The Academy Of Breastfeeding Medicine

ABM Protocols

A central goal of **The Academy of Breastfeeding Medicine** is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

Protocol #6: Guideline on co-sleeping and breastfeeding

INTRODUCTION

The Academy of Breastfeeding Medicine is a worldwide organization of physicians dedicated to the promotion, protection, and support of breastfeeding and human lactation. One of the goals of the Academy of Breastfeeding Medicine is the facilitation of optimal breastfeeding practices. This clinical guideline addresses an aspect of parenting that has a significant impact on breastfeeding: infant sleep locations.

BACKGROUND

The term co-sleeping is often used to refer only to the sharing of a sleep surface by an infant and a parent. However, co-sleeping in reality refers to the diverse ways in which infants sleep in close social and/or physical contact with a committed caregiver (usually the mother).[1] This operational definition requires that co-sleepers remain close enough for each to detect and potentially act on the sensory stimuli of the other and includes an infant sleeping alongside a parent on a different piece of furniture or object.

Bed sharing is just one form of co-sleeping. Forms of co-sleeping such as sharing a mat, futon, or the floor are different from bed sharing because the surfaces are different and may not have the same risks as soft mattresses, quilts, water beds, sofas, or couches. In addition, other surfaces such as sofas or couches may have increased risks.[2]

Parent-child co-sleeping provides physical protection for the infant against cold and extends the duration of breastfeeding, thus improving the chances of survival of the slowly developing human infant.[1,3–5] The human infant, relative to other mammals, develops more slowly, requires frequent feedings, and is born neurologically less mature.[1,3–5] In malaria settings, co-sleeping is recommended as the most efficient use of available bed-nets, and co-sleeping may be necessary in other geographic areas where available bedding or housing is inadequate.

Bed sharing and co-sleeping have received considerable negative comment in the medical literature in recent years as a cause of infant deaths.[6–10] This has led some public health authorities to discourage all parents from bed sharing. The United States Consumer Product Safety Commission (USCPSC) advises parents to "never sleep with your baby" but fails to make important distinctions between the different forms of co-sleeping and safe and unsafe bed sharing.[11]

Bed sharing has long been promoted as a method to enhance parenting behavior or "attachment parenting" and also to facilitate breastfeeding.[12–16] Based on a review of the current literature (see "Justification") the Academy of Breastfeeding Medicine has the following recommendations for health-care providers.

RECOMMENDATIONS

A. Because breastfeeding is the best form of nutrition for infants, any recommendations for infant care that impede its initiation or duration need to be carefully weighed against the many known benefits to infants, their mothers, and society.
B. It should not be assumed that families are practicing only one sleeping arrangement all night every night and during the daytime as well. Health care providers should consider this when obtaining a history on infant sleep practices.[2,22] Parents need to be encouraged to express their views and to seek information and support from their health care providers. Sensitivity to cultural differences is necessary when obtaining sleep histories.
C. There is currently not enough evidence to support routine recommendations against co-sleeping. Parents should be educated about risks and benefits of co-sleeping and unsafe co-sleeping practices and should be allowed to make their own informed decision. Bed sharing is a complex practice. Parental counseling about infant sleep environments should include the following information:

1. Some potentially unsafe practices related to bed sharing/co-sleeping have been identified either in the peer reviewed literature or as a consensus of expert opinion:

- Environmental smoke exposure and maternal smoking[2,11,17–21]
- Sharing sofas, couches, or daybeds with infants[2,6,9–11]
- Sharing waterbeds or the use of soft bedding materials[6,9–11]
- Sharing beds with adjacent spaces that could trap an infant[6,9–11]
- Placement of the infant in the adult bed in the prone or side position[6,9–11]
- The use of alcohol or mind-altering drugs by the adult(s) who is bed sharing[2]

2. Families also should be given all the information that is known about safe sleep environments for their infants, including:

