

Playgrounds are a place where memories are made, skills are built and laughter is heard. But all too often they are also a place where injuries occur. Routine playground maintenance can reduce the occurrence of injuries and increase safety for all patrons.

Whether your playground is for toddlers (6 months to 23 months), pre-school aged (2-4 years), or school aged (5-12 years) children, there are certain safety standards you are expected to comply with. It is important to be aware of fall heights, fill levels, maintenance checks, proper signage and barriers to keep playground patrons safe and also to protect your company from liability. Using the following information as a guide you will learn ways to create and maintain a safe playground.

5 Steps To Creating A Safe Playground

- 1 Barrier
- 2 Signage
- 3 Surfacing
- 4 Fixtures & Fasteners
- 5 Maintenance



Barrier The playground barrier is fencing which surrounds the playground area and is usually made of metal or wood material; this fencing should be closed and locked after the posted hours of operation. Weekly (Playground) Safety Self Inspection checklists should include periodic fencing material audits. Playground barriers should be free of any protrusions such as nails or splinters that could hurt someone. Playground barriers should be age appropriate, dependent of end user age range, and different barriers should be used to section off or buffer areas from one another.

Supervision is one of the most important things on a playground. Playground barrier height should not impede sight lines. Ensuring all sections of the playground are visible to caregivers is beneficial for both the caregiver and your company as it makes supervision feasible and increases safety. If the playground is close in proximity to a major road or high traffic area fencing should be a minimum of 4 feet tall.

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Signage Playground signage is used to relay important playground information to the end users and supervisors such as playground rules, use limits, safety precautions and age restrictions. Playground signs should be posted in a location that is visible to all playground users. Usually the first sign encountered is posted on playground fence exteriors and displays hours of operation. Signs should also be posted in each area of the playground to specify equipment use age restrictions (i.e. toddler toys should be clearly labeled to prevent school aged children from improperly using the equipment and vice versa). Playground signs also aid supervisors in determining age appropriateness of the equipment.

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Surfacing Grass and dirt are not considered acceptable protective surface for playgrounds. When surfacing your playground you should have a cushion of loose fill materials that will soften any fall that takes place. This makes playing more comfortable and increases safety exponentially for children who are climbing, sliding, and playing. There are many different types of materials that are acceptable fill material for your playground surface. Acceptable loose fill materials include: shredded rubber, pea gravel, sand, wood mulch, and wood chips. Each type of fill material has a corresponding minimum to ensure appropriate fall protection.

- **Shredded Rubber** - Minimum of 6 inches for a 10 foot fall height. (This material does not compress in the same manner as the other loose fill materials but should be checked for depth frequently as displacement is common)
- **Pea Gravel** - Minimum of 9 inches for a 5 foot fall height
- **Sand** - Minimum of 9 inches of loose fill for a 4 foot fall height
- **Wood Mulch** - Minimum of 9 inches for a 7 foot fall height
- **Wood Chips** - Minimum of 9 inches for a 10 foot fall height

Most loose fill materials will compress at least 25% over time due to the use and weathering of the material. This must be considered during the planning stage of your playground. Accounting for the compression of 25%, you should use at least 9 inches of loose fill material to ensure safety. Regardless of which fill material you choose to use on your playground it should be checked regularly to ensure proper depth for injury protection and ensure no displacement has occurred.

Keep In Mind

Steps should be age-appropriate

7" Toddlers

12" Pre-school Age

18" School Age

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Fixtures & Fasteners Each piece of playground equipment is secured using hooks and or fasteners, all fasteners should be secured tightly and should not loosen or be removable without the use of tools. These fasteners should be corrosion resistant and all hooks should be closed to ensure no snagging. S-hooks are not recommended because they are likely to cause injury if clothing is caught on them.

If you are using metal for your playground fixtures, it should be oriented away from direct sunlight to avoid any possibility of burns. Metals should be painted, galvanized, or otherwise treated to prevent rusting. If you intend to have a wood playground it should be made of either naturally rot resistant/insect resistant wood like cedar or redwood, or should be treated to be resistant to rot and insects. *Avoid using wood that has been treated with chromated copper arsenate which contains arsenic.*

Did You Know?

The following are the top 4 injury-causing play equipment, according to the 2008 Consumer Product Safety Commission. (CPSC)

Climbers - Arch climbers, dome climbers, flexible climbers (chain or net), overhead ladders, and spiral climbers (nets should be smaller than 17" or larger than 28" to minimize entrapment hazard). Usually school aged children are more proficient with the climbers and have the necessary physical skills for them. When choosing a climber be sure to adjust the fall height according to the age and capability of the children expected to use equipment.

Slides - Straight, wavy, or spiral descent slides are common on playgrounds. Avoid using bare materials when possible; if used, keep in a shaded area to prevent the slides from becoming a serious burn hazard. Whenever possible, use plastic or coated metal. To promote the seated sliding position, use a hood over the entrance of your slide.

Swings - Single axis swings (swing front to back) and multi axis swings (usually tire swing that allows you to swing in multiple directions). S-hooks that are often used in swings' suspension system must be closed with no gap. Swings should be positioned away from other equipment to prevent possibility of injury, and fiber ropes are not recommended as they will deteriorate.

Overhead Ladders (Monkey Bars) - These should not be on playgrounds intended for toddlers. Overhead ladders intended for pre-school age children should have rungs that are parallel to one another and evenly spaced. Maximum height should be no more than 60" for preschool age, and no more than 84" for school age. The rungs should also be adjusted to age of user. Preschool age would need bars spaced no more than 12" apart, school aged children should be at no more than 15" apart. The maximum height of the take-off/ landing platform should be no more than 18" for preschool age children, and no more than 36" for school age children. Please keep in mind the first rung should never be placed directly above the take off/landing platform to minimize the risk of injury if they fall from that rung.

Keep In Mind Platforms should be age-appropriate

-  7" of fall height
Toddlers
-  20" of fall height
Pre-school Age
-  30" of fall height
School Age

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Maintenance All playgrounds should have a comprehensive maintenance program that surveys all areas, and equipment for excessive wear, deterioration, and potential hazards, and detailed inspections should give special attention to moving parts and other parts that can be expected to wear. Inspections should be carried out in a systematic manner by personnel familiar with the playground. Some manufacturers provide inspection checklists, but if none is provided a general checklist can be used. All problems found during inspection should be noted and fixed as soon as possible. Loose fill surfacing should be checked regularly especially around high traffic areas like swings and slides. All records of maintenance and inspection surveys should be retained including manufacturers' instructions and checklists used.

There are many different ways to create and maintain a playground that fits your company needs. Following these steps could help decrease the likelihood of children becoming injured while utilizing your playground and increase the overall safety of your playground. [Click here to download our Playground Inspection Checklist.](#)

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