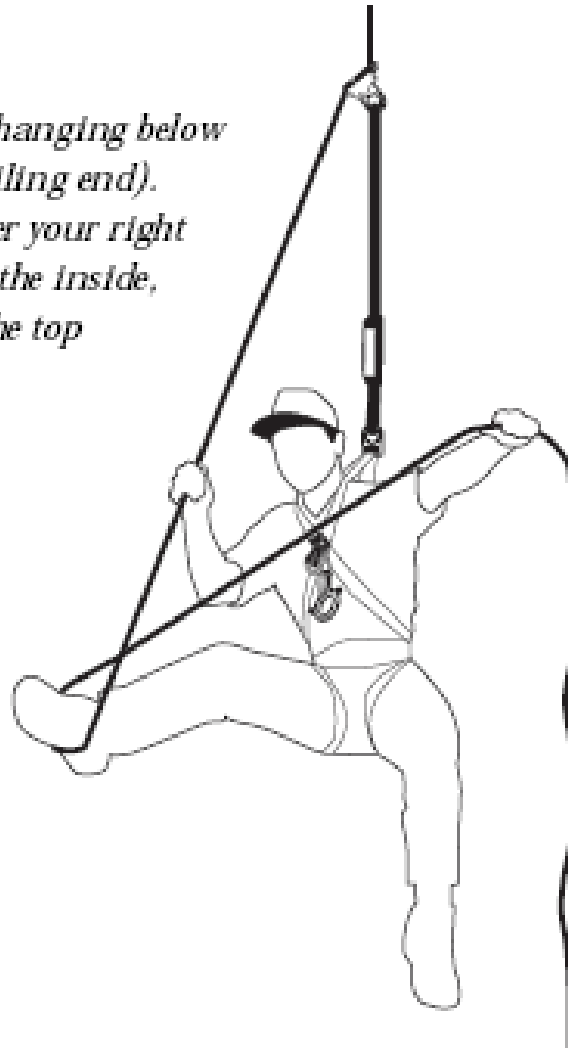


# Self-rescue – Foot Wrap

## Step 1

**Fig. 1**

*Grasp the lifeline hanging below you (that's the trailing end).  
Wrap it once under your right foot starting from the inside,  
then loop it over the top of the foot.*

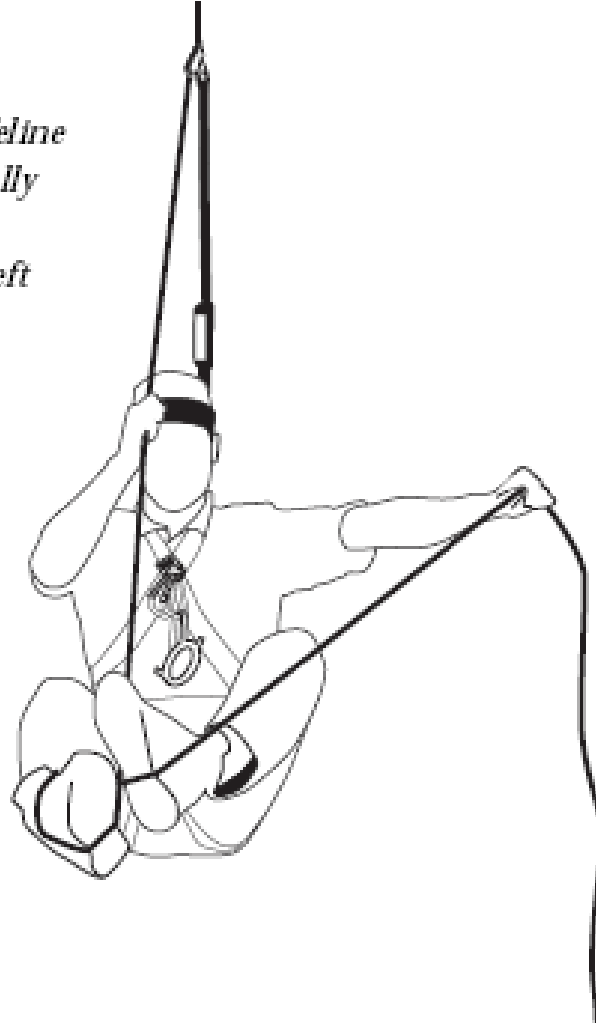


# Self-rescue – Foot Wrap

Step 2

**Fig. 2**

*Stretch the lifeline out horizontally and step into it with your left foot.*



# Self-rescue – Foot Wrap

## Step 3

**Fig. 3**

*Raise the trailing end of the lifeline and bring both parts together. You have now created a loop that will allow you to stand.*