- Place babies in the supine position for sleep.[23]
- Use a firm, flat surface and avoid waterbeds, couches, sofas, pillows, soft materials, or loose bedding.[6,9–11,23]
- Use only a thin blanket to cover the infant.
- Ensure that the head will not be covered. In a cold room the infant could be kept in an infant sleeper to maintain warmth.[6,9–11,23]
- Avoid the use of quilts, duvets, comforters, pillows, and stuffed animals in the infant's sleep environment.[6,9–11,23]
- Never put an infant down to sleep on a pillow or adjacent to a pillow.[6,9–11,23]
- Never leave an infant alone on an adult bed.[6,9–11,23]
- Inform families that adult beds have potential risks and are not designed to meet federal safety standards for infants.[6,9–11,23]
- Ensure that there are no spaces between the mattress and headboard, walls, and other surfaces, which may entrap the infant and lead to suffocation.[6,9–11,23]

Placement of a firm mattress directly on the floor away from walls may be a safe alternative. Another alternative to sharing an adult bed or sharing a mattress is the use of an infant bed that attaches to the side of the adult bed and provides proximity and access to the infant but a separate sleep surface. There are currently no peer-reviewed studies of such devices.

JUSTIFICATION

Breastfeeding and bed sharing

A study of bed sharing and breastfeeding found that infants who routinely shared a bed with their mothers breastfed approximately three times longer during the night than infants who routinely slept separately. There was a twofold increase in the number of breastfeeding episodes, and the episodes were 39% longer.[16] Proximity to and sensory contact with the mother during sleep facilitates prompt responses to signs of the infant's readiness to breastfeed and provides psychologic comfort and reassurance to the dependent infant as well as the parents.

A recent large prospective study of more than 10,000 infants in the United State found that up to 22% of 1-month-old infants were bed sharing and that breastfeeding mothers were three times more likely to bed share than mothers who did not breastfeed. Ninety-five percent of infants who shared a bed did so with a parent.[24] Studies in New Zealand and Australia have actually found rates of bed sharing to be greater than 40%.[22,25] A more recent retrospective study in the United States has also shown the rates of co-sleeping to be as high as 45%.[26]

Co-sleeping and infant mortality

SIDS prevention and risk

Several epidemiological studies and a recent metaanalysis have found a significant association between breastfeeding and a lowered SIDS risk, especially when breastfeeding was the exclusive form of feeding during the first four months of life.[27,28] However, there is insufficient evidence at this time to show a causal link between breastfeeding and the prevention of SIDS.

Several studies have also demonstrated an increased risk of SIDS when infants bed share with mothers who smoke cigarettes. Exposure to cigarette smoke as a fetus and in infancy appears to contribute to this risk and is independent of other known risk factors, including social class.[2,17–21,29,30] This has led to the recommendation that infants not bed share with parents who smoke.

Asphyxiation risk

Two studies from the United States Consumer Product Safety Commission using *unverified death certificate* diagnoses concluded that a significant number of infants were asphyxiated as they slept in unsafe sleep environments caused by either accidental entrapment in the sleep surface or overlying by a sleeping adult or older child.[8,10] From these studies the United States Consumer Product Safety Commission (USCPSC) has made recommendations against the use of all types and forms of co-sleeping and advised parents against sleeping with their infants under any circumstances. The USCPSC is concerned about the absence of infant safety standards for adult beds and the hazards that may result from an infant sleeping in an unsafe environment. Two more recent studies done in St. Louis and Cleveland have raised similar concerns,[7,9] yet these studies have flaws similar to those of previous ones. They lack data on the state of intoxication of the co-sleeping adult (drugs or alcohol) and fail to consider the sleep position of the baby at time of death, even though prone sleep position appears to be one of the most significant risk factors for SIDS. They also group all bed sharing into one category, not separating known unsafe sleep environments such as sofas and couches, waterbeds, and upholstered chairs from other, safer sleep surfaces. In these studies there is no assurance of the quality of the data collection, no consistency in the criteria employed in using the term "overlay," and no validation of the conclusions. Bias by medical examiners and coroners may lead them to classify infant deaths that occur in an adult bed, couch, or chair in the presence of an adult as a rollover death even where there is no evidence that an actual overlay occurred. This is especially a problem in the absence of a death scene examination and detailed interviews of those present at the time of death. There is no autopsy method to differentiate between death caused by SIDS versus death from accidental or intentional causes such as infant homicide by pillow smothering. Thus, infant deaths that occur in a crib are usually designated as SIDS, whereas deaths in a couch or adult bed are usually labeled as smothering. Further complicating analyses of infant deaths is the diversity of bed-sharing behaviors. A home visit study of families considered to be at high risk for SIDS because of socioeconomic status found that those bed sharing were more likely to place infants in the prone position and to use softer bed surfaces.[31]

