

**Playgrounds, the place kids get hurt.
(Oh, and also learn, have fun, be healthy and grow)**

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Would you be surprised to learn that 80% of the injuries that occur at schools happen on the playground (The National Program for Playground Safety, 2002)? The majority of injuries are caused by falls (70-80%) according to the National Playground Safety Institute (NPSI) (2008). Over 186,000 children are injured in the United States every year (Consumer Product Safety Commission (CPSC)). The types of injuries range from sprained ankles to fatalities.

Knowing about the high number and the severity of the injuries on playgrounds may make people question what can be done to address the problem. Adhering to an accepted standard of care is one place to start. Legally, agencies with playgrounds are held to industry standards that cover items such as the equipment, protective surfacing, installation, accessibility, and design. Schools, childcare centers and after school programs may also be affected by supervision requirements. The national standard of care in the playground industry is set through a few primary sources. The American Society for Testing Materials (ASTM), which establishes the requirements for equipment on public playgrounds; the CPSC, which developed guidelines for user safety; and the Americans with Disabilities Act (ADA), which sets standards for accessibility.

State and local laws also form the framework of the standard of care. The state of Arkansas' Department of Education (Code Ark. R. 005 24 001), the Arkansas Better Chance Program (section 13.13), and the Child Care Facility Licensing Act (434 of 1969) adapted part or all of the CPSC guidelines for early childhood programs. Florida's Child Care Standards include playground safety and F.A.C. 65C-22.003 includes playground safety as a potential course for

childcare providers. North Carolina has adopted sections of the CPSC for childcare facilities. Tennessee Child Care Standards use CPSC guidelines and Tennessee's Licensure Rules for Child Care Centers Serving Pre-School (Tenn. Comp. R & Reg. 1240-4-3-.08) include the CPSC requirements. The above mentioned framework is used for comparison in a court of law when legal challenges to playground safety are raised.

The first step in complying with the standard of care and making a playground safer is to have a detailed safety inspection of the existing playground. A comprehensive evaluation of a playground, called an audit, can be performed by qualified in-house personnel or contracted out to a third party. The purpose of the audit is to inventory existing equipment and surfacing and to examine them both for safety and compliance with the standard of care. The next step would be to modify or replace equipment and surfacing that is non-compliant. New or retrofitted equipment should be certified by the International Play Equipment Manufacturers Association (IPEMA) and the International Organization for Standardization (ISO 9000). IPEMA certifies that the equipment and protective surfacing meet ASTM Playground Safety Standards. ISO 9000 certification is a manufacturing consistency standard. This information should be required by the purchasing agency as part of the request for proposal or purchasing process from the manufacturers' representatives.

When designing or redesigning a playground some key elements need to be addressed. The ASTM and CPSC separate playgrounds into three age groups, 0-24 months, 2-5 year olds, and 5-12 year olds based on the children's abilities (their body size, skill levels and developmental levels). An example is a horizontal ladder, which can be a maximum of 60 inches above the protective surfacing for 2-5 year olds and 84 inches above for 5-12 year olds. In the school setting, Physical Education instructors should be actively engaged as design team members so fitness and curriculum considerations can be integrated into the playground. Some

manufacturers of playground equipment can provide fitness activities to be incorporated into the school curriculum. Maintenance issues should always be considered in the design process. Keep in mind that moving parts (equipment and/or material) wear out more quickly than those that are stationary. Loose fill types of surfacing are displaced through use and weather, so they must be maintained and replaced more often. When used as a protective surfacing, sand can wear down other materials, scraping off paint much like sandpaper on equipment and wearing off glue used to hold protective surfacing tiles.

When designing a playground, signs are necessary to direct users and caregivers to the age appropriate equipment for play and to notify them of the rules for safe play. Burns and skin cancer can be reduced with the use of shade and selection of appropriate protective surfacing and equipment. The ADA requires accessible routes into the playground, numeric calculation for the ratio of elevated to ground level components, and an analysis of different types of play components. These requirements are intended to provide equal access for children of differing physical abilities so they can all be engaged and enjoy the playground experience.

After certified equipment and surfacing has been purchased, installation is the next critical element in making playgrounds safer. It is recommended that installers be manufacturer certified so specific requirements for the equipment and protective surfacing installation are understood and applied. Hiring National Playground Safety Inspectors, certified through the NRPA, helps to insure understanding of safety requirements for issues such as use zones and overhead clearances, as well as preventing the possibility of protrusions and entanglements. One way of assuring the installer is a committed professional is through their membership in the International Playground Contractors Association (NPCAI).

Once the playground is operational, supervision moves to the forefront as a major safety practice. Schools and other structured programs should provide an adequate ratio of supervisors

to children. NPPS recommends the same number of supervisors on the playground as in the classroom. Location, training, identification, and communication between supervisors are crucial elements to effective playground supervision. Training for supervisors to prevent playground injuries can be provided by private companies, insurance providers, and professional organizations such as the NRPA and NPPS. Training should include awareness of child development, emergency procedures, identifying and addressing hazards, understanding of the supervision plan and how to implement the plan.

Risk management, or reducing the liability presented by playgrounds, is essential when the high number of possible injuries on a playground is understood. A comprehensive Risk Management Plan should include training of staff at least once a year, a proactive maintenance plan consisting of regular inspections and repairs, and documentation. Legal representative or risk management personnel should develop or review forms and procedures annually, and determine the length of time documents are retained by the agency.

The following resources are available to help guide decisions about playgrounds:

NPSI - <http://www.nrpa.org/>

NPPS - <http://www.playgroundsafety.org/>

IPEMA - <http://www.ipema.org/>

NPCAI - <http://www.playground-contractors.org/>

If further information concerning playground safety is of interest, please contact PlaySafe, LLC at www.play-safe.com