SLIPS, TRIPS AND FALLS

On TV and in cartoons, a person falls but doesn't get a scratch. In reality, falls cause injury and lost time. Often, falls are fatal.

Injuries from falls may include cuts, bruises, sprains, strains, broken bones, and back injuries.

WHERE ARE THE REGULATIONS?

Although the general industry standards of the Occupational Safety and Health Administration (OSHA) do not yet have fall protection requirements under Subpart I, Personal Protective Equipment (PPE), fall protection requirements exist at:

- Subpart D, Walking/Working Surfaces.
- Subpart F, Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms.
- Subpart R, Special Industries.

Regardless of the current status of any regulations, the City recognizes the need to protect the staff from falls and have set up fall protection programs.

WHAT HAPPENS WHEN YOU SLIP?

Slips can be caused by wet surfaces, spills, or weather hazards like ice and snow. Slips are more likely to occur when you hurry, run, or don't pay attention to where you're walking. Follow these safety precautions in order to avoid a slip:

- Practice safe walking skills. If you must walk on slippery or wet surfaces, take short steps to keep your center of balance under you, and move slowly. Devices such as strap-on cleats can be fastened to shoes or boots for greater traction on ice.
- Clean up spills right away. Even minor spills can be very hazardous. Report spills or leaks of hazardous materials to the proper authorities immediately.
- Don't let grease accumulate on a shop floor around machinery.

Properly cleaned floors help

Floors must be dry and free of protruding objects such as nails, splinters, holes, or loose boards. Use floor finishes properly so they don't leave a slippery surface. Many slip accidents are caused by improper cleaning methods.

Some floor finishes may have additives that help increase traction. If you're mopping or cleaning, post signs or place barricades to warn others of a wet surface.

Added traction for wet floors

One way to avoid slips on frequently wet surfaces is to apply some type of abrasive that will increase traction. Epoxies and enamels that contain gritty compounds may be painted on floors. Adhesive-backed strips of skid-resistant material can be applied to some walking surfaces.

Rubber mats can be used as a permanent or temporary solution to wet areas.

WHAT HAPPENS WHEN YOU TRIP?

Trips occur whenever your foot hits an object and you are moving with enough momentum to be thrown off balance. Remember these rules to avoid tripping:

- Make sure you can see where you're going. Carry only loads that you can see over.
- Don't run up or down stairs or jump from landing to landing. Use the handrails.
- Keep work areas well-lit. Report burnt out light bulbs.
- Keep your work area clean, and don't clutter aisles or stairs. Store materials and tools properly.
- Arrange furniture so that it doesn't interfere with walkways or pedestrian traffic in your area.
- Keep extension or power tool cords out of walkways.
- Eliminate hazards due to loose footing on stairs, steps, and floors. Report loose carpeting, stair treads, hand rails, or floor tiles, and report broken pavement and floor boards.

WHAT HAPPENS WHEN YOU FALL?

Falls occur whenever you move too far off your center of balance. Slips and trips often push you off your center of balance far enough to cause a fall, but there are many other ways to fall. Falls are also caused by makeshift ladders, misuse of ladders, accidents while climbing, and improper scaffolding use.

A few words about ladders

The following points serve as guidelines for ladder use:

- Don't build makeshift ladders out of chairs, benches, or boxes. If the job calls for a ladder, take the time to find one.
- Make sure there's only one person on a ladder at a time.
- Check the ladder's condition before climbing. Don't use a ladder with broken or cracked rails or rungs. If the rungs are slippery with grease or oil, clean them.
- Place the ladder so it has secure footing. Don't place a ladder on boxes or blocks to make it taller.
- Face front and use both hands as you climb.

- Don't overreach from a ladder. If your waist reaches past the uprights, you've gone too far - move the ladder.
- Set ladders up properly by using the 4 to 1 rule. The distance from the wall to the base of the ladder should be one fourth the distance from the base of the ladder to where it touches the wall.
- Hoist tools or materials up to you after you reach the top of the ladder. You need both hands for climbing.
- Don't stand on top of a step ladder. Also be careful not to get too close to the top of an extension or straight ladder.

For more information on ladders, check the OSHA regulations which can be found at 29 CFR 1910.25 and 1910.26.

Scaffolds can be dangerous

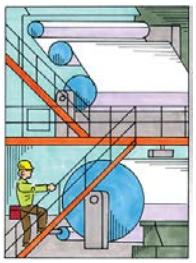
Scaffolds are elevated work platforms that may be built up from the ground or suspended from above. Check OSHA regulations at 29 CFR 1910.28 for detailed requirements on using scaffolds. Keep both feet firmly on the scaffold with these safety precautions:

- Make sure scaffolds are sturdy. Check them daily for any safety defects.
- Always clear work surfaces of snow, ice, or slippery materials. Spread sand onto wet planking for sure footing.
- Never overload scaffolds with people, equipment, or supplies.
- Lock casters on mobile scaffolding to prevent movement when working. Use ladder jack scaffolds only for light-duty work.
- Fall and climbing protection devices prevent injury in the event of an accidental slip, trip, or fall on ladders or scaffolding. If your job requires you to wear fall protection, know how it works and keep it in good working condition.

WHAT IS FALL PROTECTION?

All fall protection systems serve one of two basic functions. They:

- Prevent or restrain a worker from falling.
- Safely stop or arrest a worker who falls.
- Guardrail, safety net, and personal fall arrest systems are conventional fall protection systems.



Before you begin using personal fall protection equipment, become familiar with the fall protection systems your employer has put in place to *prevent* falls.

Guardrail systems and toe boards

A guardrail is a vertical barrier, normally consisting of an assembly of top rails, midrails, and posts, erected to prevent employees from falling to lower levels. A toe board is a barrier placed to prevent the fall of materials to a lower level, or to keep employees' feet from slipping over an edge.

