

Breastfeeding & Bedsharing: Still Useful (And Important) After All These Years

Written by James J. McKenna, PhD

Wednesday, 01 March 2006 00:00 - Last Updated Thursday, 26 February 2015 09:46

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2 | JOURNAL OF LACTATION | VOLUME 1

JOURNAL OF LACTATION | VOLUME 1 | 3

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This is because, of all mammals, humans are born the least neurologically mature (25% of adult brain volume), develop the most slowly, and are the most dependent for the longest period of time for nutritional, social, and emotional support, as well as for transportation. Indeed, in the early phases of human infancy, social care is synonymous with physiological regulation. That is, holding, carrying, and/or caressing an infant, and emitting odors and breath in his or her proximity, induce increased body temperature, less crying, greater heart-rate variability, fewer apneas, lower stress levels, increased glucose storage, and greater daily growth. ¹

Moreover, since the content of human milk is relatively low in fat and protein and high in sugar, which is metabolized quickly, and since human infants are unable to locomote on their own, continuous contact and carrying, with frequent breastfeeding day and night, is required. Thus, any biological scientific study that attempts to understand “normal,” species-wide, human infant sleep patterns without considering the vital role of nighttime contact in the form of breastfeeding and maternal proximity must be considered inadequate, misleading, and/or fundamentally flawed. ²

Co-sleeping: The Importance of Taxonomic Distinctions

Much of the controversy surrounding the question of the safety of mother– infant co-sleeping involves the ways in which investigators define and conceptualize it. Co-sleeping is not, as the Consumer Product Safety Commission (CPSC) assumes, a single, coherent practice. Rather, it is best thought of as a generic, diverse class of sleeping arrangements composed of many different practices, each of which requires proper description and characterization before the issue of safety and clinical outcomes can be understood.

A safe co-sleeping environment must provide the infant with the opportunity to sense and respond to the caregiver’s signals and cues, such as the mother’s smells, breathing sounds and movements, infant-directed speech, invitations to breastfeed, touches, and any hidden sensory stimuli, whether intended or not. ³ Moreover, to be designated as safe, the physical and social co-sleeping environment must involve a willing and active caregiver who chooses to co-sleep specifically to nurture, feed, or be close to the infant in order to monitor or protect him or her.

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The co-sleeping environment also must be carefully constructed to avoid known hazardous conditions, recently revealed by epidemiological studies. [4](#) Dangerous types of co-sleeping include sleeping with infants on sofas or couches, bed-sharing with mothers who smoke, and positioning toddlers next to infants. Parents or caregivers desensitized by drugs or alcohol create an unsafe co-sleeping environment. Other dangerous co-sleeping environments occur when an infant sleeps with a larger person on a soft mattress or is placed on large pillows in a bed with a parent. [5](#), [6](#), [7](#)

While all forms of bed-sharing are examples of co-sleeping, bed-sharing is only one of perhaps hundreds of different ways to co-sleep practiced around the world. For example, some parents in Latin America, the Philippines, and Vietnam sleep with their infant in a hammock, or place the infant in a hammock to sleep next to them, while they sleep on mats or beds. Some parents place their infant in a wicker basket and put the basket on a bed, between the parents. Other parents sleep next to their infants on bamboo or straw mats or on futons (as in Japan). Some place their infant on a cradleboard, keeping the infant within arm's reach; others co-sleep by room-sharing, having the infant sleep on a different surface, such as in a crib or bassinet, which is kept next to the parental bed, within arm's reach.

Co-sleeping Has Not Outlived Its Biological Usefulness

Although forms of infant sleeping vary enormously from culture to culture, the potentially beneficial physiological regulatory effects of maternal contact on human infants during sleep do not. Up to one degree of temperature can be lost when a newborn human is removed from the mother's stomach following birth, even when the infant is placed in an incubator with ambient temperatures set to match the mother's body temperature. [8](#) Richard found that among 11- to 16-week-old infants, solitary-sleeping infants exhibited lower average axillary skin temperatures than breastfeeding infants sharing a bed with their mothers.