# Self-rescue – Foot Wrap

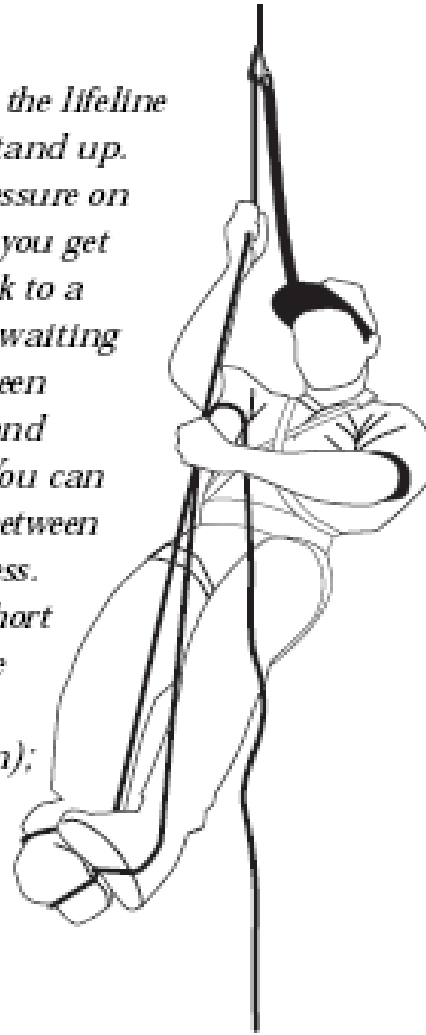
## Step 4

**Fig. 4**

*Continue to hold on to the lifeline with both hands and stand up.*

*This will relieve the pressure on your upper legs. When you get tired, you can shift back to a sitting position. While waiting for help, alternate between sitting in the harness and standing in the loop. You can also distribute weight between your feet and the harness.*

*To climb up or down short distances, slide the rope grab up (to climb up) or down (to climb down); sit back down, grasp another bite of rope, then repeat the process.*



# Self-rescue Strategies

- Imminent Danger
- Self-rescue lanyards
- Backpack Systems
- Rescue Pole Systems
- Cell phone or two-way radio
- Boatswains Technique
- Prussic Loop
- Suspension trauma straps and slings
- Lifeline loop
- Foot wrap



# After a Fall – First Aid

- Carefully handle the rescued worker
  - The quick release of pooled blood from the legs can cause cardiac arrest.
- A position of comfort on the ground and for transport to hospital is recommended.
- Administer oxygen if available.



# Take Equipment Out of Service

- OSHA requires that PFA equipment that has been subjected to “impact loading”—subjected to forces like those during a fall—must be immediately removed from service and not be used again until inspected by a competent person and determined to be undamaged and suitable for reuse.



(29 CFR 1926.502(d)(19))



# Fall Prevention & Rescue Planning Resources

Chris Trahan Cain, CIH  
Executive Director, CPWR

<http://stopconstructionfalls.com/planning/>



# Employer Rules & Regulations

- What OSHA standards address fall protection?
- What are some of the other OSHA standards that address safety in construction?
- What guidance does OSHA give for fall protection in residential construction?
- What are workers' rights under the Occupational Safety and Health Act?
- What are employers' responsibilities under the Occupational Safety and Health (OSH) Act?
- OSHA Compliance Resources

## What OSHA standards address fall protection?

OSHA covers fall protection in several standards:

- [1926 Subpart M \(English\)](#)
  - [1926.500 \(English\)](#), Scope, application, and definitions applicable to this subpart ([Related Information - English](#))
  - [1926.501 \(English\)](#), Duty to have fall protection ([Related Information - English](#))
  - [1926.502 \(English\)](#), Fall protection systems criteria and practices ([Related Information - English](#))
  - [1926.503 \(English\)](#), Training requirements ([Related Information - English](#))
- [1926 Subpart L \(English\)](#) - Scaffolds ([Related Information - English](#))
- [1926 Subpart R, Steel Erection \(English\)](#)
  - [1926.760, \(English\)](#) Fall protection ([Related Information - English](#))
- [1926 Subpart X \(English\)](#) - Stairways and Ladders ([Related Information - English](#))
- [1926 Subpart CC \(English\)](#) Cranes and Derricks in Construction
  - [1926.1423 \(English\)](#), Fall protection ([Related Information - English](#))

