

Bed sharing with infants: Can it be done safely?

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Bed sharing in cross-cultural perspective

Throughout human history, babies and mothers have slept together, often sharing a sleep surface (Konner 1981). Is this a safe arrangement?

The answer depends on the details. Unmodified, the typical, Western-style bed is not a safe place for babies to sleep. And there are people whose habits and style of sleeping make them hazardous bed partners for infants.

However, all risk is relative, and some sleeping arrangements are much safer than others. For instance, there may be little risk associated with shared sleep as it has been practiced in traditional Japan.

More generally, bed sharing seems to be pretty safe for older babies (as long as parents follow the basic safety guidelines mentioned in this article). If you read the scientific and medical literature, the controversy about bed sharing safety primarily concerns babies less than 20 weeks old.

Here I describe the specific circumstances that are linked with higher rates of mortality among young babies. In addition, I describe the arguments for and against sharing a bed. Last, I review what researchers agree about.

As noted below, most researchers agree that young babies should sleep in the same room where their parents sleep. The point of disagreement is whether parents should be advised against sharing their beds. Some researchers think that the safest arrangement involves cosleeping without sharing the same bed—i.e., placing a young infant in a crib or “side car” that is within arm’s reach of his parent.

Understanding the hazards of bed sharing with infants

Several organizations have issued recommendations against bed sharing for infants (e.g., the American Academy of Pediatrics). These organizations base their recommendations on Western studies linking bed sharing with increased [SIDS](#) rates for babies under 20 weeks old. In addition, babies who sleep in traditional, Western-style adult beds may be at greater risk of accidental injury or death.

Why? Much of the risk is associated with specific cultural practices.

Smoking and the risk of SIDS

There is something about smoking that makes bed sharing very dangerous. Studies suggest that the odds of SIDS, or sudden infant death syndrome, are 16 times greater if **babies who bed-share are also exposed to second-hand smoke**. This pertains to both prenatal exposure--i.e., babies whose mothers smoked during pregnancy--and to postnatal exposure to household smoke (Horsley et al 2007).

Why the link? That's not yet clear. Research suggests that babies who are exposed to smoke have more difficulty arousing from sleep, perhaps because smoke exposure changes the serotonin pathways of the brain (Kinney 2009). And when babies having difficulty arousing, they are at increased risk for SIDS.

But regardless of the mechanism, there is a consensus that smokers shouldn't bed share, and that smoking can explain much of the elevated SIDS risk associated with bed sharing. In some studies, the risk of bed sharing became statistically insignificant after researchers controlled for maternal smoking (e.g., Scragg et al 1993; Blair et al 1999; McGarvey et al 2003).

Dangerous sleeping surfaces

Sofas, chairs, and waterbeds are very dangerous places for babies to sleep. Indeed, an analysis of SIDS cases in Scotland found that the risk of mortality increased 60-fold for babies cosleeping on sofas (Tappin et al 2005).

Compared to a sofa, chair, or water bed, a conventional bed might seem less hazardous. **But the Western bed wasn't designed for babies, and it presents several dangers** (Nakamura et al 1999; Kemp et al 2000).

- Western beds may include pillows, loose bedding, heavy blankets, duvets, or soft mattresses--all hazards for accidental suffocation, re-breathing asphyxia, and SIDS.
- Babies can get trapped in the spaces between a mattress and a wall, headboard, or footboard.
- Bed rails pose a strangulation hazard.

- Western beds are elevated from the floor, creating a falling hazard.
- Even a bed sheet or light blanket poses a risk if it can cover a baby's face

This last point shouldn't be overlooked, because research suggests that any kind of covering--even a thin bed sheet--can make it harder for babies to arouse from sleep (Franco et al 2002).

This suggests that the sleeping environment is safer when parents and babies sleep without any coverings at all. When people sleep under sheets or blankets, these coverings tend to end up over the baby's face.

A study mother-infant pairs in New Zealand found that bed sharing infants were far more likely than were solitary sleepers to spend time with blankets covering their noses, faces, or entire heads (Baddock et al 2006).

Unsafe bed sharing companions

Let's imagine a sleeping surface that is free of known hazards--like pillows and bed rails. What other risks might bed-sharing pose?

Are babies at risk of being smothered?

Perhaps a parent's biggest fear is overlaying--i.e., a baby getting smothered because somebody accidentally rolls onto him during sleep. What percentage of bed sharing incidents end in this horrifying way?