[9](#)

Thoman and Graham discovered that even mechanical breathing teddy bears placed next to apnea-prone human newborns have the effect of reducing apneas by as much as 60%, in addition to physically drawing the infant subjects to sleep in direct contact.

[10](#)

Moreover, when resting on their mothers' (or fathers') chests, skin-to-skin, both premature and full-term infants breathe more regularly, use energy more efficiently, grow faster, and experience less stress.

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[12](#)

[13](#)

Clinical Outcomes Depend on How Co-sleeping Is Practiced

Exactly how co-sleeping may be beneficial or dangerous to the infant varies as a function of the particular social and physical environment (family circumstances) that it is practiced in. This is why there is no single outcome associated with forms of co-sleeping, especially in urban Western cultures, and why there is so much debate about whether co-sleeping, especially in the form of bed-sharing, is safe.

For example, in industrialized urban societies, among middle- to upperclass families where bed-sharing and breastfeeding are practiced by nonsmoking mothers, infant mortality, including deaths from sudden infant death syndrome (SIDS), is low. The most recent international study of childcare practices in relationship to SIDS rates, conducted by the SIDS Global Task Force, shows dramatically that low SIDS awareness and low SIDS rates are associated with the highest co-sleeping/bed-sharing rates.

At the most recent International SIDS Meeting in Auckland, New Zealand, Sankaran et al. presented data from Saskatchewan, Canada, showing that where breastfeeding and forms of co-sleeping coexist, SIDS deaths are reduced. [14](#) This finding is consistent with a study in South Africa indicating that bed-sharing babies have higher survival rates than solitary-sleeping babies. [15](#)

In Hong Kong, where co-sleeping is the norm, SIDS rates are among the lowest in the world. [16](#), [17](#)

The same is true in Japan, where rates of not only SIDS but infant mortality in general are among the lowest in the world, according to the Japan SIDS Family Organization's 1999 report. [18](#)

Moreover, during a span of about four years in Japan, where maternal smoking has decreased while breastfeeding, co sleeping, and supine (face up) infant sleep have increased, SIDS rates have decreased—the exact opposite of what co-sleeping critics would predict.

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In many other Asian cultures where cosleeping is the norm, including China, Vietnam, Cambodia, and Thailand, SIDS is either unheard of or rare. [19](#), [20](#), [21](#) In one study conducted in Australia, an immigrant Vietnamese mother was told about SIDS, with which she was unfamiliar. She said, “The custom of being with the baby must prevent this disease. If you are sleeping with your baby, you always sleep lightly. You notice if his breathing changes... Babies should not be left alone.” Another Vietnamese mother added, “Babies are too important to be left alone with nobody watching them.”

[22](#)

Of 40 Chinese women interviewed at Guangzhou University Hospital by SIDS researcher Elizabeth Wilson, more than 66% of new mothers intended to have their infants sleep with them in the marital bed, and the rest of her sample planned to have the infant sleep alongside the bed. One informant represented many when she stated that the baby is “too little to sleep alone” and that co-sleeping “makes babies happy.” [23](#)

In contrast, in Western urban subgroups, co-sleeping is associated with increased risks to the infant, especially but not exclusively when it occurs in association with maternal smoking, drug or alcohol use, chaotic lifestyles, lack of education and opportunities, prone sleeping, and other dangerous factors. [24](#) For example, bed-sharing deaths (which often erroneously include couch-sleeping deaths in the CPSC data bank) are especially high in the United States among poor African-Americans living in large cities such as Chicago; Cleveland; Washington, D.C.; and St. Louis—the four cities from which data used to argue against the safety of all co-sleeping, regardless of circumstances, emerge. [25](#), [26](#) Moreover, epidemiological studies show consistently across cultures that among economically deprived, indigenous groups, such as the Maori in New Zealand, Aborigines in Australia, Cree in Canada, and Aleuts in Alaska, bed-sharing and other forms of co-sleeping can be associated also with increased risks to infants and increased infant deaths.

