



# PROFESSIONAL CONSIDERATIONS IN DESIGN OF PUBLIC PLAYSPACES

Understanding Risks of  
Unacceptable Injury

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# Professional Considerations in Design of Public Playspaces

## Understanding Risk of Unacceptable Injury

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Every type of surface has the potential to fail to perform as expected. Manufacturers and distributors are obligated to market the advantageous aspects of their products but what questions should the owner/purchaser be asking of the supplier that they might not be disclosing. Playgrounds are a place of wonder for all to enjoy irrespective of ability or age. Without the knowledge necessary to purchase the appropriate surface system for your playground you are likely to experience problems with maintaining your playground in compliance with the current public playground standards and guidelines.

Learning objectives include.

Understanding the considerations for a risk assessment by the designer of the playground is steered by surfacing choices.

- The history of impact attenuation and severity of injury.
- Mechanism of injury prevention and severity reduction
- What is an acceptable injury to a child?
- How many playground injuries are there per year?
- What are the main causes of these injuries?
- What are the most frequent types of injuries?
- What is the cost?
- How many traumatic brain injuries are sustained on playgrounds annually?



Understanding the current Standards of care for Public Playground Impact Attenuating Surfacing

- CSA Z614-20, contains performance requirements for impact attenuation of surfacing and a risk assessment option
- US CPSC Handbook for Public Playground Safety
- ASTM F1292 - *Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment*
- ASTM F3313- *Standard Test Method for Determining Impact Attenuation of Playground Surfaces Within the Use Zone of Playground Equipment as Tested in the Field*

- ASTM F3351 – *Standard Test Method for Playground Surface Impact Testing in the Laboratory at Specified Test Height*
- Other ASTM Standards related to Impact attenuation for surfacing.

Understanding issues related to Injury Reduction; Can playground injuries be reduced in frequency or severity, let alone prevented?

- With the goal of injury reduction in mind; we will discuss the impact on the owner, designer, and/or manufacturers of intended and designed use of the playground equipment versus the reality of how a child plays in unforeseeable and unintended ways.
- Since the performance of surfacing greatly contributes to the potential for injury prevention and/or reduction in injury severity we will discuss what the owner/designer should consider when designing for more challenging play in the public playground.
- This section will outline the problems associated with different types of surfacing systems, their materials, installation and maintenance issues, and the problems related to cross contamination of loose-fill and unitary surface systems.
  - Review the different types of playground surfaces available today.
  - Discuss the advantages, disadvantages, and performance issues of each.
- What goes wrong with surfacing? We will discuss the common problems of maintaining compliant surfacing regardless of the type. What is an accessible surface?

Understanding Good Product Selection and Purchasing Practices

- There is not a perfect surface - We will have a discussion with the entire group to consider what a good surface is and how it enhances play, protects children and allows access to everyone wanting to play or participate in play.

Best Defense Against Claims of Surfacing Non-Compliance

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