## What are some of the other OSHA standards that address safety in construction?

Additional key OSHA standards that address safety in construction include:


- [1926.20 - General Safety and Health Provisions \(English\)](#) ([Related Information - English](#))
- [1926.21 - Safety training and education \(English\)](#) ([Related Information - English](#))
- [1926.32 - Definitions \(English\)](#) ([Related Information - English](#))

See OSHA's [Recommended Practices for Safety and Health Programs in Construction \(English, Español\)](#) for more information.

## What guidance does OSHA give for fall protection in residential construction?

# Starter Fall Prevention Plan

- Begin with this resource if you do not currently have a fall prevention plan.
- Helps identify possible fall exposures, methods of fall protection and prevention, inspection plans, and rescue procedures.
- FIRST STEP for beginning a fall prevention planning program.
- [English](#), [Español](#)

**FALL PREVENTION PLAN**

Company Name \_\_\_\_\_ Date \_\_\_\_\_

Job Site Address \_\_\_\_\_

1) **What fall exposures are expected?** (Check all hazards you expect to find.)

- Deck or floor integrity (underside of deck, points of possible failure due to corrosion, etc.)
- Roof edge exposure where parapets are not at least 39" high
- Holes, skylights, hatches or skylight openings
- Loading/offloading, material handling, access points
- Ladders (set-up or take down, climbing up and down, using to perform work)
- Scaffolds (climbing onto, using to perform work)
- Open-sided ramps, floors or other walking/working surfaces, etc. with unprotected edges/sides
- Job-related material handling trip hazards
- Roof and other material loading and off loading
- ATV or other motorized equipment use
- Penthouses (access, work in a small area)
- Conduit or other piping (gas, water)
- Other (describe): \_\_\_\_\_
- Other (describe): \_\_\_\_\_

2) **What fall protection will be used?** (Check all the ways that you will prevent the fall hazards.)

<input type="checkbox"/> Guardrail system (GRS)	<input type="checkbox"/> Guardrails system with toe board
<input type="checkbox"/> Scaffold w/guardrails	<input type="checkbox"/> Horizontal lifelines
<input type="checkbox"/> Scissor lift	<input type="checkbox"/> Roofing slide guards (used with PFA, GRS or SNS)
<input type="checkbox"/> Personal fall restraint system	<input type="checkbox"/> Catch platform
<input type="checkbox"/> Personal fall arrest system (PFA)	<input type="checkbox"/> Safety net system (SNS)
<input type="checkbox"/> Covers for holes and openings	<input type="checkbox"/> Warning line (low slope roofs only 4 in 12 [or 4:12] or less)
<input type="checkbox"/> Safety Monitor with warning lines	<input type="checkbox"/> General awareness training (describe): _____
<input type="checkbox"/> Safety Monitor on roofs $\leq 50'$ in width	<input type="checkbox"/> Other (describe): _____

3) **Specifically, who will ensure the proper inspection, use, set up, and take down of fall protection?**

\_\_\_\_\_

4) **How will drop hazards/falling objects be prevented?**

<input type="checkbox"/> Inspect and protect for overhead holes/gaps	<input type="checkbox"/> Hoisted materials to be secured/netted
<input type="checkbox"/> Set up a restricted area below overhead work	<input type="checkbox"/> Other (describe): _____
<input type="checkbox"/> Tether tools and materials where possible	<input type="checkbox"/> Other (describe): _____
<input type="checkbox"/> Properly store tools, materials and refuse at heights	<input type="checkbox"/> Other (describe): _____

5) **If a worker falls:**

a) How will the fallen worker be rescued?