[27](#)

[28](#)

The SIDS Global Task Force accounts for these differences in bed-sharing outcomes in a way consistent with my own view, pointing to factors such as parental smoking, drug and alcohol use, infants sleeping prone on soft mattresses, infants sleeping alone on adult beds with gaps or ledges around the bed frame or between the mattress and a wall or piece of furniture, dangerous furniture or furniture arrangements, and infants sleeping next to toddlers or on sofas

with obese adults.

Perhaps it is best to conceptualize outcomes related to bed-sharing in terms of a benefit–risk continuum. For example, if mothers elect to bedshare for purposes of nurturing and breastfeeding and are knowledgeable about safety precautions (e.g., use stiff mattresses, do not over-wrap the infant, or lay babies supine), we can expect that bed-sharing will be protective or reduce SIDS risks. But when bed-sharing is not chosen as a childcare strategy but rather is a necessity because there is no other place to put the baby, and mothers smoke, take drugs, and do not place an adult in between a toddler and a baby sharing a bed, increased risk of SIDS or asphyxiation can be predicted.

Solitary Infant Sleep: A Historical Novelty

Emotions, designed by natural selection and controlled by the limbic system of the brain, motivate infants and children to protest sleep isolation from parents by crying. These emotions undoubtedly evolved to ameliorate what was throughout our evolution a life-threatening situation: separation from the caregiver. [29](#)

In recent decades, Western childcare strategies have favored early infant autonomy. Health professionals teach that parents should condition infants to sleep alone throughout the night with minimal parental intervention, including breastfeedings (according to some advice givers, the fewer number of breastfeeds the better). [30](#) . [31](#) Parents are encouraged by some health professionals to train their infants to soothe themselves back to sleep. Pediatric sleep advisers say that infants should never be permitted to fall asleep at the breast or in the mother's arms, even though this is the very context within which the infant's natural falling asleep evolved. As many parents will attest, this advice proves highly problematic.

The exaggerated fear of suffocating an infant while co-sleeping may stem, in part, from Western cultural history. During the last 500 years, many economically destitute women in Paris, Brussels, Munich, and London (to name but a few locales) confessed to Catholic priests of having murdered their infants by overlying, in order to control family size. The priests threatened

excommunication, fines, or imprisonment—and banned infants from parental beds. [32](#) . [33](#)

The legacy of this particular historical condition in the Western world probably converged with other changing social mores and customs (the emphasis on privacy, self-reliance, and individualism), providing a philosophical foundation for contemporary cultural beliefs and making it easier to find dangers associated with co-sleeping than to find (or assume) hidden benefits. The proliferation throughout Europe of the idea of romantic love, coupled with the belief in the importance of the husband– wife relationship, also may have promoted separate sleeping quarters. This physical separation, especially of the father from his children, also was seen as maximizing the father’s ability to dispense religious training and to display moral authority.

Co-sleeping and Solitary Sleeping Arrangements: Effects on Children

As I have noted elsewhere, the first published studies of people who coslept as infants contradict conventional Western assumptions that co-sleeping leads to negative psychological, emotional, and social outcomes later in life. [34](#) . [35](#) . [36](#) A recent cross-sectional study of middle-class English children shows that children who never slept in their parents’ beds were more likely to be rated by teachers and parents as “harder to control” and “less happy” and exhibited a greater number of tantrums. Children never permitted to bed-share were also more fearful than those who slept in their parents’ beds.

[37](#)

Other findings point to further advantages of co-sleeping over solitary sleeping. A survey of college-aged individuals found that men who had coslept with their parents between birth and five years of age had significantly higher self-esteem, experienced less guilt and anxiety, and reported greater frequency of sex. Men who had coslept between 6 and 11 years of age also had higher self-esteem. For women, co-sleeping during childhood was associated with less discomfort about physical contact and affection as adults. [38](#) Another study found that women who had co-slept as children had higher self-esteem than those who did not.

[39](#)

Indeed, co-sleeping appears to promote confidence, self-esteem, and intimacy, possibly by reflecting an attitude of parental acceptance.