Population-based prospective studies

The only population-based prospective study of bed sharing and SIDS was done in England.[2] The investigators found the following:

- Co-sleeping with an infant on a sofa was associated with particularly high risk of sudden infant death syndrome.
- There was no increased risk associated with bed sharing when the infant was placed back in his or her cot after a period of time and did not spend the whole sleep period in the parent's bed.
- Among infants whose parents do not smoke or infants older than 14 weeks there was no association between infants being found in the parental bed and an increased risk of sudden infant death.
- The risk linked with bed sharing among younger infants seemed to be associated with recent parental consumption of alcohol, overcrowded housing conditions, extreme parental tiredness, and the infant being under a heavy cover such as a quilt.
- Sharing a room with the parents was associated with a lower risk of sudden infant death syndrome.

The authors of this study conclude that "there has been little in the way of direct observation data until recently, but it is becoming clear that sharing a bed both for infants and mothers results in complex interactions that are completely different from isolated sleeping and that need to be understood in detail before application of simplistic labels such as 'safe' or 'unsafe.'" They go on to say, "Perhaps it is not bed sharing per se that is hazardous but rather the particular circumstances in which bed sharing occurs. That

some of these circumstances may be modifiable has important implications in terms of social policy and health education."

Ethnic diversity

The rates of SIDS deaths are low in Asian cultures in which co-sleeping is common. However, some argue that co-sleeping in these cultures is different from the bed sharing that occurs in the United States. As Blair and colleagues note in their study, "A baby sleeping at arm's length from the mother on a firm surface, as is often the case in Hong Kong, or a Pacific Island baby sleeping *on* the bed rather than *in* the bed is in a different environment from a baby sleeping in direct contact with the mother on a soft mattress and covered by a thick duvet."[2] A large, prospective study using multivariate analysis of bed sharing found that race or ethnicity appears to have the strongest association with bed sharing at all follow-up periods with black, Asian, and Hispanic mothers four to six times more likely to bed share than white mothers.[24] In a recent study in Alaska, where there is a high rate of co-sleeping among Alaskan Native people, researchers found that almost all SIDS deaths associated with parental bed sharing occurred in conjunction with a history of parental drug use and occasionally in association with prone sleep position or sleeping on surfaces such as couches or waterbeds.[32]

Controlled laboratory studies

McKenna and colleagues have studied bed sharing in the greatest scientific detail in a laboratory setting and have found that infants who shared a bed with the mother had more sleep arousals and spent less time in stage three and four sleep. This may be protective against SIDS since deep sleep and infrequent arousals have been considered as possible risk factors for SIDS.[3,33–36]

Parental factors

The contribution of other parental factors to the risk of bed sharing is unclear. Blair and colleagues found in a multivariate analysis that maternal alcohol consumption of more than 2 drinks (1 drink = 12 oz beer, 5 oz wine or 1½ oz distilled alcohol) and parental tiredness were associated with sudden infant death.[2] A study in New Zealand did not show a clear link with alcohol consumption, however.[20] The role of obesity has been examined in only one study of SIDS cases. They found the mean pregravid weights of bed sharing mothers to be greater than those of non–bed-sharing mothers.[7] If overlying is thought to be the mechanism of infant suffocation, it would seem plausible that the psychologic and physical states of those sharing the bed with an infant could be of importance.

RECOMMENDATIONS FOR FUTURE RESEARCH

A. The Academy of Breastfeeding Medicine urges that more research be undertaken so that the benefits and risks of co-sleeping and bed sharing and their association with breastfeeding can be better understood.

B. The Academy is concerned that co-sleeping and bed sharing are being interdicted based on faulty data collection and erroneous conclusions. If data from medical examiners is to be used in research, medical examiners should develop protocols to investigate unexplained infant deaths using impartial and standardized methods, including detailed site investigations. Data collection must be scientifically sound, verifiable, and include

- the physical environment of the bed
- the precise position of the infant in the bed
- the individual(s) sharing the bed
- the physical and psychologic status of the adult(s) sharing the bed with the infant, and
- the medical status of the infant at the time of death

Complete and critically reviewed autopsies are essential, as are visits by trained unbiased investigators to the site of death.