Such accidents have been documented in the United States and elsewhere (e.g., Nakamura et al 1999; Kemp et al 2000; Shapiro-Medonza et al 2009). But because we lack information about the prevalence of bed sharing, it's hard to quantify the risk.

There *is* some evidence regarding the frequency of adults rolling over.

In a study by Sally Baddock and colleagues, 40 mother-infant pairs were videotaped and monitored as they slept together in their own homes on two consecutive nights. The researchers observed no instances in which the mother obstructed the baby's airways. Nor did the babies experience any unusual changes in oxygen level or body temperature (Baddock et al 2006). Such findings are supported by the experiences of James McKenna, who has conducted decades of [laboratory research on mother-infant bed sharing](#).

Of course, this doesn't mean that it never happens. A recent survey of bed-sharing mothers in Canada found that 13% of the respondents recalled at least one episode in which someone (e.g., the mother or father) had rolled onto or part way onto their infants (Ateah and Hamelin 2008).

In these cases, none of the infants were hurt. The sleeper was awakened before any injury occurred.

That's probably normal--at least when the sleeper is a healthy mother unimpaired by drugs, alcohol or exhaustion. As James McKenna has argued, mothers and infants have slept together for millions of years. Natural selection would have favored traits that keep mothers attuned to their babies during sleep.

And research suggests that mothers who routinely bed-share are light sleepers.

In a laboratory study, mothers experienced 30% more arousals when they slept with their infants (Mosko et al 1997a). And mother-infant pairs tend to sleep in synchrony, with more than 70% of their arousals overlapping (Mosko et al 1997b). Moreover, mothers who bed-share check on their babies more frequently during the night. In Baddock's study, bed sharing mothers checked on their babies a median of 11 times. For mothers sleeping in separate beds, the median was 4 (Baddock et al 2006).

Who shouldn't bed share: High-risk groups

Presumably, at least some of the incidents reported in the Canadian study could have ended badly if people on the scene had been less alert. And indeed, **case studies of SIDS and accidental death have linked higher mortality rates with certain kinds of bed-sharers.**

For example, **researchers agree that children should not sleep with young babies.**

In addition,

- **The risk of SIDS is higher when bed sharing parents have consumed alcohol or any other drugs or medications that impair alertness and judgment** (Carpenter et al 2004; Blair et al 1999; McGarvey et al 2006).

- **Sleeping together is also more dangerous when parents are very tired** (Blair et al 1999). Presumably, people sleep more deeply when they are overtired and might be less likely to awaken when their baby is in danger.

- **It's also about how many people are in the bed.** In an analysis of SIDS deaths in Chicago, researchers controlled for various SIDS risk factors, including maternal smoking, soft sleep surface, pillow use, prone sleep position, and pacifier use. They found that sharing a bed with two other people was linked with a significant increase in SIDS risk. And the risk of SIDS increased dramatically if babies shared a bed with *three or more* people. By contrast, **there was no increased SIDS risk for babies who shared their beds with just one person--their mothers** (Hauck and Herman 2006).

Other risk factors

Bed sharing mortality has also been linked with markers of lower socioeconomic status (SES), including overcrowded households, adolescent mothers, economic deprivation, and low levels of maternal education (e.g., Carpenter et al 2004; Fleming 2006; Ostfeld et al 2006).

Why? Lower SES is linked with higher rates of mortality in general, as well as higher rates of risky practices, like smoking. It also seems likely that SES is correlated with other conditions of the shared sleeping environment, like air quality and the condition of the mattress.

In any case, links between mortality and socioeconomic factors seem to underscore the point: The risks of bed sharing depend on the context.

What about bed-sharing on a safe sleeping surface with a healthy, sober, non-smoking parent?

