CRITICAL UPDATE

Preventing Sleep-Related Infant Death

More infants 1-12 months old die unexpectedly during sleep than from any other type of injury. Medical examiners used to attribute most sleep-related deaths to Sudden Infant Death Syndrome (SIDS), but use of this term is fading. Doctors and scientists widely agree that sleeping infants die from accidental suffocation or strangulation more often than from an unexplainable syndrome. That is why examiners now describe infant deaths using a greater variety of terms such as “Sleep-Related Infant Death,” “Accidental Suffocation and Strangulation,” or “Sudden Unexplained Infant Death.”

Although medical terms may change, sleep-related deaths continue to occur when parents or other caregivers put infants in risky situations. Child care providers can save lives by eliminating risks from their programs and by educating families to use updated safety practices at home. One of the biggest risks is putting infants to sleep on their stomachs. Caregivers help cut sleep-related deaths significantly by adopting recommendations of the Back to Sleep campaign that began in 1994. Since then, researchers have pinpointed additional risks and precautions. The American Academy of Pediatrics (AAP) endorsed a set of updated safety practices in 2011. These practices include back sleeping, using bare sleep surfaces designed specifically for infants, breastfeeding, pacifier use, and elimination of cigarette smoke.

Do You Know?

- Blankets are sleep hazards.
- Pacifiers protect infants during sleep.
- Many parents and caregivers still don’t know stomach sleep is more dangerous than back sleep.
**Multiple risks**

Sleep-related death occurs when systems inside the infant’s body cannot overcome challenges in the infant’s environment. Examples of challenges are air pollution, improper air circulation, and bedding that may overheat or entangle the infant. Many deaths occur when multiple risks are present at the same time: 1) a vulnerable period of development, 2) a biological vulnerability, and 3) stress in the environment. Researchers refer to this as the Triple Risk Model.\(^3\)

These risks most often coincide during the first 1-4 months after birth but may be present throughout the first year. Some infants have abnormalities in their breathing and nervous systems and are less capable of fighting against environmental stress. In some cases, these weaknesses are genetic, but in others, unhealthy pregnancy hinders proper development of an infant’s internal defense mechanisms.\(^4\)

One example of a life-saving defense mechanism is light sleeping. Light sleeping allows infants to adjust to environmental challenges that might otherwise kill them. Consider this scenario:

**Environmental Challenge**

*A caregiver places an infant to sleep on his stomach. The infant’s nose and mouth face down toward the mattress. He begins to re-breathe gases he should only be exhaling.*

<table>
<thead>
<tr>
<th>Normal Response</th>
<th>Compromised Response</th>
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<tbody>
<tr>
<td>An internal reflex triggers the infant to turn his head and maybe wake up. He can now access better air and return to sleep.</td>
<td>If the infant has weakened reflexes, he will not turn his head or wake up. His body does not get the right amount of oxygen and shuts down.</td>
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Eliminate risks!

Although many sleep-related deaths are explained using the Triple Risk Model, some environmental risks are strong enough to overpower infants without biological vulnerabilities. Very healthy infants can still die if they are accidentally suffocated or strangled, for example, by loose blankets, bibs, or by other people sharing the bed. While scientists keep looking for ways to identify internal risks and medical treatments, there are many ways you can protect infants. You can encourage pregnant mothers to have healthy pregnancies, you can implement AAP safety practices described in this brief with every infant in your program, and you can educate families about using these practices at home.

Recommendations

Encourage healthy pregnancy

Mothers begin protecting infants during pregnancy. Infants born early or with low birth weight have weaker defenses against environmental threats and are more susceptible to sleep-related death. Physicians can monitor pregnancies, give health advice, treat risks, and educate parents on safe infant care practices. A woman should visit a physician as soon as she suspects she is pregnant and attend all recommended check-ups. Prenatal care reduces low birth weight and preterm births, and it increases breast-feeding and safe sleep practices.  

Pregnant mothers should not smoke, drink alcohol, or take drugs. These substances can cause complications during pregnancy, premature birth, and low birthweight. Smoking increases the odds of infant death more than any other pregnancy risk. If we could prevent moms from smoking during pregnancy, scientists estimate that we would reduce sleep-related deaths 20-30%.

Use surfaces designed for sleeping infants

When it comes to sleeping, an infant needs an attentive caregiver and a firm surface designed specifically for infant sleep safety. Verify cribs, play yards, and bassinets meet current guidelines of the U.S. Consumer Product Safety Commission. Only insert firm mattresses designed specifically for the product frame. Cover each mattress in a single, tight-fitted sheet. Eliminate dangerous sleep surfaces and bed accessories that can suffocate, entrap, or overheat infants. Some of these items may surprise you!

Bare is Best

Eliminate risks!