C. Researchers should employ well-designed, impartial, prospective protocols with standardized, well-defined data collection methods. Control data for comparison are an essential part of such research. Studies should be population based, so that actual risk of sudden infant death and overlying smothering due to bed sharing or co-sleeping can be computed. A denominator is needed for calculation of risk and for comparison with a population not practicing co-sleeping or bed sharing. In the final analysis, it is critical that dangerous, modifiable "factors" associated with bed sharing not be considered the same as bed sharing itself. The ethnic diversity of the United States needs to be considered as well.

D. Continuing study of the impact of co-sleeping on infant behavior, SIDS, and breastfeeding is essential.

REFERENCES

1. McKenna JJ, Thoman EB, Anders TF, et al: Infant-parent co-sleeping in an evolutionary perspective: implications for understanding infant sleep development and the sudden infant death syndrome. Sleep 16:263–282, 1993.
2. Blair PS, Fleming PJ, Smith IJ, et al: Babies sleeping with parents: case-control study of factors influencing the risk of the sudden infant death syndrome. CESDI SUDI research group. Br Med J 319:1457–1461, 1999.
3. McKenna JJ: An anthropological perspective on the sudden infant death syndrome (SIDS): the role of parental breathing cues and speech breathing adaptations. Med Anthropol 10:9–92, 1986.
4. McKenna JJ, Mosko S: Evolution and infant sleep: an experimental study of infant-parent co-sleeping and its implications for SIDS. Acta Paediatr 82 (Suppl 389):31–36, 1993.
5. McKenna JJ, Mosko SS: Sleep and arousal, synchrony and independence, among mothers and infants sleeping apart and together (same bed): an experiment in evolutionary medicine. Acta Paediatr Suppl 397:94–102, 1994.
6. Byard RW, Beal S, Bourne AJ: Potentially dangerous sleeping environments and accidental asphyxia in infancy and early childhood. Arch Dis Child 71:497–500, 1994.
7. Carroll-Pankhurst C, Mortimer EA Jr: Sudden infant death syndrome, bedsharing, parental weight, and age at death. Pediatrics 107:530–536, 1994.
8. Drago DA, Dannenberg AL: Infant mechanical suffocation deaths in the United States, 1980–1997. Pediatrics 103:e59, 1999.
9. Kemp JS, Unger B, Wilkins D, et al: Unsafe sleep practices and an analysis of bedsharing among infants dying suddenly and unexpectedly: results of a four-year, population-based, death-scene investigation study of sudden infant death syndrome and related deaths. Pediatrics 106:e41, 2000.
10. Nakamura S, Wind M, Danello MA: Review of hazards associated with children placed in adult beds. Arch Pediatr Adolesc Med 153:1019–1023, 1999.
11. United States Consumer Products Safety Commission: CPSC warns against placing babies in adult beds. SPSC Document #5091. Washington, DC, USCPSC, 1999.
12. Rosenberg KD: Sudden infant death syndrome and cosleeping. Arch Pediatr Adolesc Med 154:529–530, 2000.
13. Thevenin T: The Family Bed. East Rutherford, NJ, Avery Publishing Group, 1987.
14. Sears W, Sears M: The Baby Book. Boston, Little, Brown and Company, 1993.
15. La Leche League International: The Womanly Art of Breastfeeding, 5th ed. Schaumburg, Ill, LLLI, 1991.
16. McKenna JJ, Mosko SS, Richard CA: Bedsharing promotes breastfeeding. Pediatrics 100(2 Pt 1):214–219, 1997.
17. Mitchell EA, Taylor BJ, Ford RP, et al: Four modifiable and other major risk factors for cot death: the New Zealand study. J Paediatr Child Health 28 Suppl 1:S3–S8, 1992.
18. Mitchell EA, Esmail A, Jones DR, Clements M: Do differences in the prevalence of risk factors explain the higher mortality from sudden infant death syndrome in New Zealand compared with the UK? N Z Med J 109(1030):352–355, 1996.
19. Mitchell EA, Tuohy PG, Brunt JM, et al: Risk factors for sudden infant death syndrome following the prevention campaign in New Zealand: a prospective study. Pediatrics 100(5):835–840, 1997.
20. Scragg R, Mitchell EA, Taylor BJ, et al: Bed sharing, smoking, and alcohol in the sudden infant death syndrome. New Zealand Cot Death Study Group. Br Med J 307(6915): 1312–1318, 1993.
21. Scragg R, Stewart AW, Mitchell EA, Ford RP, Thompson JM: Public health policy on bed sharing and smoking in the sudden infant death syndrome. N Z Med J 108(1001): 218–222, 1995.
22. Rigda RS, McMillen IC, Buckley P: Bed sharing patterns in a cohort of Australian infants during the first six months after birth. J Paediatr Child Health 36(2):117–121, 2000.
23. American Academy of Pediatrics: Changing concepts of sudden infant death syndrome: implications for infant sleeping environment and sleep position. Task Force on Infant Sleep Position and Sudden Infant Death Syndrome. Pediatrics 105(3 Pt 1):650–656, 2000.
24. McCoy RC, Hunt CL, Lesko SM: Population-based study of bedsharing and breastfeeding. Pediatr Res 47:154A. 2000.
25. Tuohy PG, Smale P, Clements M: Ethnic differences in parent/infant co-sleeping practices in New Zealand. N Z Med J 111(1074):364–366, 1998.
26. Willinger M, Ko CW, Hoffman HJ, Kessler RC, Corwin MJ: Trends in infant bed sharing in the United States 1993–2000. The national infant sleep position study. Arch Pediatr Adolesc Med 157:43–49, 2003.