\_\_\_\_\_

b) Who will be contacted in the event of an emergency? \_\_\_\_\_

\_\_\_\_\_

Please attach a list of the employees who have reviewed this plan and have been trained on the protective equipment to be used

\*Learn about requirements for competent persons and fall protection: <https://www.osha.gov/SLC/competentperson/index.html>  
Source: Adapted from a Fall Protection Work Plan developed by Washington State Department of Labor & Industries <https://lni.wa.gov/safety-health/preventing-injuries-illnesses/create-a-safety-program/sample-safety-programs-plans>, Fall Protection Work Plans - <https://lni.wa.gov/safety>

# Daily Checklist

- Developed for small contractors
- Use before work begins to identify possible fall hazards and interventions to prevent falls
- Print it out and use it each day to plan for how to prevent falls
- [English](#), [Español](#)

**Daily Job Site Checklist for Recognizing and Preventing Falls** Date: \_\_\_\_\_

Job Name/Location: \_\_\_\_\_

Based on your Fall Prevention Plan, identify the fall hazards employees may encounter on the job today, how falls will be prevented, and where to find the safety equipment. Initial when equipment is ready for use and employees are properly trained on its use. Share this information with your team to prevent a fall.

Fall Hazard	Fall prevention equipment or work practice	Safety Equipment Location	Equipment is in order? <i>Initial</i>	Employees trained? (see reverse side) <i>Initial</i>

If someone is injured – call 911 and then call: \_\_\_\_\_



# Detailed Fall Prevention & Rescue Plan

- Use this resource when you are ready to develop a detailed fall protection and rescue plan or when you are looking to strengthen your existing plan.
- Contains more information, options, and exercises compared with the Starter Fall Protection Plan.
- [English](#), [Español](#)

CPWR  THE CENTER FOR CONSTRUCTION  
RESEARCH AND TRAINING

## FALL PROTECTION PLAN

CPWR – The Center for Construction Research and Training created this document as part of the National Campaign to Prevent Falls in Construction to provide companies with guidance on how to develop or enhance their site-specific fall protection plans. While OSHA only requires a written fall protection plan for employees engaged in leading edge work, precast concrete erection work, or residential construction work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment (See 1926.501(b)(2), (b)(12), and (b)(13)), CPWR believes that developing and implementing a detailed fall protection plan is essential to protect all workers at risk for a fall. We encourage you to use any and all sections that are applicable to your jobsite(s).

*Note: blue text indicates that a word can be found in the glossary at the end of this packet.*

*For more information about the National Campaign to Prevent Falls in Construction, including how to participate in the annual Safety Stand-Down, visit [stopconstructionfalls.com](http://stopconstructionfalls.com).*

Job Name: \_\_\_\_\_

Jobsite Phone: \_\_\_\_\_

Job Address: \_\_\_\_\_

Job Foreman: \_\_\_\_\_

Qualified Person: \_\_\_\_\_

### 1. JOBSITE/BUILDING DETAILS

Use the following page to sketch and note the important details of the jobsite. Be sure to consider:

- Type of jobsite or building (e.g. two-story residential home, commercial high-rise, highway work)
- Type of work being done (e.g. framing, roofing, electrical, restoration)
- [Prevention through Design](#) measures already in place (e.g. permanent railings or permanent ladders)
- Relevant work surfaces & building materials (e.g. abrasive concrete edges, slippery floors)
- Estimated duration of job (should you consider longer-term solutions such as scaffolding vs. moveable lifts?)

**PLAN. PROVIDE. TRAIN. Three simple steps to preventing falls.** 

# Tipsheet: Planning a Multi-Layered Approach to Fall Prevention and Protection

English ([PNG](#), [PDF](#)),  
Español ([JPEG](#), [PDF](#))

The table below is based on the [hierarchy of controls](#). The top of the table represents approaches that result in the most risk reduction and the bottom represents approaches that result in the least risk reduction. Contractors, owners, designers, and others should use this chart, beginning at the top and incorporating controls as feasible to prevent falls.<sup>2,3</sup>

