Contact Safety

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Mine Safety & Training Section

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Preventing Slips, Trips and Falls

Slips, trips, and falls are the number one cause of injuries in the workplace. According to 2010 data from the Bureau of Labor and Statistics (BLS), slips, trips and falls accounted for approximately 25% of lost time injuries. (Cani, 2012) Since 2012, Metal/Non-metal mines in the U.S. have experienced 12 fatalities that were classified as a "Fall of Person." There were a total of 96 fatalities in this five year period and individuals falling from heights accounted for approximately 13%. In the United States, $70 billion is spent annually on workers' compensation and medical costs associated with occupational falls. (University of South Florida, n.d.) While the costs associated with falls is tremendous, the loss of a single life is difficult to accept when most of these accidents could be prevented.

Let's begin the discussion by looking at some of the common factors that were associated with many of these fatalities.

Factors that contribute to falls from heights

Factor #1 – Incomplete or ineffective workplace examinations. Remember, under 56/57.18002(a): *A competent person designated by the operator shall examine each working place at least once each shift for conditions which may adversely affect safety and health. The operator shall initiate appropriate actions to correct such conditions.*

While the regulations requires a designated individual to complete these examinations, it is just as important for the individuals assigned to complete a task or job to complete their own examination of their work area. In many of these fatalities, the hazard pre-existed but no one stopped to correct it in a timely manner.

Factor #2 – Unsafe work practices or procedures. This factor includes:

56/57.11001: *Safe means of access shall be provided and maintained in all working places.*

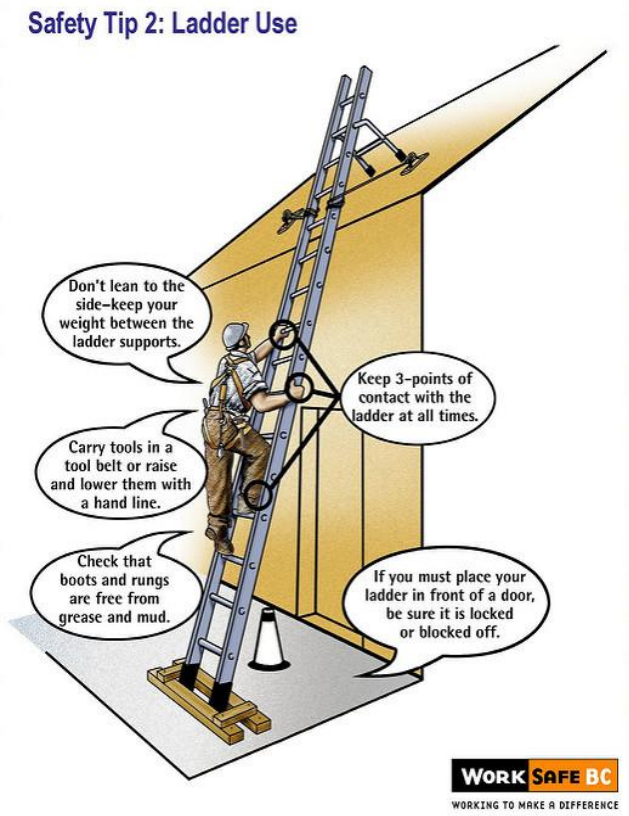
Safe means of access includes ensuring supplies and/or equipment that is stored at heights can be accessed and moved safely. Ladders provided to access supplies should be of suitable size and positioned correctly. Items such as pallets, boxes, buckets, etc., should never be used in replace of a ladder. In addition, workers should be trained to never work perpendicular while standing on a ladder to access materials.

Working surfaces, regardless of the height, should be level and free of tripping hazards.

Factor #3 – Failure to use/provide adequate fall protection.

56/57.15005: *Safety belts and lines shall be worn when persons work where there is a danger of falling; a second person shall tend the lifeline when bins, tanks, or other dangerous areas are entered.*

There is no arbitrary height established by MSHA. However, it is common practice to ensure fall protection is provided for distances above 6 feet. In addition, it is important to understand that heights under six feet are assumed to be safe. There have been serious injuries and fatalities associated with falls at distances as low as 2 feet.