Rid from Crib
Blanks
Bumpers
Hats
Bolsters
Positioners
Toys
Mobiles
Stuffed animals
Pillows
Overhead tents
Car Seats

Keep for Sleep
Infant sleep surfaces approved by the U.S. Consumer Safety Commission
Sleep sacks
Pacifiers
Sleep dangers: Couches, chairs, and adult mattresses

Infants die more often when they are sleeping on surfaces designed for older people. These include sofas, chairs, and adult mattresses. Some caregivers use these surfaces to be closer to the infant or to make night feedings easier. Unfortunately, infants may overheat or suffocate when lying next to or on top of cushions or other people. Pillows or rails set up to prevent rolling or falling can entrap or suffocate infants. Even mattresses placed directly on the floor are dangerous.

Discuss with families the importance of staying awake while holding infants. Adults who feel drowsy should immediately move infants to their individual cribs rather than fall asleep holding them on sofas or chairs.

Sleep dangers: Upright infant seats

Car seats are designed for crash safety, not for sleep safety. Caregivers must not leave sleeping infants in car seats or other sitting devices, such as swings. Infants cannot access as much oxygen when sleeping seated. Therefore, remove sleeping infants from car seats when you reach your destination. If infants doze off while seated, move them to their infant beds. Do not allow families to leave sleeping babies in car seats at drop off to your program. Instead, implement routines that require parents to remove sleeping infants from car seats and place them on their backs in separate cribs.

Sleep dangers: Loose blankets, bumpers, layers, and “cozy” items

Bare is best for cribs, bassinets, or play yards when infants are sleeping. The safest way to keep infants warm is to dress them in a single layer, either in sleep sacks or footed pajamas that cannot shift over their heads. The temperature in the sleep room should be comfortable to an adult wearing a single layer of clothing. Remove blankets, hats and head covers. Those items can overheat or accidentally suffocate infants. The sleep surface should be firm and flat, so also remove bumpers and pillows. Only use “cozy” items, such as soft stuffed toys, mobiles, or fuzzy burp cloths when infants are awake. During sleep, they can block air circulation, suffocate, or overheat infants.

Caregiver in the room, not in the bed

In child care programs, an alert caregiver should attend sleeping infants at all times rather than leave infants alone in separate rooms. Lighting should be adequate to watch for loose bedding or signs of overheating and to verify that infants’ heads are not covered. Regardless of location, parents, siblings, and pets should not share beds with infants. Bed sharing can double the odds of sleep-related death. Bed sharing risks are greatest when infants are very young or when parents smoke.
Continue to assure parents that the instinct to remain close to sleeping infants is a good thing. Although bed sharing can be lethal, remaining in the room protects infants. At home, mothers can place cribs or bassinets in arm’s reach of the adult bed to make soothing and night feedings more convenient. Stress the importance of staying awake during feeding and putting infants into their own beds when feedings have ended.

Parents often have good motivations for bed sharing. Some mothers share beds to make breastfeeding easier or to cope with depression. Some cannot afford to purchase cribs. Others share beds to protect infants from external threats, such as bugs or gunfire. Advise families that sleep-related death kills more infants than any other threat. Sleep safety should be top priority. Then, help families find practical resources and assistance to address additional concerns. Always be sensitive to a family’s culture and their environment when discussing safe sleep.

Back to Sleep everywhere, all the time

Infants are safest when they sleep on their backs, not on their sides or stomachs. Unfortunately, child care providers cannot assume that everyone knows about or complies with Back to Sleep recommendations. In 2010, 14% of mothers still reported usually placing infants to sleep on the stomach. Infants who are used to back-sleeping and then are placed on their stomachs are at significantly higher risk for sleep-related death. Therefore, every child care program needs written sleep safety policies based on current AAP guidelines. Discuss these policies with every adult providing or using child care services. Assuming they will read policies is not enough. Actively train employees and volunteers in safety practices and regularly observe them for 100% compliance. Then orient parents to safe sleep practices at the enrollment of each new infant.

Always include discussions about these common beliefs and misperceptions:

- Many adults believe infants can choke when sleeping on their backs and may mistake coughing for gagging. Firmly assure parents that back sleeping does not cause choking.

- Another common belief is that infants are more comfortable on their stomachs. Tell parents they can use other methods to make their infants comfortable. For instance, infants soothe faster and sleep better when caregivers put them to bed at the same time every day.

Pair Back to Sleep with these practices

Back sleeping may contribute to flattened head shape and slowed gross motor development, but these side effects can be minimized.

Tummy Time

Schedule Tummy Time sessions for babies that are awake. Placing infants on their stomachs while awake helps them develop motor control and muscles for head lifting and rolling.

Head Positions

Alternate infant head positions at naps and feedings. Babies will often face the door when sleeping. By alternating ends of the crib that you place them to sleep, you can help them switch head positions. In addition, you can switch sides that you hold infants from one feeding to the next.
Hospital nursery practices and physicians’ advice influence how parents place their infants at home.\textsuperscript{40,41} Doctors and nurses sometimes place premature infants to sleep on their stomachs in the hospital, where they are under strict care and observation and attached to monitors that immediately alert hospital staff of a crisis. However, infants born prematurely will be more susceptible to sleep-related deaths when placed on their stomachs at home.\textsuperscript{40} Some mothers receive no advice regarding sleep position from their physicians and may even receive inaccurate info.\textsuperscript{35} Child care programs should only comply with requests for stomach sleep when the infant’s pediatrician provides written, signed explanations and parents sign a release.

