

# Safe Windows

# Placement

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The application of sufficient force to open a double-hung or vertical sliding window over a sink, counter, bathtub, or similar fixture requires the use of both hands and arms and, further, necessitates the individual to assume an awkward position leaning over the obstruction. This position and the upward arm motion required to open the window causes the center of gravity of the body to shift from its normal position to a point over the obstructing fixture. With the edge of the fixture acting as a pivot point, the application of the vertical force required to place the window in motion reduces the normal gravitational and frictional forces at the feet to a point that will induce slippage. As the feet slip backwards, the body rotates around the pivot point (edge of the counter or other obstruction), and the victim may fall onto the fixture if he is unable to recover. Women are more susceptible to this action than men because of their comparatively limited weight, height, and strength. The force required to operate double-hung, or vertical sliding windows increases with age as paint accumulations, corrosion in the tracks, and faulty balance mechanisms develop.



Raising double-hung windows located over sinks or counters places the individual in an awkward position which may result in an accidental slip and fall.

**Crank-actuated casement or awning windows located over sinks or counters require less physical effort and the use of only one hand, allowing the operator to maintain a safer position and better control.**

Horizontal sliding or crank-actuated windows, which require only one hand and arm for operation, are best suited for window locations above permanent fixture obstructions. Although these types of windows may become more difficult to operate with age, the free hand and arm may be used to advantage in maintaining balance.

## RECOMMENDATIONS:

The hazardous conditions presented in the use of vertical sliding windows located over counters, fixtures, and other permanent obstructions may be reduced by the use of the following alternative types of windows in these locations:

- Horizontal sliding windows
- Casement windows
- Awning windows

**Before building, consult the BOCA code.**

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