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A study of 86 children on military bases revealed that co-sleeping children received higher evaluations of their comportment from teachers than solitary-sleeping children and that they were underrepresented in psychiatric care populations compared with children who did not co-sleep. The authors stated: Contrary to expectations, those children who had not had previous professional attention for emotional or behavioral problems co-slept more frequently than did children who were known to have had psychiatric intervention and lower parental ratings of adaptive functioning. The same finding occurred in a sample of boys one might consider Oedipal visitors (e.g., three-year-old and older boys who sleep with their mothers in the absence of the father)—a finding which directly opposes traditional psychoanalytic thought. [40](#)

The largest and possibly most systematic study to date, involving more than 1,400 subjects from five ethnic groups in Chicago and New York, found far more positive than negative adult outcomes for individuals who co-slept as children. The results were the same for almost all the ethnic groups (African Americans and Puerto Ricans in New York; Puerto Ricans, Dominicans, and Mexicans in Chicago). An especially robust finding, one that cut across all ethnic groups, was that co-sleepers exhibited a greater feeling of satisfaction with life. [41](#)

Physiological Studies of Mother–Infant Pairs

A study at the University of California- Irvine School of Medicine quantified differences in the sleep behavior and physiology of 70 Latina mothers and infants. More than 200 eight-hour polysomnographic recordings were made of mothers and their infants sharing a bed or sleeping apart in adjacent rooms over three successive nights. We specifically compared how the solitary sleep environment and the bed-sharing environment affected two kinds of mother–infant pairs: pairs who routinely bed shared at home and pairs who routinely slept apart.

In randomly assigned order, each mother–infant pair spent two nights sleeping in their routine (home) sleeping condition and one night sleeping in the non-routine condition; that is, routine bed-sharing pairs slept in different rooms, routine solitary sleepers bed shared. All mothers and infants were healthy and nearly exclusively breastfeeding. The infants ranged in ages from 11 to 15 weeks (the peak age for SIDS).

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We found that bed-sharing doubled the number of nightly breastfeeds and tripled the total nightly duration of breastfeeding. Bed-sharing also correlated with shorter average intervals between breastfeeding sessions. Among 70 nearly exclusively breastfeeding mothers, we found that the average interval between breastfeeds was approximately an hour and a half on the bed-sharing night—the approximate length of the mothers' (adult) sleep cycle. That is, infant nighttime nutritional needs and feeding cycle while co-sleeping correlated with the general length of the ultradian (subcycle of sleep) sleep cycle (90–120 minutes) of the human adult—a correlation never before observed or proposed. When sleeping in separate bedrooms (but still within earshot), the breastfeeding interval was at least twice as long. [42](#)

The supine position is the universal sleep position for infants, having evolved specifically to facilitate and make possible nighttime breastfeeding. Indeed, our studies reveal that without instruction, breastfeeding mothers who routinely bed-share practically always placed their infants in the safe, supine position, probably because it is difficult, if not impossible, to breastfeed a prone, sleeping infant. From our infrared video studies of bed sharing mothers and infants, it appears that supine infant sleep maximizes the infant's overall ability to control its microenvironment, and especially to elicit breastfeeds. [43](#), [44](#) In addition to permitting the infant to move toward and away from the breast, back-sleeping permits infants to remove blankets covering their faces, turn to face toward or away from the mother, touch their faces, wipe their noses, and, without a great deal of effort, suck on their fists or fingers, thus making loud sounds that will awaken their mothers, who often then offer breastfeeding.

Our studies also suggest that supine infant sleep in the breastfeeding/bed sharing context maximizes the chances of the baby detecting and responding in synchrony with the mother's movements, sounds, and touches, and vice versa. [45](#), [46](#), [47](#) The supine position of the infant promotes easy and constant communication between infant and mother, thus furthering mutual attachment and trust (a prerequisite for healthy infant development); in addition, it may stimulate the infant, through olfactory cues, to want to breastfeed more frequently, therein further suppressing the mother's ovulation. This model constitutes yet another reason to view the mother–infant relationship not simply in terms of how mothers regulate their infants, but rather how mothers and infants mutually regulate each other's physiology, including the mother's reproductive status.

