



Michigan Child Death Review Program  
[www.keepingkidsalive.org](http://www.keepingkidsalive.org)

## Suffocation

### Major Risk Factors

- Infants sharing sleep surfaces with other persons
- Unsafe infant sleeping locations, such as adult beds, waterbeds, couches, futons
- Unsafe infant bedding, including poor-fitting or soft crib mattresses, pillows, stuffed toys, bumper pads, heavy or numerous blankets
- Easy access by infants and toddlers to small objects, cords and straps

Child deaths due to suffocation result when the child is in a place or position where he or she is unable to breathe. Unintentional suffocations include deaths caused:

- By objects that cover a child's face, such as plastic bags or heavy bedding.
- When a child becomes wedged or entrapped into a small space, such as between a mattress and a wall, usually while in a sleeping environment. This is called positional asphyxia. By a person that unintentionally overlays on, or entraps and smothers a child. By a child choking on a foreign object.
- When a child is confined in an airtight place such as an unused refrigerator or toy chest.

Most suffocations are unintentional and happen most frequently to infants and toddlers in a sleeping environment. Most infants who suffocate in this manner have no clinical findings at autopsy. It is only through a thorough scene investigation that these deaths can be distinguished from SIDS or intentional suffocation.

Infants' faces can be covered during sleep if the babies fall into or are covered by objects such as heavy blankets or large stuffed animals. Some infants die when they roll onto items left near their sleeping area, including plastic bags, clothing and adult bedding.

Positional asphyxia deaths occur when infants' faces become pressed into soft mattresses, waterbeds or soft bedding; or when they become wedged into the edges of cribs with loose fitting mattresses, cribs with wide slats or between couch cushions. It is widely believed that couches and waterbeds pose the greatest danger for positional asphyxia.

Infants are at risk of an overlay death when sleeping with another person, especially

when the person is obese and/or is alcohol or drug-impaired. At present, a national debate is occurring comparing the risks and benefits of bed-sharing (having the infant in the bed or on the same sleep surface as the caregivers). A number of studies have demonstrated that bed-sharing environments are hazardous for infants, even when the adults are not obese or alcohol/drug-impaired. Advocates of bed-sharing argue that the bed-sharing environment is conducive to infant-parent bonding and promotes breastfeeding.

A study conducted in Saginaw, Michigan, by researchers at Michigan State University, examined 22 infant suffocation deaths from 1993-1999, in which the infant was bed-sharing, representing 12% of Saginaw County's child deaths. In 80% of the cases, at least two other persons were in the bed with the infant. Alcohol or other drugs were not a factor in at least 50% of the deaths, and 42% of the infants were sleeping with normal weight adults as opposed to 47% of the infants that were sleeping with obese adults.

One study found that more than 75% of 119 Missouri infants that died from SIDS, suffocation or undetermined causes were sleeping on surfaces not designed for infants. This included adult beds, couches and chairs. Forty-seven percent were bed-sharing, and 23.2% showed evidence of entrapment. In 33% of the bed-sharing deaths, the infants were found on pillows and comforters. Only 8.4% of the 119 babies were sleeping on their backs, alone, with their faces uncovered.

The CPSC, after reviewing a number of national studies related to sleep environment, concluded that as many as 900 infant deaths a year are associated with soft bedding, including situations when the infant was bed-sharing with adults. This led to a Consumer Product Safety Alert, issued in conjunction with the American Academy of Pediatrics and the National Institutes of Child Health and Human Development. The alert issued revised recommendations for safe sleep environments for infants to reduce the risks for suffocation and SIDS.

Though rare, there are well-publicized cases of parents intentionally smothering their children. Many of these deaths occur after the infant has already experienced a series of apparent life threatening events such as breathing difficulties and apnea episodes. A number of these deaths can be attributed to Munchausen's Syndrome by Proxy, in which the parent is seeking attention by creating a fictitious illness in the child. It is only by a thorough scene investigation and review of medical history that these deaths can be distinguished from other suffocation deaths or SIDS.