Factor #4 – Failure to protect opening/improper or missing signage.
56/57.2011: *Areas where health or safety hazards exist that are not immediately obvious to employees shall be barricaded, or warning signs shall be posted at all approaches. Warning signs shall be readily visible, legible, and display the nature of the hazard and any protection required.*
Several of the fatalities associated with a fall over the last five years could have been prevented had proper barricades and/or warning signs been provided. Hazards, once identified, should be corrected immediately. In the event these hazards cannot be corrected, employees shall be notified of the hazard and barricades/warning signs should be put in place to keep employees from these areas.
Factor #5 – Unfamiliar with hazards or failure to maintain situational awareness.
In many cases involving fatalities from falls, employees were not appropriately trained on hazard awareness or failed to recognize the hazard associated with the task they were performing.

So what can be done to reduce and/or eliminate injuries/fatalities associated with slip, trips and fall?

ESTABLISH A FALL PROTECTION PROGRAM
The steps with preventing falls begins by following three basic rules.
First – plan ahead to get the job done safely. This means completing a job hazard analysis (JHA) for any task that requires work to be done at heights. The JHA should identify the hazards, ensure proper equipment and training is available and provided to the employee prior to work commencement.
Second – provide the correct equipment for the job. This includes appropriate fall protection equipment, ladders and scaffolding needed for heights 6 feet or greater. Ensure when providing ladders and scaffolding, they are appropriate for the job to be performed. All equipment should be inspected before use to ensure it functions appropriately.
Third – training employees is perhaps the most important rule. You can plan for the hazards and provide equipment but if employees are not trained on the hazards and how to use the equipment, a fall protection program is doomed to fail. Employees should be trained on how to properly use a ladder or scaffolding as well as how to appropriately wear personal fall arrest systems.

Now let's turn our attention to how to prevent falls

Preventing falls from roofs:

Ensure properly fitted fall protection is worn and always stay connected (tied off)

Use guardrails and lifelines

Always inspect equipment before use

Preventing falls from ladders:

Chose the right ladder for the job. Ensure it is the proper height and never use the top rung to stand on.

Maintain three points of contact

Make sure the base of the ladder is secure

Always face the ladder when ascending and descending

Place ladder on stable and level ground

Ensure ladder is angled appropriately

Preventing falls from scaffolds

Use fully planked scaffolds

Ensure proper access is maintained

Install proper guardrails

Ensure stable footing

Inspect before use

Prevent slip, trip and falls on surfaces

Use slip-resistant floor treatments, especially in areas that are frequently wet

Ensure snow and ice are removed from walkways and steps

Maintain adequate lighting of all walkways and travelways

Repair worn/uneven surfaces

Maintain entry areas and secure entry mats

Slip, trip and falls that occur in an occupational setting are costly and preventable. When it comes to the Metal/Non-metal mining, these accidents can be prevented. Prevention is achieved by Planning, Providing, and Training. Plan all activities in advance with a focus on eliminating or addressing hazards before work begins. Provide the necessary equipment. Training all employees on how to safely complete the job. By following the three basic rules and prevention strategies discussed above, we can work to reduce the injury/fatality rates we see from slip, trip and falls.

References

Cani, B. (2012). *Michigan Occupational Safety and Health.* Retrieved from Michigan Occupational Safety and Health: www.mishigan.gov/cet

University of South Florida. (n.d.). Retrieved from University of South Florida Health: www.usfosha.com

QUIZ

1. Slip, trip and falls are the _____ cause of _____ in the workplace.

2. Since 2012 what percentage of fatalities were related to falls in Metal/Non-metal mining? _____

3. True or False The operator/manager/supervisor are the only individuals responsible for completing workplace exams.

4. What are the three basic rules to follow when it comes to fall prevention. _____, _____,_____

5. Explain what is wrong with the picture on the next page.

If there is any specific topics you would like to learn more about please write on line below.

_____

_____

_____

Employee:_____**Date:**_____

Mine/Company:_____

Address:_____

City:_____**State:**_____**Zip:**_____