As of 2009, no one yet has demonstrated that keeping a baby in a crib is any less hazardous than this mother-infant bed sharing scenario:

- The sleeping surface is a firm mattress or mat pushed away from the wall and all other furniture
- There is no headboard, footboard, or railing attached to the bed
- The baby is placed on his back and his face is uncovered.
- There are no bed covers (neither blankets, duvets, no top sheets), no soft toys and no dangerous bedding (e.g., pillows) near the baby.
- Care is taken to prevent the baby from overheating (i.e., the room is a comfortable temperature and the baby isn't overdressed)
- There are no draperies, blinds, or cords nearby that the baby could get tangled in
- Neither mother nor infant is wearing anything could cover the baby's face, get tangled around the baby's neck, or constitute a choking hazard

- The baby can't hurt himself by falling out of bed. For example, if the bed is elevated from the ground, the baby is protected from falling out by being placed between the mother and a safe barrier, like the Humanity Family Bed Cosleeping Pad.
- The mother is a nonsmoker and is unimpaired by alcohol, drugs, or exhaustion
- The mother doesn't suffer from medical conditions that render her a "heavy" sleeper or a "restless" sleeper
- The mother is the only person sharing the sleeping surface with the baby

This might sound like a lot of stipulations. But many of these stipulations correspond to the sleeping conditions found in places like Japan, where SIDS rates are low (Nelson et al 2001). And this scenario--which I'll call the "primal co-sleeping scenario"--has probably been the most common infant sleeping arrangement in human history.

Does this mean that the "primal co-sleeping scenario" is risk-free?

No. As noted above, we lack studies regarding the safety of this style of co-sleeping. But we have to remember that babies have died in cribs, too. And it's reasonable to assume that eliminating known hazards from the bed-sharing environment will reduce risk to the baby.

For example, in one study of SIDS cases, **the risk of bed sharing became statistically insignificant after researchers controlled for the effects of recent maternal alcohol consumption, infant duvet use, overcrowding, and parental tiredness (Blair 2006).**

And, as mentioned above, **another study found no elevated SIDS risk for babies who shared a bed with their mothers only (Hauck and Herman 2006).**

As researcher Peter Blair has noted, **"It may not be bed-sharing per se, but the particular circumstances in which bed sharing occurs that is dangerous"** (Blair 2006).

What's the *safest* place for young babies?

Recommendations against bed sharing

In their 2005 policy statement, the American Academy of Pediatrics (AAP) Task Force on Sudden Infant Death Syndrome wrote

“...bed sharing, *as practiced in the United States and other Western countries*, is more hazardous than the infant sleeping on a separate sleep surface”

(AAP Task Force on Sudden Infant Death Syndrome 2005; emphasis mine).

As a result, the Task Force says, parents should avoid bed sharing. Instead, a baby can sleep in a crib placed alongside the parent’s bed.

The Task Force based this recommendation on the European Concerted Actions on SIDS (“ECAS”) study, an analysis of sudden unexplained infant death cases reported in 20 different regions of Europe (Carpenter et al 2004). According to the ECAS data, bed sharing posed a significant risk for babies under 12 weeks of age, even for nonsmokers (Carpenter 2006). The SIDS risk was lowest for babies who slept in the same room as their parents—but in their own crib.

Robert Carpenter, lead author of the ECAS study, reasons:

“In view of the high rate of smoking, the difficulty of giving up the addiction, and the high risks associated with many subgroups, especially the youngest infants, the most sensible recommendation is that the safest place for a baby to sleep is in a crib beside the parents’ bed” (Carpenter 2006).

Are such recommendations too sweeping? People concerned with broad, population-wide trends might say no.

The argument for general recommendations against bed sharing

True, the ECAS study didn’t control for parental exhaustion, illegal drug use, the firmness of the mattress, the number or the identity of people sharing the bed (Carpenter et al 2005; Carpenter 2006; personal communication 2008).

Nor is it clear why bed sharing *per se* (as opposed to particular circumstances of bed sharing) might put babies at higher risk of SIDS.

But the medical community didn’t wait to discover *why* babies who slept on their stomachs were more likely to die of SIDS. Once the link was established, parents were advised to place babies on their backs. And this approach paid off: As the “Back to Sleep” campaign spread, SIDS rates fell.

Moreover, even if there were no SIDS risk, there is still the risk of accidents. And the most certain way to prevent bed sharing accidents is to stop people from bed sharing.

So some people think it makes sense to avoid bed sharing altogether—at least for infants in the first few months of life.

However, this argument doesn’t take into account the potential benefits of sharing a bed.

The benefits of bed sharing

Sleep, breastfeeding, bonding, and stress management

Sleeping together makes nocturnal breastfeeding less disruptive, and mothers who bed-share and breastfeed get more sleep than do mothers who bottle-feed (Quillan and Glenn 2004).

