Sudden infant death syndrome (SIDS) is a term attributed to any infant death that cannot be explained. Sudden unexpected infant death describes any sudden and unexpected death, whether explained or unexplained, that occurs during infancy. Sudden unexpected infant death includes those deaths that fall into the category of SIDS; other categories of sudden unexpected infant death include suffocation, asphyxia, entrapment, infection, ingestions, metabolic diseases, arrhythmia-associated cardiac channelopathies, and trauma. Finding a distinction between SIDS and sudden unexpected infant death can be challenging, particularly when the incident occurs while an infant is sleeping.

The American Academy of Pediatrics (AAP) first recommended that infants be placed for sleep in a non-prone position in 1992. Since the AAP published its last statement on SIDS in 2005, the incidence of SIDS-related deaths has plateaued, while other causes of sudden unexpected infant death have increased in incidence. Because many of the risk factors for SIDS and suffocation are similar, the AAP has expanded its recommendations on SIDS to include more on a safe sleep environment that can reduce the risk of all sleep-related infant deaths. The recommendations are based on the U.S. Preventive Services Task Force grading criteria (available at http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm). Topics addressed include supine positioning; using a firm sleep surface; room-sharing; breastfeeding; routine immunizations; pacifier use; and avoidance of soft bedding, overheating, and exposure to alcohol, tobacco smoke, and illicit drugs.

**Level A Recommendations**

**Infants should be placed in a supine position for sleeping until 12 months of age. Side sleeping is not advised.**

Because infants have protective airway mechanisms, placing them in a supine position does not appear to increase the risk of choking or aspiration. There is an exception for infants with certain anatomic abnormalities and those who are at greater risk of death from complications of gastroesophageal reflux. Preterm infants are at increased risk of SIDS, and studies have shown an equal or increased association between prone sleep position and SIDS among low-birth-weight infants compared with infants born at term. Other studies have established the prone sleep position and side sleeping as risk factors for SIDS in infants up to one year of age.

**Using a firm sleep surface, such as a firm mattress covered by a fitted sheet, reduces the risk of SIDS and suffocation.**

Cribs, bassinets, or play yards that meet the Consumer Product Safety Commission and ASTM International’s safety standards are recommended, using only mattresses that are intended for that specific product. Soft objects such as pillows, quilts, comforters, or animal skins should not be placed under sleeping infants, even if they are covered.
by a sheet. In addition, the infant’s sleep area should be clear of potential hazards such as cords and electric wires. Because of the risk of suffocation and entrapment, infants should not be placed on adult beds for sleep. Parents should not use car safety seats, infant carriers, strollers, swings, or infant slings for routine sleep. If an infant falls asleep in or on one of these products, the child should be moved to a crib or other firm flat surface as soon as it is practical. Raising the head of the crib is not recommended.

Sharing a room with an infant, without sharing a bed, can reduce the risk of SIDS by up to 50 percent.

Placing the infant’s crib or bassinet near the parents’ bed can significantly reduce the risk of SIDS and the possibility of an infant suffocating, strangling, or becoming trapped while sleeping on an adult bed. Infants may be brought into the bed for feeding and comforting, but they should be returned to their own crib when the parent is ready to go to sleep. Studies have not demonstrated any bed-sharing situations that protect against SIDS or infantile suffocation. As a result, the AAP does not recommend any specific bed-sharing situation as safe; some bed-sharing situations should be avoided at all times. For example, twins, triplets, and higher-number infant groups should have separate sleep areas and not be bedded together.

Soft objects, loose bedding, and similar items should be kept out of the infant’s crib.

Pillows, pillow-like toys, quilts, comforters, and loose bedding such as blankets and sheets, should not be used in an infant’s sleep area. In addition, bumper pads or similar products that attach to the sides or slats of the crib are not recommended because they may increase the risk of suffocation, strangulation, and entrapment. Sleep clothing designed to keep an infant warm can be used, provided the clothing does not pose a risk of head covering or entrapment.

Pregnant women should receive regular prenatal care.

Epidemiologic evidence shows that infants whose mothers obtain regular prenatal care are at a lower risk of SIDS.

Avoid exposure to smoke during pregnancy and after birth. Maternal smoking during pregnancy and the presence of smoke in the infant’s environment are significant risk factors for SIDS.

Women should not smoke while pregnant or after the birth of their child. They also should avoid second-hand tobacco smoke during pregnancy and after giving birth. Families should be encouraged to set rules for smoke-free homes and cars, and to eliminate second-hand smoke from all places used by children and non-smokers. In addition, bed-sharing between an infant and an adult smoker significantly increases the risk of SIDS.

Avoid alcohol and illicit drug use during pregnancy and after birth. Pre- and postnatal exposure to alcohol or illicit drugs increases the risk of SIDS.