27. Ford RP, Taylor BJ, Mitchell EA, et al: Breastfeeding and the risk of sudden infant death syndrome. Int J Epidemiol 22:885–890, 1993.
28. McVea KL, Turner PD, Peppler DK: The role of breastfeeding in sudden infant death syndrome. J Hum Lact 2000; 16(1):13–20.
29. Mitchell EA, Scragg L, Clements M: Factors related to infants bed sharing. N Z Med J 107(989):466–467, 1994.
30. Scragg RK, Mitchell EA: Side sleeping position and bed sharing in the sudden infant death syndrome. Ann Med 30:345–349, 1998.
31. Flick L, White DK, Vemulapalli C, Stulac BB, Kemp JS: Sleep position and the use of soft bedding during bed sharing among African American infants at increased risk for sudden infant death syndrome. J Pediatr 138:338–343, 2001.
32. Gessner BD, Ives GC, Perham-Hester KA: Association between sudden infant death syndrome and prone sleep position, bed sharing, and sleeping outside an infant crib in Alaska. Pediatrics 108:923–927, 2001.
33. McKenna JJ, Mosko S, Dungy C, McAninch J: Sleep and arousal patterns of co-sleeping human mother/infant pairs: a preliminary physiological study with implications for the study of sudden infant death syndrome (SIDS). Am J Phys Anthropol 83:331–347, 1990.
34. Mosko S, Richard C, McKenna J: Infant arousals during mother-infant bed sharing: implications for infant sleep and sudden infant death syndrome research. Pediatrics 100: 841–849, 1997.
35. McKenna J, Mosko S, Richard C, et al: Experimental studies of infant-parent co-sleeping: mutual physiological and behavioral influences and their relevance to SIDS (sudden infant death syndrome). Early Hum Dev 38: 187–201, 1994.
36. Mosko S, Richard C, McKenna J, Drummond S, Mukai D: Maternal proximity and infant CO2 environment during bedsharing and possible implications for SIDS research. Am J Phys Anthropol 103:315–328, 1997.

Approved January 20, 2003
The Academy of Breastfeeding Medicine Protocol Committee
Caroline J. Chantry MD, FABM, Co-Chairperson
Lawrence M. Gartner MD
Cynthia R. Howard MD, MPH, FABM, Co-Chairperson
*Rosha Champion McCoy MD
Consultant
James McKenna J. PhD
Supported in part by a grant from the Maternal and Child Health Bureau, Department of Health and Human Services.
*Lead Author(s)