This might explain why mothers who sleep with their babies

- spend more time breastfeeding at night (McKenna et al 1999), and
- are more likely to continue breastfeeding over the long-term (Horsley et al 2007)

So bed sharing may benefit babies by increasing the duration of breastfeeding.

Emotional comfort and bonding

Bed sharing appears to have emotional benefits, too. Many parents feel that bed sharing strengthens their emotional bonds with their babies (McKenna and Volpe 2007).

Do the babies feel better? Experimental evidence suggests that they might. For example, sleeping together promotes skin-to-skin contact, and studies indicate that skin-to-skin contact—with or without breastfeeding—reduces physiological stress in infants (Gray et al 2000; Gray et al 2002).

Safety and protection from SIDS

Sleeping together permits parents to closely monitor their babies throughout the night. For instance, a parent may be more likely to notice if her baby has adopted a dangerous sleep position or has become ill. Indeed, one survey collected anecdotal accounts from parents who believed that bed sharing may have saved their babies lives (McKenna and Volpe 2007). Many of these parents reported that sharing a bed allowed them to identify and immediately intervene when their babies suffered respiratory crises.

Bed sharing might also have a protective effect against SIDS. That's because babies who bed share experience more frequent arousals from sleep, and frequent arousals reduce the risk of SIDS (Mosko et al 1997; Mao et al 2004; McKenna and McDade 2005).

Bed sharing may protect babies indirectly, too. As noted above, bed sharing might encourage mothers to breastfeed, and babies who are breastfed have a reduced risk of being victimized by SIDS (Venneman et al 2009). Although it's not yet clear why, one hypothesis is that breastfeeding protects babies via benefits to the immune system. According to this idea, breastfed babies are less likely to succumb to pathogens that can trigger life-threatening respiratory events.

A crucial tool for coping with high-need babies?

I think it's important to recognize that some young babies have a very difficult time sleeping apart from their parents. For these so-called "fussy" or "high need" babies, the standard pediatric recommendations and folk remedies don't work (Sears and Sears 1996). The baby doesn't fall asleep or stay asleep unless she is in close contact with a caregiver. Such babies may demand very frequent feedings, too. For the minority of parents who cope with high-need babies, sleeping together may seem like the only practical way for a family to get quality sleep.

Weighing the risks and benefits

For those parents who want to practice bed sharing, there may be quite a bit at stake.

Rather than abandon bed sharing, such parents may choose to modify their sleeping environment, eliminate known hazards, and practice the safest form of bed sharing possible.

As noted above, the current data on bed sharing concern bed sharing "as practiced in the United States and other Western countries" (AAP Task Force on Sudden Infant Death Syndrome 2005).

At present, it's not known if the net risks of the "primal sleep scenario" are any greater than the net risks of using a crib.

But it's important to recognize how very far the typical Western, adult sleeping environment is from the primal sleep scenario outlined above. Accidental bed sharing deaths may be on the rise in the United States, particularly among socially and economically disadvantaged populations (Shapiro-Mendoza 2009). Some researchers speculate that this is because hazardous forms of bed sharing are becoming more common.

So we shouldn't be complacent about these hazards. For parents living in the West, low-risk bed sharing may require some dramatic changes to their bedrooms and sleep routines.

Alternatively, parents may opt for other co-sleeping alternatives, like attaching an especially-designed baby "side car" to the side of the parental bed. One example is the Arm's Reach cosleeper, a product endorsed by pediatrician William Sears and anthropologist James McKenna. As its name suggests, it permits parents to keep babies within arm's reach—something that just about every researcher agrees is a good idea.

The bottom line?

Researchers on both sides of the debate agree that

- Accidents happen. Although we lack information to quantify the risk, it's clear that some babies have died in accidents on adult beds.
- Babies shouldn't sleep on sofas, armchairs, or waterbeds
- Babies shouldn't share beds with adults who smoke or who are impaired by drugs, alcohol, or exhaustion

- Children and young babies shouldn't sleep in the same bed
- Babies shouldn't be left alone in adult beds
- Babies shouldn't sleep in beds that include features known to be hazardous--like soft mattresses, loose bedding, and the entrapment hazards named above.

Researchers also agree that

- It's a good idea for young babies to sleep in the same room as their parent(s)
- Some studies of Western populations have found a statistically significant, increased SIDS rate among young babies (< 20 weeks old) who bed share—even when the mothers were nonsmokers.
- Such studies haven't controlled for all possible confounding variables, like parental exhaustion, mattress quality, or illegal drug use

Why is there a link between bed sharing and SIDs in these studies?