**No smoke, alcohol, drugs**

Caregivers should never allow smoking around infants. Cigarette smoke inhibits heart and breathing function and suppresses reflexes that would otherwise help infants adjust to their environments. Infants exposed to smoke are much more vulnerable to sleep-related death.\textsuperscript{44}

Also, advise families and other care providers to avoid drinking alcohol or using drugs while caring for infants. They dull a caregiver’s ability to respond to infant needs. Sleep-related deaths occur at much higher rates among alcohol-consumers than non-alcohol consumers, especially on weekends.\textsuperscript{45}

**Yes to breast feeding & pacifiers**

![Pacifier](image)

Much of your sleep safety routine involves removing things around infants, but two things you can keep are breastfeeding and pacifiers. Breastfed infants are more resistant to sleep-related death, especially when exclusively breastfed until 6 months old.\textsuperscript{12,46,47} They arouse from dangerous situations better than formula-fed infants do, and they develop fewer infections that might weaken their defenses against sleep hazards.

Pacifier use at bedtime also appears to decrease sleep-related death.\textsuperscript{47,48} Offer a clean, dry pacifier at sleep times once an infant is accustomed to breastfeeding. Pacifiers do not need to be reinserted if they fall out of infants’ mouths while sleeping. To eliminate the chance of entanglement or suffocations, never clip or tie pacifiers to an infant’s clothing or body.

**Confront mixed messages**

What we see or hear in our communities about infant safety may not match all of these current AAP recommendations. You may have to demonstrate how magazines, TV, or family suggestions are not up-to-date with scientific evidence. Be ready to confront mixed messages about what keeps infants comfortable and safe!
Family and community influences

Mothers pay attention to the advice of secondary caregivers, such as grandparents and child care providers. The more a mother hears accurate safe, sleep messages the more likely she is to use them. Child care providers should engage grandparents and other influencers in safe sleep education.

Media images and advertising

Remind parents and child care colleagues that the media tries to sell things infants do not need. For instance, most cradle and crib bedding sets sold by retailers still include bumpers. Some businesses selling sleep positioners, wedges, monitors, and co-sleepers have claimed these products protect against sleep-related death, yet none of these claims are supported by the U.S. Food and Drug Administration. Filter ads and media images you pass on to families. Check to see if posters, brochures, and photos in your program reflect new safe sleep practices. Do parents share photos of sleeping newborns nuzzled against animals or bundled in hats and blankets? If so, they are selling parents outdated ideas about comfort.

Immunization opponents

Encourage families to keep up with recommended immunizations (baby shots). Claims that immunizations are more dangerous than protective or that they can trigger sleep-related are incorrect. Immunizations protect children from deadly diseases and make infants more resistant to sleep-related death.

Broaden your approach

Misperceptions about safe, comfortable sleep are everywhere, so consider ways to broadcast safe sleep messages to a wider audience.

- Educate moms and your fellow child care providers first. Then find ways to educate others involved in infant care: fathers, siblings, extended family members, and babysitters.

- Turn to the National Resource Center for Health and Safety in Child Care and Early Education (ncrkids.org) for policy statements you can use in your program.

- Make your conversations more than a list of do’s and do not’s, and teach caregivers why safe sleep recommendations exist. Some people believe that sleep-related death strikes randomly at God’s will and that prevention is beyond their control. Others hear that infants choke when they sleep on their backs, or may have trouble associating soft items with danger instead of comfort.

To protect more infants, confront these misperceptions every time you talk about sleep safety.

Resources on the following page will help you share safe sleep practices.
More info & support

National SUID/SIDS Resource Center
sidscenter.org
One-stop shop for technical assistance and support you may need to educate staff and families.

National Resource Center for Health & Safety in Child Care & Early Education
nrckids.org
Clearly written, up-to-date sleep safety policies based on AAP standards to incorporate into your employee or parent manuals.

Refer to the document:

American Academy of Pediatrics (AAP)
www.healthychildcare.org/sids.html
AAP sponsored website for child care. Includes links to printable Safe Sleep and Tummy Time brochures for families and providers.

National Institute of Child Health & Human Development
www.nichd.nih.gov/SIDS
Free downloads of Safe to Sleep campaign materials and a 10-minute educational video on safe sleep to share with parents and staff.

Consumer Product Safety Commission
cpsc.gov
Product hazard and recall info and printable “Bare is Best” flyer to post in your child care program: http://www.cpsc.gov/tnsn/bareisbest.pdf

Cribbs for Kids
cribbsforkids.org
Local chapters help families obtain free or low-cost infant beds. Use the website to locate chapters or to see pediatrician responses to questions about sleep safety.

Office of Planning, Research & Evaluation
Administration for Children & Families
www.acf.hhs.gov
Suggested Citation

References