Eliminate or minimize the fall hazard	<b>Elimination</b>	Plan, design, install, or move equipment to eliminate or minimize hazards associated with working at heights. <a href="#">Use Prevention Through Design</a> measures. Inspect and maintain equipment regularly to prevent failure.	<ol style="list-style-type: none"> <li>1. Adopt a building design with a single level at grade rather than multiple levels at elevations.</li> <li>2. Use parapet walls or permanent guardrails at least 39 inches high.</li> </ol>
	<b>Substitution</b>	Change the method of work to reduce the risk of falling.	<ol style="list-style-type: none"> <li>1. Move equipment or work to a lower height.</li> <li>2. Use safer equipment, for example replace ladders with aerial lifts.</li> </ol>
Prevent the fall	<b>Passive Engineering Controls</b>	Use passive fall prevention.	Install temporary guardrails or barriers, including around skylights and holes.
	<b>Active Engineering Controls</b>	Use active fall prevention.	Use fall restraint systems that secure workers via an anchor point, connector, lanyard, and harness to prevent the worker from reaching the fall hazard.
	<b>Administrative Controls</b>	Establish and use safe operating procedures when working at heights and provide comprehensive training in a language understood by workers.	<ol style="list-style-type: none"> <li>1. Make sure a competent/qualified person is present on the job site.</li> <li>2. Train workers for the specific task and unique fall hazards faced.</li> </ol>
Minimize the impact of the fall	<b>Personal Protective Equipment &amp; Other Protective Measures</b>	<p>Supply and use personal protective equipment (PPE) such as a personal fall arrest system.<sup>2</sup></p> <p>Plan ahead to reduce the risk of injury or death if a fall does occur.</p>	<ol style="list-style-type: none"> <li>1. Make sure fall harnesses fit workers properly.</li> <li>2. Plan ahead with input from the competent or qualified person to ensure certified anchor points, lanyard type and length, etc.</li> <li>3. Provide rescue equipment and training.</li> <li>4. Make sure the fall clearance is sufficient to avoid both swing hazards and the ground or nearest obstruction below.</li> <li>5. Select PPE that includes trauma straps or loops or a personal rope ladder to avoid suspension trauma.</li> <li>6. Provide hard helmets with chinstraps.</li> <li>7. Have a trained first aider on site when possible.</li> </ol>



# Tipsheet: Rescue Planning Saves Lives

English ([PNG](#), [PDF](#))  
Español ([JPEG](#), [PDF](#))

Falls can occur in the blink of an eye, even when being careful. Using personal fall arrest systems is only the first step in protecting workers if a fall does happen. If the fallen worker is suspended in a harness for longer than a few minutes, a lack of circulation can lead to nausea, unconsciousness, suspension trauma, and even death.

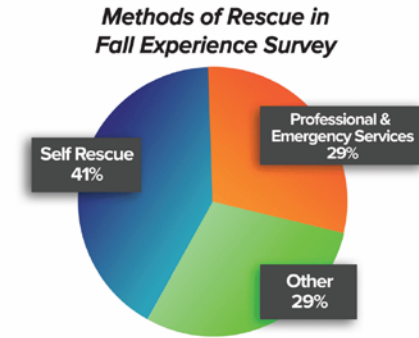
### **Planning for safe, efficient rescue saves lives.**

In a recent CPWR survey of contractors, safety & health pros, workers, and others, **over 67% of respondents indicated they never or only occasionally witnessed sufficient pre-planning for fall rescue.\***

### **Use these tips to strengthen your rescue planning:**

#### **Prioritize preparation for self- and crew-assisted-rescue**

- Use any method available to help blood circulation. For example, raise the worker up, lower them down, bring them into a structure through an opening, or bring support equipment to them. Make sure equipment for self-rescue, such as trauma straps, self-rescue harness units, or even bucket trucks, are available, ready to be used, and in good condition.
- The CPWR survey found that: Self-rescue (e.g., climbing or lowering oneself) was the most used method of rescue.\*
- The odds of a fall being fatal were 76% lower for those who had self-rescue training compared to those who did not have this training.\*



#### **Tailor the plan to each jobsite**

- Talk to emergency services in your area. Find out if 911 responders are trained to perform this type of rescue and how quickly they can get to the job site. If reliable and fast rescue is not available, consider implementing [prevention through design and fall restraint measures to reduce the likelihood of falls occurring](#).
- Designate a qualified rescuer to lead any rescue operations and communicate with the fallen worker. Decide on emergency methods of communication in advance and make sure all workers know how to contact the rescuer (e.g., walkie talkies, whistles, mobile phone).
- Think about how your access equipment could be used for rescue. In CPWR's survey, aerial lifts were the most common form of rescue after self-rescue and emergency services.\*

#### **Train workers**

- Train workers on self-rescue and assisted rescue. Make sure everyone is aware of the specific protocols included in the rescue plan and the locations of rescue equipment or first aid supplies.
- Make sure to provide training in the languages workers use.
- Include subcontracted workers. CPWR's survey found that workers employed by subcontractors were more than twice as likely to die in falls as workers employed by general contractors.\*

**REMEMBER! Even if a worker does not appear injured after a fall, they should always be examined by a medical professional.**



Use CPWR's [Generic Written Fall and Rescue Protection Plan](#) to integrate rescue planning into your fall protection plan (available in English and Spanish).



