

"Window Falls In The Home"

Facts About Escape and Access

Studies (1) of child window falls find that over 5,000 children will fall from windows annually, with as many as 8 deaths per year expected, across the United States. The average age of the child who falls will be 5.1 years. The prevalence of falls can vary from community to community due to climate, seasonal weather patterns, and building type. The fire service most typically becomes involved in this issue when a child falls and is injured, requiring first responders to care for injuries. But involvement actually begins much earlier.

Child window falls occur most often from the windows of a residence, often where the child lives. This can be one or two family homes, or multi-family housing such as apartments. Injury-inducing falls most often occur from upper floor windows (most often 2nd or 3rd story) and death most often results when hard surfaces, such as concrete driveways, are below a window.

While these types of occupancies are regulated by the building and residential codes, the reach of these codes only involves the construction of a building until it is approved for occupancy. Inside these types of residences, the fire codes carry little to no capacity to monitor safety.

Fire departments may be called upon to comment on the installation of safety devices that can safeguard a window from a child falling. It is important to understand the position of the residential codes and the standards associated with child window fall prevention.

Any sleeping room in a residence is required to have two means of escape, typically a door and a window. Windows must meet a certain size requirement to serve as a means of emergency escape for occupants, or a means of emergency access by firefighters. These same windows cannot be secured in a way that will hinder occupants or firefighters' use during emergencies.



Building and residential codes elude to safety devices to help prevent child window falls, but ultimately refer to the American Society for Testing Materials (ASTM) to define what constitutes a safety device. ASTM Standard F2090 is titled "Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms". ASTM F2090 provides criteria for several types of devices that can safeguard a window for fall prevention, AND meet the criteria for emergency escape and access. "Window Opening Control Devices" (WOCD) include window opening limiters, window guards, or safety screens. Each of these devices must be tested to ensure they meet the standard of operation and strength to be approved as WOCD's. They must also limit the space within an open window to less than 4 inches. This space is consistent with the protective factors built into stair balusters, crib rails, etc.



Window Opening Limiter
(Window Stop)
to limit openings to less than 4"

Approved WOCD's must operate on the same principle as other child safety devices, such as a child safety caps on pill bottles, and the child-resistant feature on a lighter. WOCD's must operate using two functions that require certain strength and dexterity, performed simultaneously, to release the device for occupant escape. These are tested to defeat the behavior in children age 5 and under, which studies (1) have shown is the most common age for child window falls.

Some fire service professionals have expressed belief that this puts a young child at risk in the event of a fire. However, it is important to consider that a child age 5 and under (the age at which the safety features are designed to protect) will not be able to safely exit a building from an upper floor without adult assistance. To do so on their own would very likely result in a fall that would injure or kill the escaping child. All safety issues involving young children involve the care and involvement of the adults charged with their care.

Important factors to ensure the safety of young children include:

- explaining the responsibility adults who care take young children carry in window safety and emergency escape
- the importance of working smoke alarms, which should give early warning and allow for escape from upper floors before occupants are trapped (with no option but an upper floor window for escape).



Some fire agencies have denounced WOCD's as a hindrance to occupant escape during a fire. It has also been stated that these devices might slow entry by firefighters during an emergency. A properly designed WOCD meets specific standards that do not impede access or escape. Other devices NOT meeting standards can be problematic.

The fire service carries a key role in educating the public about the balance between fire safety and child window safety. An understanding of these concepts could save a young life.



Source:

1. Using the National Electronic Injury Surveillance System (NEISS), emergency department (ED) data for pediatric injury cases associated with child window falls from 1990–2008 were reviewed. The review was conducted by the Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio; and Department of Pediatrics and Medical Student Education, College of Medicine, The Ohio State University, Columbus, Ohio

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