

Preventing Injuries

PREVENTING INJURIES FROM SLIPS, TRIPS AND FALLS

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A slapstick comedian slips on a banana peel and everyone laughs. A schoolboy stumbles and the kid behind him cracks, "Have a good trip?", but slips and falls are no laughing matter. Slip and fall injuries are the third leading cause of disabling work injuries in the United States, the most common type of office injury, and the leading cause of accidental death in the elderly. They account for about half of all accidental deaths in the home. More than a million people suffer from a slip, trip or falling injury each year in this country. Over 11,000 die as a result of falls. In the work place, there are an estimated 300,000 disabling injuries each year resulting in 1,400 worker deaths. Slips, trips and falls account for approximately 15-20% of all Workers' Compensation costs. The back is the most frequently injured part of the body in falls, and most injuries are sprains and strains.

Who slips and falls? Nearly everyone has fallen at least once during their lifetime, and some people have fallen scores of times. Individuals who work on walking surfaces that are rough, irregular or unsteady are at higher risk as are people at the beginning of their careers and veteran employees. In both cases, nonchalance, hurrying, or distraction are often involved. A fall occurs when you lose your balance and the center of gravity is displaced and there is nowhere to go but down. You may be thrown off balance by a slip (i.e., on a wet floor) or a trip (i.e., over an obstacle in your path), but once you lose your footing and balance, a fall is inevitable.

The cause of most slips and trips have to do with either a loss of footing or a loss of traction. Four major lessons to avoid a loss of footing include:

1. Keep walkways clear of debris.
2. Keep work areas well lit so that obstacles can be well seen.
3. Watch where your steps are taking you.
4. Wear shoes with adequate ankle support to assure the best control on uneven surfaces.

Steps to take to avoid loss of traction include:

1. Keep floors and walkways clear of water, ice and slippery materials.
2. Require slip resistant shoes for people who work in potentially wet or greasy conditions or move rapidly from one type of walking surface to another. Check the "static coefficient of friction" when purchasing slip resistant shoes. OSHA recommends a minimum coefficient of 0.5 or even higher for tasks with greater risks of slipping.
3. For those who work in outdoor icy conditions, consider studded rubber pullovers for shoes and boots.

There are a number of pointers to improve safety when walking on slippery surfaces. These include:

1. Take small steps, shorter than your foot length, to keep your center of balance under you.
2. Walk with your toes pointed outward, which provides a wider, more stable base of support for maintaining balance.
3. Turn gradually – a sharp turn results in a sideways force that cause loss of balance and a fall.
4. Keep both hands free for balance, rather than in your pockets.
5. Wear shoes with slip resistant soles or studded shoe pullovers for walking on icy surfaces.

Advice for the smart use of stairs include:

1. Use the handrail from start to finish.
2. Avoid carrying loads on stairways – or only carry loads that you can see over.
3. Keep your eyes on where your going and descend stairs slowly to keep your balance and identify tripping hazards.
4. Test potentially slippery stairs by tapping them with your foot. When going up or down, keep your weight on your back leg until your front foot is safely on the next step. This helps maintain your center of gravity.
5. Follow the 3-point rule on ladders. When ascending or descending the ladders of machinery or vehicles, always keep one hand and two feet or one foot and two hands on the ladder.

General recommendations include:

"If you drop it, pick it up!"

"If you spill it, wipe it up!"

"Go where you are looking and look where you are going."

"Step, don't jump from vehicles, equipment and platforms."

Advice on the art of falling. One way to reduce injuries related to falls is to learn how to "fall correctly." Often, coworkers who are former athletes are good sources of advice for how to fall without becoming seriously hurt. General advice includes, roll with the fall ("bruise the meat; don't break the bones"). Try to twist and roll backward rather than falling forward. Roll onto the soft tissues of your buttocks, thigh and large back muscles, which protect the back of your head and spine. In general, you would like to maximize the surface area of your body that strikes the floor. Turn quickly to look at the spot where your body will hit the ground. This will cause you to turn your body to your side rather than falling on your back. Relax as much as possible when you begin to fall. You will be more likely to roll with the fall than to strike an elbow or knee. When falling, shout and exhale ("curse the fall!") to reduce internal compression due to holding your breath. Cry out as they do in the

marshal arts. Slap the ground ("hit it before it hits you!"). Don't stiff arm the wall, floor or ground when you fall. Slap the surface with your extended palm and forearm just before impact. This helps spread the impact, reduce the force of the fall and avoid wrist, elbow and shoulder dislocations. Finally, toss the load ("free your arms"). Protect yourself instead of objects being carried by letting go or tossing them clear when beginning to fall. The potential cost in damage to materials or in cleanup time is usually much less than the cost of an injury.

References

- Supervisors' Safety Update #97-03, *Prevent Slip, Trip and Fall Injuries*, by Jeannette Jacobson – <http://www.eig.com/ssus/ssu9703.htm>
- *Preventing Injuries From Slips, Trips and Falls*, by William J. Becker. – <http://www.cdc.gov/niosh/nasd/docs/as04200.html>