

Check Your Playgrounds for These Hazards

It is estimated that each year, over 170,000 playground related injuries occur that are serious enough to require emergency room treatment. Although most states do not regulate public playground equipment, national playground standards do exist.

The U.S. Consumer Products Safety Commission (CPSC) and the American Society for Testing and Materials (ASTM) have both established such standards. These standards have no legal status in most jurisdictions, but they have been used in court cases to establish a standard of care by which an agency should have operated.

Most public playgrounds, including those in parks and on school grounds, do not comply with these standards. Much of the equipment was manufactured and installed many years ago and has not been properly maintained. In some cases, these installations are truly "accidents waiting to happen".

Playgrounds should be regularly inspected for potential hazards, especially during high use periods. The National Playground Safety Institute (NSPI) has identified twelve of the leading causes of injury on playgrounds. These causes are identified below. They should be used as a starting point for assessing the injury potential of your playgrounds.



- 1. Improper Protective Surfacing** – The surface under play equipment should be soft enough to cushion a fall. Over seventy percent of all accidents on playgrounds are from children falling. Hard surfaces such as concrete, asphalt, packed earth or grass are not acceptable under play equipment. Acceptable surfaces include hardwood fiber/mulch, sand and pea gravel, maintained to a depth of twelve inches.
- 2. Inadequate Fall Zone** – The fall zone for playground equipment is the area under or around the equipment where a child might fall. This area is generally six feet in all directions around most stationary equipment. Larger fall zones apply to slides over four feet high and swings. These fall zones should be properly surfaced and free of injury hazards.
- 3. Protrusion and Entanglement Hazards**- A protrusion is a component or piece of hardware that might be capable of impaling or cutting a child that might fall against it. Some protrusions are situated so that they can catch clothing so that strangulation can occur. Some protrusions are built in to older equipment. Newer equipment have fewer such hazards if installed and maintained properly.
- 4. Entrapment in Openings** – Enclosed openings on playground equipment can pose head entrapment potential when the opening is large enough for the child's body to pass through but not large enough for the head. There are special probes available to check these openings, but as a general rule, there should be no enclosed openings on equipment that measures between 3 ½ and nine inches.
- 5. Insufficient Equipment Spacing** – Improper spacing between play equipment can cause overcrowding of a play area, which can create several hazards. Fall zones for equipment over 24" in height cannot overlap. Therefore, there should be a minimum of twelve feet between play structures. This prevents children from falling off one structure and striking another structure.
- 6. Trip Hazards** – Components of the play areas that increase the hazard of falls are called trip hazards. Some examples include exposed concrete footings, abrupt changes in surface elevations, containment borders, tree stumps, tree roots and rocks. Trip hazards are most often a maintenance issue.

7. Lack of Supervision – The supervision of children at play directly relates to the overall safety of the environment. Play areas should be designed so that it is easy for parents or caregivers to watch children at play. It is estimated that forty percent of all playground injuries are directly related to lack of supervision.

8. Age-Inappropriate Activities – The play needs and physical abilities of children vary greatly with age. Equipment designed for school age children should be separated from equipment designed for use by pre-school age children.



9. Lack of Maintenance – In order for equipment and play areas to remain safe, a system of systematic, preventive maintenance should be in place. There should be no broken, missing or worn out components. All hardware should be secure. The surfacing material should be maintained. All inspections and maintenance should be documented in some way, in case you ever have to prove that they were done.

10. Pinch, Crush, Shearing and Sharp Edge Hazard – Playground equipment should have no sharp edges or points that could cut skin. Moving components such as suspension bridges, track rides, merry-go rounds, seesaws and some swings should be checked to make sure there are no moving parts or mechanisms that might crush or pinch a child's finger.

11. Platforms with No Guards – Elevated surfaces such as platforms, ramps and bridge ways should have guardrails that would prevent accidental falls to the surface or on to other parts of the apparatus. Generally equipment designed for preschool children should have guardrails on elevated surfaces higher than twenty inches. For school-age equipment, that figure is thirty inches.

12. Equipment Not Recommended for Public Playgrounds – Accidents associated with the following types of equipment has resulted in the CPSC recommending that they not be used on public playgrounds:

- Heavy swings such as animal figures and multiple occupancy/glider type swings
- Free swinging ropes that may fray or form a loop
- Swinging exercise rings and trapeze bars. (These are considered athletic equipment and not recommended for public playgrounds.)

The hazards listed above are the most common injury producers. This list can be used as a starting point to assess the current condition of your playground equipment and help with maintenance planning and new equipment purchases and installation.

If you have questions about specific situations, please contact your loss control representative.