The increased breastfeeding that accompanies bed-sharing raises the possibility of enhanced immunological protection for the infant from potentially dangerous bacteria and viruses. Because bed-sharing in the context of a breastfeeding mother leads to the use of the single most important defense against sudden infant death syndrome (SIDS), the supine infant sleep position, we argued that the combination of breastfeeding and bed-sharing may provide and enhance potentially significant health gains for the baby and nonsmoking mother alike, including

reducing the infant's chances of dying from SIDS. Indeed, from the back-to-sleep campaign in 1992, which no doubt largely accounts for the significant reduction of SIDS, to the present, breastfeeding rates have increased to historic highs. If, as studies indicate, breastfeeding promotes the choice to bed-share, and more American parents are bed sharing than ever before, then perhaps these practices have also contributed to the reduction of SIDS since 1992. Most American breastfeeding mothers do not smoke and have access to safety information. Hence, the American situation of high rates of breastfeeding, high rates of supine infant sleep, reduced maternal smoking among this group, and safe bed-sharing could well parallel the situation in Japan, discussed above.

Infant–Parent Sleep Difficulties

Because infant sleep biology changes much more slowly than cultural values, sleep environments that are optimal for infants may not be the ones encouraged by the culture. Moreover, widely accepted infant sleep management strategies may be sufficient for some infants and children but unsuitable for others. Some families may apply norms established for bottle-fed, solitary-sleeping infants to their own children when it is inappropriate to do so, leading parents to conclude either that their parenting skills are deficient or that their child is uncooperative.

Ironically, this situation best describes what occurs in developed countries such as the United States, Great Britain, and Australia, where as many as one out of every three otherwise healthy children may have problems falling or staying asleep, after having first been conditioned to sleep alone. ⁴⁸ Rather than infant or caregiver deficiencies, such high percentages probably reflect overconfidence in the validity of our definitions and expectations about how infants should sleep, and the rigidity with which parents interpret and apply messages offered by health professionals.

Indeed, parents' rigid expectations concerning how their infants should sleep can be used to predict the likelihood that infant/child sleep problems will manifest: The more rigid the expectations, the more likely it is that parents will report dissatisfaction with their child's sleep behavior. ⁴⁹ Night awakenings constitute a problem only for parents who expect their children to sleep through the night.

It is only in the last century or so, and in a relatively small number of cultures, that parents and health professionals have become concerned with how infants should be conditioned to sleep. And, only in Western cultures are infants thought to need to learn to sleep, in this case alone and without parental contact. Most cultures simply take infant sleep for granted.

The Cultural/Scientific Bias Against Co-sleeping

It has been easy for public officials to conclude that the problems associated with co-sleeping are not worth solving, in part because of our society's unique cultural history. In popular parenting books and childcare magazines, co-sleeping may be (1) described as if it were a homogenous concept, (2) ignored completely, or (3) presented in terms of the likely or inevitable "problems" that could arise, especially the danger of suffocation. Sometimes co-sleeping is explicitly discouraged; at other times the message is subtler. The most frequently cited reasons for recommending separate sleeping quarters for parents and children include preservation of the marriage; promotion of the child's individualism and autonomy; avoidance of incest and suffocation; promotion of the child's social competence; and strengthening of the child's gender and sexual identities.

Indeed, where a problem or potential problem with co-sleeping can be identified, rather than being considered simply something to be solved, it becomes an argument against the practice, as if all families who co-sleep will experience the same problem. Furthermore, problems associated with co-sleeping are presented as if they cannot be solved in the same manner as, for example, problems associated with solitary sleep.

Throughout the literature, co-sleeping is described as the cause of marital discord; although, data from Sweden refute this notion.⁵⁰ Co-sleeping is also cited as the cause of sibling jealousy; while possibly true, it is probably only one of many causes. Parents are warned that co-sleeping creates a bad habit, one that is difficult to break. Co-sleeping is said to confuse the infant or child emotionally or sexually, or to induce over stimulation: "Sleeping in your bed can make your child feel confused and anxious rather than relaxed and reassured. Even a young toddler may find this repeated experience overly stimulating."

⁵¹

But no evidence is offered to show how, when, and under what circumstances this happens; nor is there any acknowledgment that perhaps under stimulation could be a more serious clinical

and psychological problem.