Women should avoid using drugs and alcohol before and during pregnancy. The combination of bed-sharing and drug and alcohol use increases the risk of SIDS.

Breastfeeding is recommended.

Studies have shown that breastfeeding offers infants a protective effect from SIDS; this effect increases if the breastfeeding is exclusive. In accordance with existing AAP recommendations, mothers should breastfeed or feed with expressed human milk for six months if possible.

Offer the infant a pacifier at nap time and at bedtime. Studies indicate that pacifiers appear to confer some protection against SIDS; this effect continues throughout the infant’s sleep period, even if the pacifier falls out of the infant’s mouth.

Parents should use a pacifier when preparing the infant for sleep; however, infants should not be forced to take it. Pacifiers should not be hung around the infant’s neck; objects that present a risk of suffocation or choking should not be attached to pacifiers. There is no evidence to suggest that finger-sucking provides any protection against SIDS.

Avoid overheating of infants.

Although it is difficult to provide specific guidelines, studies have reported a link between overheating and increased risk of SIDS. In general, infants should wear no more than one layer more than what an adult would wear to feel comfortable in the same environment. Parents should avoid overbundling and covering of their infant’s head and face, and monitor their infant for signs of overheating (such as sweating or the infant’s chest feeling hot to the touch).

Do not use home cardiorespiratory monitors as a means of reducing the risk of SIDS.

Cardiorespiratory monitors can be used to detect apnea, bradycardia, and (in some instances) decreases in blood oxygen levels, but there is no evidence that they decrease the incidence of SIDS. Furthermore, there is no evidence that routine cardiorespiratory monitoring before an infant is discharged from the hospital can identify whether the infant is at risk of SIDS.
Expand the national campaign to reduce the risk of SIDS, with an emphasis on the safe sleep environment and ways to reduce the risks of all sleep-related deaths. Family physicians and other primary care clinicians are encouraged to participate.

Public education should continue for anyone involved in the care of infants. In particular, the campaign should include strategies for increasing breastfeeding, decreasing bed-sharing, and eliminating exposure to tobacco smoke. Ideally, these recommendations should be introduced in secondary school curricula, and should include information on preconception health and avoidance of smoking and alcohol. Blacks and American Indian/Alaska Native populations need special attention because of an increased incidence of SIDS and other sleep-related infant deaths in these groups. Educational messages should be reviewed, revised, and reissued at least every five years.

**Level B Recommendations**

Infants should be immunized in accordance with recommendations from the AAP and the Centers for Disease Control and Prevention.

There is no evidence to suggest that immunizations cause SIDS; recently published research suggests that immunizations may protect against the incidence of SIDS. Infants should be seen for regular well-child visits in accordance with AAP recommendations.

Avoid wedges, positioners, special mattresses, special sleep surfaces, and other commercial devices marketed to reduce the risk of SIDS.

There is no evidence that these products marketed to protect against SIDS actually provide any level of protection, or that they reduce the risk of suffocation, or that they are safe. According to the U.S. Food and Drug Administration and the Consumer Product Safety Commission, manufacturers should not claim that a product or device protects against SIDS unless there is scientific evidence sufficient to validate such a claim.

Supervised, awake tummy time is recommended to facilitate an infant’s development, and to minimize the risk of positional plagiocephaly.

Daily supervised, awake tummy time sessions promote the development of an infant’s motor skills and facilitate the development of the infant’s upper body muscles, while minimizing the risk of positional plagiocephaly. Parents also should avoid having the infant in a car safety seat for excessive periods of time, and should change the infant’s orientation in the crib periodically.

**Level C Recommendations**

Health and child care professionals should endorse the SIDS risk-reduction recommendations.

All physicians, nurses, child care professionals, and other health care professionals should receive education on safe infant sleep and implement safe sleep practices as needed. Newborn nursery staff should model and implement the SIDS recommendations beginning at the infant’s birth; neonatal intensive care unit staff should model and implement the recommendations as soon as the infant is clinically stable.

The media and product manufacturers should follow safe sleep guidelines in their advertising and marketing campaigns.

Exposure to different forms of media, with product advertisements and displays, influences beliefs and attitudes and may cause behavioral changes. Media and advertising that do not adhere to safe sleep recommendations may lead to misinformation about safe sleep practices.

Continue to investigate the causes, risk factors, and pathophysiologic mechanisms of SIDS and other sleep-related infant deaths.

Existing education campaigns must be evaluated and new intervention methods should be encouraged. Standardized protocols for investigating infant deaths should continue to be implemented; training on how to conduct such investigations, and the allocation of resources for training and conduct, should continue.

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**Answers to This Issue’s CME Quiz**

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