# NEW! Leading Edge Tipsheet

## FALL PROTECTION:

### Leading Edge Safety Tipsheet

A **leading edge** is the unprotected side and edge of a floor, roof, or formwork for a floor or other walking/working surface (such as a deck) that changes location as components are added. It is called a **leading edge** because the location of the edge changes as workers add or construct additional floor, roof, decking, or formwork sections. When a leading edge is not actively and continuously under construction – and therefore is not moving, it is considered an “unprotected side or edge”.

Employers must protect all workers constructing a leading edge that is **6 feet or more above lower levels** from falling through use of passive engineering controls (e.g., guardrails, safety net systems) and/or active systems (e.g., travel restraint or personal fall arrest systems).\*

Visit [CPWR's Tipsheet on Planning a Multi-Layered Approach to Fall Prevention and Protection](#) for more information on these and other controls.

When there is no overhead anchorage point available on a leading edge, workers often tie off at foot level. If they fall, it causes the lifeline to catch and pull taut on the leading edge. The positioning of the lifeline along the edge can also add increased force on both the lifeline and the worker's body.

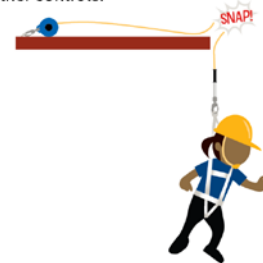
**This can cause a standard lanyard or self-retracting lifeline (SRL) to break or be cut.**

Always work with your **competent person** and your **qualified person** to ensure the best fall prevention and protection methods and equipment are in place. These may be the same person or two different people on your site. A **competent** person is capable of identifying and correcting fall-related hazards, while a **qualified** person is approved to supervise the design, installation, and inspection of fall protection and rescue systems.

*\*An exception to this rule occurs when the employer can demonstrate that these solutions are infeasible or create a greater hazard. In these cases, the employer must still develop and implement a fall protection plan which meets OSHA requirements. For more information, view OSHA's Hazard Alert.*

Sources: OSHA 1926.751 and ANSI Z-359

April 2024

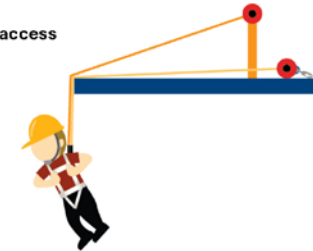


## To Protect Workers on A Leading Edge, Consider Implementing the Following Measures:

1. Use a guardrail system or safety net system as close to the working level as possible. Safety nets can also help protect workers below from being struck by falling objects from above.

2. Use a fall restraint system to prevent access to the leading edge fall hazard.

3. Use overhead anchorage solutions whenever possible. Keep in mind that an overhead anchorage system does not automatically protect the lifeline from pulling taut and fraying/breaking on the edge. Pay close attention to the distance from the edge and angle created.



4. Equip workers with **Class 2 SRLs** that are made of materials that can withstand a sharp edge and include energy/shock absorption. Class 2 SRLs have integrated permanent energy absorbers (shock packs) that remain in-line with the force vector during fall arrest. **Adding accessory shock packs to standard SRLs does NOT turn them into Class 2 SRLs.**



Look for the Class 2 icon to determine if an SRL can be used for anchorage positioned below the dorsal D-ring (i.e., for tying off at foot level)

5. Consider the building materials being used. **Is the edge sharp, serrated, or abrasive?** If so, even a Class 2 SRL can fray and break after a fall is arrested. ANSI has added a test for use with sharp leading edges, however it is only for structural steel and does not consider other types of sharp and abrasive materials that make up many leading and non-leading edges and can lead to cutting and fraying of both Class 1 and Class 2 SRLs.

