

# PLAYGROUND SAFETY

Each year, about 200,000 children are treated in U.S. hospital emergency rooms for playground equipment related injuries - an estimated 148,000 of these injuries involve public playground equipment and an estimated 51,000 involve home playground equipment. Also, about 15 children die each year as a result of playground equipment-related incidents. Most of the injuries are the result of falls. These are primarily falls to the ground below the equipment, but falls from one piece of equipment to another are also reported. Most of the deaths are due to strangulations, though some are due to falls.

Protective Surfacing - Since almost 60% of all injuries are caused by falls to the ground, protective surfacing under and around all playground equipment can reduce the risk of serious head injury.

Falls on asphalt and concrete can result in serious head injury and death. Do not place playground equipment over these surfaces. Also grass and turf lose their ability to absorb shock through wear and environmental conditions. Always use protective surfacing.

Certain loose-fill surfacing materials are acceptable, such as the types and depths shown in the table.

Certain manufactured synthetic surfaces also are acceptable; however, test data on shock absorbing performance should be requested from the manufacturer.

<b>Fall Height In Feet From Which A Life Threatening Head Injury Would Not Be Expected</b>			
Type of Material	6" Depth	9" Depth	12" Depth
Double Shredded Bark Mulch	6	10	11
Wood Chips	6	7	12
Fine Sand	5	5	9
Fine Gravel	6	7	10

Fall Zones - A fall zone, covered with a protective surfacing material, is essential under and around equipment where a child might fall. This area should be free of other equipment and obstacles onto which a child might fall.

Stationary climbing equipment and slides should have a fall zone extending a minimum of 6' in all directions from the perimeter of the equipment.

Swings should have a fall zone extending a minimum of 6' from the outer edge of the support structure on each side. The fall zone in front and back of the swing should extend out a minimum distance of twice the height of the swing as measured from the ground to the swing hangers on support structure.

Swing Spacing - To prevent injuries from impact with moving swings, swings should not be too close together or too close to support structures. Swing spacing should be:

At least 8 inches between suspended swings and between a swing and the support frame.

At least 16 inches from swing support frame to a pendulum see-saw.

Minimum clearance between the ground and underside of swing seat should be 8 inches.

Swing sets should be securely anchored.

Elevated Surfaces - Platforms more than 30" above the ground should have guardrails to prevent falls.

Potential Head Entrapment Hazards - In general, openings that are closed on all sides, should be less than 3 1/2" or greater than 9". Openings that are between 3' 1/2" and 9" present a head entrapment hazard because they are large enough to permit a child's body to go through, but are too small to permit the head to go through. When children enter such openings, feet first, they may become entrapped by the head and strangle.

Potential Entrapment and Strangulation Hazards - Open "S" hooks, especially on swings, and any protrusions or equipment component/hardware which may act as hooks or catch-points can entangle with children's clothing and cause strangulation incidents. Close "S" hooks as tightly as possible and eliminate protrusions or catch points.  
Pinch or Crush Points - There should be no exposed moving parts which may present a pinching or crushing hazard.

Playground Maintenance - Playgrounds should be inspected on a regular basis. Inspect protective surfacing especially mulch, and maintain the proper depth. If any of the following conditions are noted, they should be removed, corrected or repaired immediately to prevent injuries:

- Hardware is loose or worn, or that has protrusions or projections.
- Ropes, and items with cords placed around the neck can get caught on playground equipment and strangle a child. Many children have died when a rope they were wearing got caught on playground equipment, or they became entangled in a rope.
- Supervise, and teach your child safe play. Teach your child not to walk or play close to a moving swing, and not to tie ropes to playground equipment.
- Exposed equipment footings.
- Scattered debris, litter, rocks, or tree roots.
- Rust and chipped paint on metal components.
- Splinters, large cracks, and decayed wood components.
- Deterioration and corrosion on structural components which connect to the ground.
- Missing or damaged equipment components, such as handholds, guardrails, swing seats.

For more information on playground safety, refer to CPSC's **Handbook for Public Playground Safety**. To obtain a copy, send a postcard with your name, address, and name of the publication to U.S. Consumer Product Safety Commission, Washington, D.C. 20207. The publication is also available on-line in .pdf format at [www.cpsc.gov](http://www.cpsc.gov) (click on "CPSC Publications," then click on "playground safety").

To report a dangerous product or a product-related injury, call the CPSC hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270. Reports may also be filed electronically at [info@cpsc.gov](mailto:info@cpsc.gov).