

OSC 12
Ohio Safety Congress & Expo

WELL AT HOME. SAFE AT WORK.

463 The Devastating Effects of Slips, Trips and Falls

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Thursday, March 29, 11 a.m. to Noon

Ohio Bureau of Workers' Compensation

Devastating Effects of Slips, Trips and Falls



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OR...

I knew I shouldn'a' been doin' that!

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Introduction

- Slips, trips and falls cause:
 - the majority of general industry accidents
 - 15 percent of all accidental deaths
 - more fatalities than all other causes but motor vehicles
- OSHA's standards for walking and working surfaces apply to all permanent places of employment, except where only domestic, mining, or agricultural work is performed

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Slips, Trips and Falls in 2010*

Number of average days away from work:

- Fall to lower level 7.3 days
- Fall on same level 18 days
- Without fall 3.8 days

*U.S. Bureau of Labor Statistics

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How Devastating are Slips and Falls? They Cause:

- 847 Fatalities
- 11% of job-related fatalities for men
- 5% of job-related fatalities for women
- 260,610 cases with days away from work
- Expenses of \$70 billion a year
- 22% of slip/fall incidents resulted in more than 31 days away from work

U.S. Bureau of Labor Statistics

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Slips and Falls...*

- Are the leading cause of workers' compensation claims and are the leading cause of occupational injury for people aged 15-24 years
- Do not constitute a primary cause of fatal occupational injuries, but represent the primary cause of lost days from work

*National Floor Safety Institute

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But Wait...There's More!

- According to the American Trucking Association, slips and falls are the leading cause of compensable injury in the trucking industry
- Falls from elevation (approximately 40% of compensable fall cases, approximately 10% of occupational fatalities)
- Falls on the same level (approximately 60% of compensable fall cases). (W. Monroe Keyserling, Ph.D. 2000)

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And... while we're talking,

Consider your safety away from work.....
and your family's!!



Think about your role...and responsibility!

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Top 10 Slip, Trip and Fall Hazards*

1. Contaminants on the floor: water, oil, food
2. Poor drainage: pipes and drains
3. Indoor walking surfaces irregularities
4. Outdoor walking surfaces irregularities
5. Water conditions: ice and snow

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Top 10 Slip, Trip and Fall Hazards*

6. Inadequate lighting
7. Stairs and handrails
8. Stepstools and ladders
9. Tripping hazards: cords, hoses, etc.
10. Improper use of floor mats and runners

*Slip, Trip and Fall Prevention for Healthcare Workers

NIOSH Publication No.2011-223-**Great resource!**

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General Requirements Housekeeping

- Workplaces must be kept clean, orderly, and sanitary
- Workroom floors must be maintained as clean and dry as possible
- Effective process to clean up spills immediately
- Effective process to mitigate leaks or other causes of slippery floors or walkways



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General Requirements Aisles and Passageways

- Keep clear and move obstructions that could create a hazard
- Mark permanent aisles and passageways
- Aisles must be sufficiently wide where mechanical handling equipment is used



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General Requirements Covers and Guardrails

Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.



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General Requirements Floor Loading Protection

- Load ratings must be marked on plates and be conspicuously posted
- Do not exceed the load rating limit



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Floor Opening

- An opening measuring 12 inches or more in its least dimension in a floor, platform, pavement, or yard, through which persons may fall
- Every stairway floor opening shall be guarded by a standard railing



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Guarding Floor Openings Definitions

- **Standard railing**- Consists of top rail, mid rail, and posts Height from the upper surface of top rail to floor level is 42 inches. Mid rail height is 21 inches
- **Standard toe board**- 4 inches high, with not more than ¼-inch clearance above the floor



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Stairway Floor Openings

- Standard railing constructed in accordance with paragraph 1910.23. The railing shall be provided on all exposed sides (except at entrance to stairway)



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Ladderway Floor Openings

- Guard with a standard railing with toeboard on all exposed sides (except entrance)
- Guard the passage through the railing with a swinging gate or offset it to prevent someone from walking into the opening



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Floor Hole

- An opening measuring less than 12 in. but more than 1 in. in its least dimension, in a floor, platform, pavement or yard, through which materials but not persons may fall
- Every floor hole into which persons can accidentally walk must be guarded by either:
 - standard railing with toe-board
 - cover



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Wall Openings

- Opening at least 30 in. high and 18 in. wide, in a wall or partition, through which persons may fall
- Wall openings from which there is a drop of more than 4 feet must be guarded