**Remember that Class 2 SRLs require considerable clearance for deceleration, so it will always be safer to utilize guardrails or restraint systems to prevent the fall from occurring in the first place.**



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# NEW! Selecting Head Protection for Construction

## CPWR Selecting Head Protection for Construction Work

THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

A traumatic brain injury (TBI) is an injury that affects how the brain works. It can be caused by a bump, blow, jolt, or penetrating injury to the head. TBIs can be mild, but more serious TBIs can lead to disability and even death.<sup>1</sup>

Based on historical data, over 50,000 nonfatal work-related TBIs are treated on average annually in United States (US) emergency departments.<sup>2</sup> Nonfatal TBIs can be life-altering events; 43% of hospital patients treated for a TBI did not attend ordinary work for five years after their injury, which means these individuals were receiving a social transfer payment such as sickness absence benefits, experiencing short- or long-term sickness, or had died.<sup>3</sup> Among all US industries, construction has the highest number of both nonfatal<sup>4</sup> and fatal work-related TBIs. **Between 2003 and 2010, 2,210 construction workers died from a TBI.** These deaths represented 25% of all construction fatalities and 24% of work-related TBI fatalities among all industries during the same period.<sup>5</sup> More recent data show a similar pattern, with 2,297 fatal intracranial injuries in construction from 2015 to 2022.<sup>6</sup>

Construction workers are at higher risk for TBIs because, in their work environment, they may be struck by falling or flying objects and may experience different kinds of slips, trips, and falls – from falls on the same level to falls from ladders and equipment to falls from multi-story buildings or scaffolding dozens of feet in the air. Over a third of all nonfatal work-related TBIs are attributed to falls, and among workers 55 years and older, the majority result from same level falls.<sup>2</sup> **When it comes to fatal work-related TBIs, more than half are caused by falls, especially from roofs, ladders, and scaffolds.<sup>5</sup>**

Wearing protective headgear, such as a hardhat or helmet, is essential for reducing the risk of a TBI. A study by Kim et al. found individuals who had a work-related fall and were wearing a safety helmet were less likely to have head injuries compared to individuals who were not wearing a safety helmet.<sup>7</sup> Protective headgear should be selected based on your trade, type of work, and work environment. Rather than recommending a one-size-fits-all solution, the goal of this guidance document is to provide you with information on types of protective headgear, factors to consider, and additional resources.

### Acknowledgements

CPWR – The Center for Construction Research and Training would like to thank its [Expert Evaluation Panel on Construction Headgear](#) for their feedback throughout the inception and development of this document. In 2023, CPWR convened experts from academia, labor, government, manufacturing, and others to participate in an evaluation panel on the use of helmets with chin straps versus traditional hardhats. The goal of this expert evaluation panel was to: (1) assess industry awareness and adoption of Type II protective headgear and protective headgear with chin straps over



March 2024 (version 1)

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Figure 1: TYPE I & TYPE II FORCE TRANSMISSION TESTING

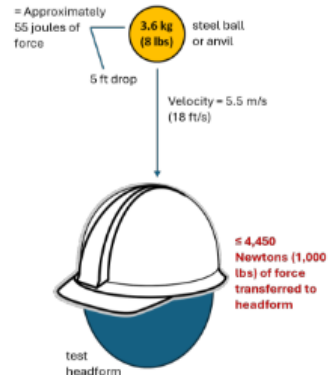


Figure 2: TYPE I & TYPE II APEX PENETRATION TESTING

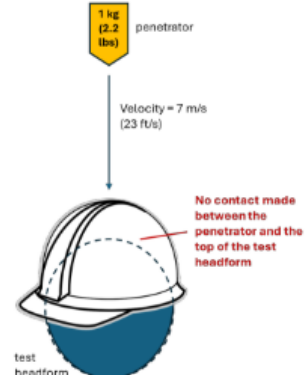
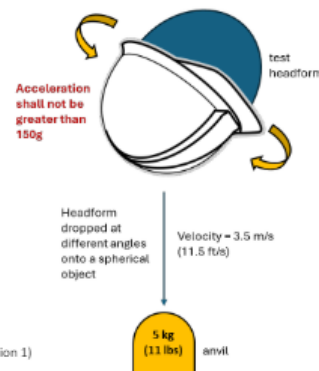