Handrail and stair rail systems

A handrail is used to assist employees going up or down stairways, ramps or other walking/working surfaces by providing a handhold for support. A stair rail protects employees from falling over the edge of an open-sided stairway.

Designated areas

This term refers to a space which has a perimeter barrier erected to warn employees when they approach an unprotected side or edge, and it also designates an area where work may be performed without additional fall protection.

Hole covers

Hole covers, guarding floor openings of at least 2 inches in size, must be capable of supporting the maximum intended load.

Ladder cages

Ladder cages are barriers surrounding or nearly surrounding the climbing area of a fixed ladder. The cage fastens to the ladder's side rails, to one side rail, or to other structures.

Ramps and bridging devices

A ramp is an inclined surface between different elevations for the passage of employees, vehicles, or both. A bridging device is a surface which spans a gap between a loading dock and a vehicle or between vehicles. It may be fixed, portable, adjustable, powered, or unpowered. It may also be called a car plate or dock board.

SAFETY NET SYSTEMS

Safety nets are designed to catch employees who have fallen off a work surface and bring them safely to a stop before they contact surfaces or structures below.

PERSONAL FALL PROTECTION

Once you know what measures your department takes to prevent falls, find out what situations exist where the risk of falling needs to be controlled by the use of personal fall protection systems.

Personal fall arrest system: A personal fall arrest system is used to stop an employee safely after a fall from a working level. It consists of an anchor, connectors, and a body harness and may include a lanyard, deceleration device, lifeline, or some combination of these.

Anchor: A secure point of attachment for lifelines, lanyards, or deceleration devices that is independent of the means of support or suspension of an employee. That is, it is a separate point of attachment from any employee support lifeline attachment point.

The strength of any fall protection system is based on it being connected to a secure attachment point. When falling six feet, a person will exert up to 10 times their body weight as a shock load on the fall protection system. Therefore, attachment points must be capable of supporting at least 5,000 pounds per employee attached to the line or be designed as part of a complete engineered fall arrest system.

Connector: A device used to connect parts of the system together. (Such as a buckle or D-ring sewn into a body harness or a snaphook spliced or sewn into a lanyard).

Harness: An arrangement of straps fastened such that the torso is supported during a fall. The attachment ring must be in the back of the harness near the shoulders. The anchor point of the lanyard or deceleration device should, if possible, be located above the wearer's harness attachment point.

Note: OSHA recommends that workers use full body harnesses instead of body belts. When subjected to an actual drop, a body harness distributes the shock wave more evenly over the body than does a belt. Similarly, the agency cautions employers against using non-locking type snaphooks.

Lanyard: A flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body harness to a deceleration device, lifeline, or anchorage. The lanyard may be a rope or shock-absorbing/ web lanyard. It must be no longer than six feet.

Another type of lanyard is a self-retractable lanyard that allows freedom of movement but protects the worker should a fall occur. The webbing moves with the worker, pulling out when the person moves forward and retracting when the worker moves back. If the worker falls, the unit locks, restricting the fall distance to two feet or less.

Deceleration device: Any mechanisms such as rope grabs, rip stitch lanyards, specially-woven lanyards, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serve to dissipate a substantial amount of energy during a fall arrest.

Lifeline: The lifeline may be either vertical or horizontal. Vertical lifelines may only support one worker at a time. Horizontal lifelines are subject to greater loads than vertical lifelines and must be properly designed and installed.

Self-retracting lifelines provide mobility as well as worker protection. The line retracts as the worker moves toward the unit and pulls out as the worker moves away. If the worker slips or falls, the sudden jerk on the cable activates the braking mechanism and the worker is brought to a stop within two feet.

USE PERSONAL FALL PROTECTION CORRECTLY

Before you use equipment and after any component change, learn to use the system safely. Find out:

- How to inspect equipment for mildew, wear, damage, and other deterioration before each use.
- Application limits, including how to estimate and limit the maximum arresting force to acceptable limits for the system.
- Methods of use, including intended functions and performance of equipment.
- How to put on, adjust, and connect the equipment.
- Anchoring and tie-off techniques.
- Emergency rescue plans and implementation.
- Maintenance procedures.
- Storage techniques.

Certain tie-offs (e.g., using knots, tying around sharp edges, etc.) can reduce system strength. This factor and maximum permitted free fall distance should be considered when determining the effectiveness of any personal fall protection system. Inspections before use, equipment limitations, and unique conditions at the worksite are also important.

Be able to recognize and avoid fall hazards you may encounter on the job. You should also be aware of your department's general written policy/procedures on fall protection.

REPORTING HAZARDS

Reporting fall hazards is integral to any effective safety effort. Report unsafe equipment, conditions, or procedures to your supervisor as soon as possible. Equipment repair should receive top priority. Under no circumstances should defective fall protection equipment be used.

WORK AT WORKING SAFELY

Preventing slips, trips, and falls is a task that depends on many factors - most importantly - you. You might not be able to change your workplace, but you can recognize and report dangers, work to eliminate hazards, and use safety devices and equipment. Take these precautions as you work:

1. Move carefully on stairs, in hallways, aisles, and work areas.
2. Report hazards like poor lighting, spills, and broken stairs.
3. Learn how to use ladders and scaffolding safely.
4. Use guardrails on walks, runways, or platforms 4 feet or more from ground level.
5. Use personal fall arrest systems whenever necessary, and understand how they work.
6. Make sure you have a guardrail or cover for all open pits, tanks, vats, ditches, and floor openings and holes.

Remember that falls are a leading cause of injuries. They aren't funny - preventing them is serious business.