A child needs to sleep alone, it is said, in order to establish a lifetime of good sleep hygiene, as well as to create a sense of self and comfort with aloneness, skills that presumably foster self-reliance and a strong sexual identity, all moral goods. Again, not only is no evidence presented that supports these statements, but also new evidence from a number of studies shows the opposite. In fact, when bed-sharing occurs in the context of ongoing healthy social relationships, toddlers and children are more independent, not less, and when they're older, they have stronger sexual identities, not weaker ones, and are able to handle stress better.

Scientific paradigms do not change quickly or easily. The concept of infant–parent co-sleeping is not readily assimilated by those who have spent their scientific lives documenting the normality of solitary infant sleep and accepting uncritically the alleged deleterious consequences of co-sleeping. Probably few researchers, clinicians, and parents routinely co-slept with their own parents, a factor that would strongly influence their comfort with the practice. Perhaps an appreciation of diverse childcare practices, including co-sleeping, will come only with the growing populations of non- European immigrants in Western countries. As demographics on that score suggest, the question is not if the paradigm will change, but how soon.

Conclusions and Recommendations

The vast majority of scientific studies on infant behavior and development conducted in diverse fields during the last 100 years suggest that the question placed before us should not be “Is it safe to sleep with my baby?” but rather, “Is it safe not to do so?” An objective reading of the CPSC’s own database leads to a very different conclusion than the one it reached— namely, that no infant should sleep outside of the supervision and company of a responsible adult caregiver.

The issue is too complex to recommend in a sweeping way that all families should bed-share; still, any public safety campaign should recommend that at the very least every infant should be placed, preferably within arm’s reach, sleeping on a different surface, alongside a responsible adult caregiver. Room-sharing alone reduces the infant’s chances of dying from SIDS fourfold, according to the largest epidemiological study of SIDS yet undertaken. [52](#)

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Recall that, until recent history, nighttime breastfeeding and infant and maternal co-sleeping functioned in tandem in all societies, and that both patterns remain an inevitable and inseparable system for most people today, including a growing number of Western parents. When practiced safely, co-sleeping with breastfeeding (whether bed-sharing or not) represents a highly effective, adaptive, integrated childcare system that can enhance attachment, communication, nutrition, and infant immune efficiency thanks to the increased breastfeedings and the increased parental supervision and mutual affection that accompany this practice. Moreover, bed-sharing and breastfeeding contribute indirectly to maternal and infant health by maximizing the intervals between succeeding births, therein lessening sibling competition for limited maternal resources. Co-sleeping infants appear more content than those who sleep (or try to sleep) by themselves. With increased maternal contact and feeding, crying is significantly reduced, and, contrary to conventional thinking, maternal and infant sleep can be increased. Consequently, less energy is siphoned away from essential infant activities such as growth and defense against infectious disease.

As renowned child psychotherapist D. Winnicott said half a century ago, “There is no such thing as a baby; there is a baby and someone.” Perhaps no childcare practice better reflects this truth than that of a human infant sleeping and breastfeeding next to its mother’s body, enjoying her loving and protective responses. For these reasons, neither governmental regulatory agencies, associations of crib manufacturers, nor medical authorities, many of whom confuse their personal preferences and ideologies for science, will ever be able to deny parents and infants what they want to do naturally— and that is to sleep and feed side by side.

Dr. James J. McKenna is a professor of Anthropology and Director of the Mother- Baby Behavioral Sleep Laboratory at the University of Notre Dame. He also serves on the Health Advisory Board of La Leche League International. He has served on the Executive Committees of the American Anthropological Association and Society For Medical Anthropology and is a member of the American Academy of Pediatrics. He lectures nationally and abroad on the importance of re-conceptualizing what constitutes healthy childhood sleep, and along with his undergraduate students, continues to study family sleeping arrangements and the importance of breast feeding in promoting the health of mothers and infants.

Notes:

Breastfeeding & Bedsharing: Still Useful (And Important) After All These Years

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Wednesday, 01 March 2006 00:00 - Last Updated Thursday, 26 February 2015 09:46

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