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Open-Sided Floors and Platforms

- Open-sided floors or platforms 4 feet or more above adjacent floor or ground level must be guarded by a standard railing (or equivalent) on all open sides, except where there is an entrance to a ramp, stairway, or fixed ladder
- A toe-board is required when, beneath the open sides:
 - persons can pass,
 - there is moving machinery, or
 - there is equipment with which falling materials could create a hazard



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Open-Sided Floors, Walkways, Platforms, and Runways

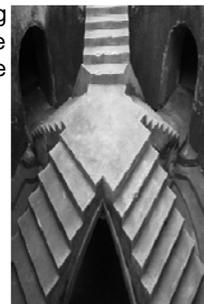
- Every open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing

Every runway shall be guarded by a standard railing (or the equivalent as specified in paragraph (e)(3) of this section) on all open sides 4 feet or more above floor or ground level

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Stairways

Every flight of stairs having four or more steps shall be equipped with standard handrails on both sides.



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Fixed Industrial Stairs

- Treads must be slip resistant with uniform rise height and tread width
- Must be able to carry 5 times expected load;
 - minimum of 1000 pounds
 - minimum width of 22 inches



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Ladders



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Portable Ladders

- Ladders used to gain access to a roof or other area must extend at least 3 feet above the point of support
- Withdraw defective ladders from service and tag or mark "Dangerous, Do Not Use"
- Never use ladders in a horizontal position as scaffolds or work platforms
- Never use metal ladders near electrical equipment

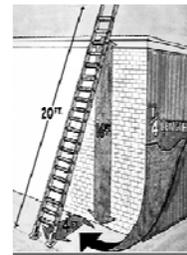


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Ladder Angle Portable Rung and Cleat Ladders

1910.25(d)(2)(i)

Portable rung and cleat ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder



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Fixed Ladders

- Permanently attached to a structure, building or equipment
- Cages or wells required if longer than 20 ft. to a maximum unbroken length of 30 ft.
- Ladder safety devices may be used on tower, water tank and chimney ladders over 20 ft. in unbroken length instead of cage protection



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Scaffolding General Requirements

- Must be capable of supporting four times the maximum intended load
- Do not alter or move while in use
- Protect workers on scaffolds from overhead hazards
- If higher than 10 ft., use guardrails, midrails and toeboards
- Use wire mesh between the toeboard and guardrail if people work or pass underneath
- Must be equipped with access ladder or equivalent



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Three Point Contact

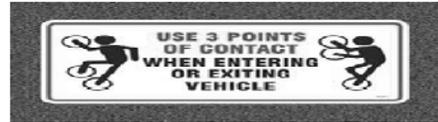


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Three Point Contact

Always maintain three point contact when:

- Climbing ladders or scaffolds
- Climbing on and off trucks and equipment
- Always use handrails when using stairs



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What Global Warming?!?!



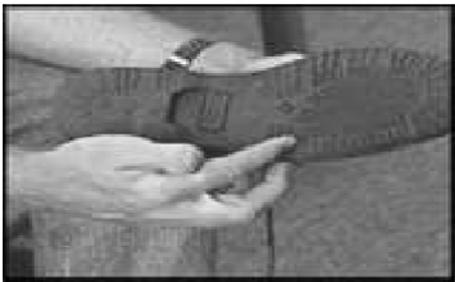
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Don't Forget the Outside!

- Filling and patching cracks and holes
- Repairing and eliminating raised areas due to tree roots, settling, cold weather (frost heaves) and ordinary wear-and-tear
- Reducing surface water by directing roof drainage away from sidewalks and parking areas
- Clearing sidewalks/parking areas of snow/ice before employees and guests arrive
- Centering and securing parking stoppers
- Painting or staining parking stoppers near entrances "safety yellow" to improve visibility

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It's Gotta' Be The Shoes!



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It's Gotta' Be The Shoes!

- Examine the Outsole Pattern
- Note the Space and Depth of the Tread
- Monitor the Tread Depth of your Shoes with Wear
- Choose the Right Shoe for the Right Environment
- Beyond Slip Resistance

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Summary

- Falls occur in virtually all manufacturing, construction and service sectors
- Fatal falls however are in construction, mining and certain maintenance activities
- OSHA's standards for walking and working surfaces include requirements for housekeeping, guarding floor and wall openings and holes, industrial stairs and ladders
- Keeping working surfaces clean, dry, and uncluttered can prevent many workplace accidents

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Questions?



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