Figure 3: TYPE II ONLY IMPACT ENERGY ATTENUATION



March 2024 (version 1)

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### 1. Work at Heights

Consider purchasing Type II protective headgear with a chin strap for the best protection of workers at heights but be aware that even if your work does not involve work at heights, workers can still experience a fall on the same level if they trip or slip. Chin straps secure headgear to your head and will help prevent it from slipping off your head when bending over or in the event of a fall. Construction helmets have a built-in chin strap, while many hardhats do not (you can, however, purchase a chin strap to attach to a hardhat). If a fall does occur, it's possible for a worker to hit their head on an object or objects as they fall. For this reason, protection from impact on both the top and sides of the head may be best for those working at heights at or above 6 feet. Some manufacturers are even starting to consider products that can minimize rotational force to the head. Rotational forces are thought to be important in causing brain injuries, including concussion. Using new materials and technologies to dampen torque and the associated movement of the brain inside the skull has been shown to decrease risk for brain injury in some studies.<sup>10,11</sup>

### 2. Slips, Trips, and Falls at the Same Level

You don't have to be working at heights to experience a fall. Many TBIs occur from slips, trips, and falls at the same level.<sup>3,11</sup> Like falls from heights, workers can hit their head on the ground or an object as they fall. Type II head protection will provide better protection to the front, back and sides of the head, and a chin strap will keep the protective headgear in place.

### 3. Locations of Surrounding Work

Part of the reason for wearing headgear is to protect workers from falling and flying objects. If workers are consistently operating on one level away from unsecured objects that could fall from heights or fly across space, Type I headgear may be sufficient. However, only about 15% of impacts occur to the headgear crown<sup>12</sup> and the vast majority of impacts occur to the front, side, and rear. This makes Type II protective headgear the safer choice in any working environment, but especially when there is overhead work that could lead to objects falling from heights or unsecured materials nearby that could fly away.

### 4. Use of Accessories

Different accessories can be attached to protective headgear, such as face shields and hearing protection, to protect workers from various hazards. Construction helmets are still relatively new to the market, so there may be fewer accessory options available (e.g., welding hoods) compared to hardhats, which have been around for longer. Talk to your manufacturer as there are constantly new devices and accessories hitting the market.

### 5. Electrical Hazards

In addition to Type I and Type II classifications, the ANSI/ISEA Z89.1 standard provides hazard-specific categories for headgear: Class C, Class E, and Class G. Class G and Class E headgear must meet performance requirements for electrical classifications. Class G (General) headgear is intended to reduce the danger of contact with low-voltage conductors and electrical hazards to the head only. It must be able to withstand 2,200 volts for one minute and maximum leakage cannot be greater than three milliamperes. Class E (Electrical) headgear is intended to reduce the danger of contact with higher voltage

March 2024 (version 1)

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# Highlighted Resource: New Premier Partner Videos

Complete playlists of videos about falls can be found on CPWR's YouTube Playlists:

**BILINGUAL PLAYLIST ABOUT FALLS**

**SPANISH PLAYLIST ABOUT FALLS**

**Highlighted Video:**

10-Year Anniversary, National Safety Stand-Down to Prevent Falls in Construction – [English](#)



**2024 Stand-Down Premier Partner Promotional Videos:**

- America Society of Safety Professionals (ASSP) – [English](#)
- Association of Occupational and Environmental Clinics – [English](#)
- Mechanical Contractors Association of America (MCAA) – [English](#)
- National Association of Home Builders (NAHB) – [English](#)
- National Roofing Contractors Association (NRCA) – [English](#)
- NCCCCO Foundation – [English](#)
- Scaffold & Access Industry Association (SAIA) – [English](#)
- Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) – [English](#)



# Save the Date: Safe + Sound Week

- A great time to continue focusing on pre-job and pre-task planning!
- [www.osha.gov/safeandsound](https://www.osha.gov/safeandsound)

**SAVE THE DATE**  
**SAFE + SOUND**   
**WEEK 2024**  
**AUGUST 12-18, 2024**



# 2024 National Campaign to Prevent Falls in Construction & Safety Stand-Down

## THANK YOU!

May 7, 2024



**PLAN. PROVIDE. TRAIN.**  
*Three simple steps to preventing falls.*

