

Does Height Matter?

Playgrounds

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Does the height of playground equipment contribute to play value and child development?

"...children use play equipment in unintended ways. What adults feel the equipment is used for, however, and what kids do is different."

"Every major national playground safety organization recommends restricting fall heights of playground equipment."

"...prevent falls that exceed the standing reaching height of the tallest child user."

"...additional height is not necessary for the play or developmental value of equipment."

"Children frequently climb to the highest possible level of equipment... Using play equipment in unintended ways is normal behavior for children, though contrary to adult conceptions of how children should play."

ASTM) to six feet for most common surfacing materials. National surveys by three major professional organizations -- American Alliance for Health, Physical Education, Recreation, and Dance, Consumer Federation of America, and National Program for Playground Safety - show widespread violation of CPSC recommendations for heights and in neighborhood playgrounds.

The Consumer Federation of America stipulates that the fall height of slides and equipment shall not exceed six feet for school-age children and four feet for preschool children (CFA, 1996a).

The American Public Health Association (1992) stipulates that the maximum height of playground equipment should not exceed 5.5 feet for children under three. The American Public Health Association (1992) stipulates that slides should be limited to a maximum height of 10 feet for children under three.

Other research confirms the relationship among risk of injury, surface resiliency, height of equipment, and also the severity of injury. This data suggests that acceptable limits for surface resiliency be set at less than 200 G, perhaps even less than 150 G, and not to exceed two meters for equipment height.

Guidelines from the Experts Numerous professional books, articles and reports were reviewed for this article. The goal was for safety professionals with extensive experience in the field of play

and playgrounds to determine maximum playground equipment heights. A wide range of variables (e.g., age and skill of child, type of equipment, nature of surfacing) affecting potential injury resulting from falls precludes clear agreement among professionals. Readdick and Park

"...widespread violation of CPSC/ASTM recommendations for heights with respect to protective surfacing."

"...heights are excessive for almost all elementary-age children and are extremely hazardous for preschool and primary-age children. Several variables are implicated in this problem -- poor equipment design, improper initial installation and lack of maintenance following installation."

"Falls are the second leading cause of unintentional injury and the most common cause of injuries resulting in hospital admissions for trauma."

"...increasing heights increases the potential for serious injury..."

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(CPSC and ASTM), do not specify maximum equipment or fall heights per se, but effectively limit heights by recommending resilient surfacing that accommodates limited heights if heights are based on prescribed criteria (HIC and G-Forces). Only two tested materials among eight types of compressed material (namely wood chips and double shredded bark mulch installed nine inches deep) are recommended for heights over six feet. Uncompressed material usually becomes compressed after play begins. This recommendation, if applied, limits fall heights (as defined by CPSC and