Future research--like the randomized, controlled, prospective study being conducted by Peter Fleming and Peter Blair—will help us answer this question.

Among other things, Fleming and Blair will measure details of the sleeping environment, including the softness of the mattress.

Meanwhile, there is controversy about how medical professionals should advise parents. Should official recommendations discourage parents from all forms of bed sharing? Or should parents be provided with information about the specific circumstances known to make bed sharing risky?

Given the mission of this website, you can probably guess my own position. According to Peter Blair, the current practice in England is to avoid a “one size fits all” piece of advice. Instead, “parents are given the information as it is” (Blair 2006).

Sounds like a good idea to me.

References

American Academy of Pediatrics Task Force on Sudden Infant Death Syndrome. 2005. The changing concept of sudden infant death syndrome: diagnostic coding shifts, controversies regarding the sleeping environment, and new variables to consider in reducing risk. *Pediatrics*. 116(5):1245-55.

Ateah CA and Hamelin KJ. 2008. Maternal bedsharing practices, experiences, and awareness of risks. *J Obstet Gynecol Neonatal Nurs.* 37(3):274-81.

Baddock SA, Galland BC, Bolton DP, Williams SM, and Taylor BJ. 2006. Differences in infant and parent behaviors during routine bed sharing compared with cot sleeping in the home setting. *Pediatrics* 117(5):1599-607.

Blair PS. 2006. Sudden infant death syndrome epidemiology and bed sharing. *Peadiatr Child Health* 11 (Suppl A): 29A-31A.

Blair PS, Sidebotham P, Berry PJ, Evans M, and Fleming PJ. 2006. Major epidemiological changes in sudden infant death syndrome: A 20-year population-based study in the UK. *Lancet* 367: 314-319.

Blair PS, Fleming PJ, Smith IJ, et al. 1999. Babies sleeping with parents: Case-control study of factors influencing the risk of the sudden infant death syndrome. CEDSI SUDI research group. *BMJ* 319: 1457-1462.

Carpenter RG, Irgens LM, Blair PS, England PD, Fleming P, Huber J, Jorch G, and Schreuder P. 2004. Sudden unexplained infant death in 20 regions in Europe: case control study. *Lancet* 363(9404): 185-191.

Carpenter RC. 2006. The hazards of bed sharing. *Peadiatr Child Health* 11 (Suppl A): 24A-28A.

Franco P, Lipshultz W, Valente F, Adams S, Scaillet S, and Kahn A. 2002. Decreased arousals in infants who sleep with the face covered by bedclothes. *Pediatrics* 109: 1112-1117.

Gray L, Miller LW, Philipp BL, Blass EM. 2002. Breastfeeding is analgesic in healthy newborns. *Pediatrics* 109: 590-593.

Gray L, Watt L, Blass EM. Skin-to-skin contact is analgesic in healthy newborns. *Pediatrics* 105(1).

Hauck FR and Herman SM. 2006. Bed sharing and sudden infant death syndrome in a largely African-American population. *Peadiatr Child Health* 11 (Suppl A): 16A-18A.

Horsley T, Clifford T, Barrowman N, Bennett S, Yazdi F, Sampson M, Moher D, Dingwall O, Schachter H, and Côté A. 2007. Benefits and Harms Associated With the Practice of Bed Sharing. *Arch Pediatr Adolesc Med.* 161(3):237-45.

Kemp JS, Unger B, Wilkins D, Psara RM, Ledbetter TL, Graham MA, Case M, Thach BT. 2000. 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(3):E41.

Kinney HC. 2009. Brainstem mechanisms underlying the sudden infant death syndrome: evidence from human pathologic studies. *Dev Psychobiol.* 51(3):223-33.

Konner M. 1981. Evolution of human behavior development. In RH Monroe, R Monroe and JM Whiting (eds): *Handbook of cross-cultural development*. New York: Garland STPM Press.

Mao A, Burnham MM, Goodlin-Jones BL, Gaylor EE, and Anders TF. 2004. A comparison of the sleep-wake patterns of co-sleeping and solitary infants. *Child Psychiatry and Human Development* 32(2): 95-105.

McGarvey C, McDonnell, Hamilton K, O'Regan M, and Matthews T. 2006. Bed sharing and sudden infant death syndrome: Irish case-control study. *Paediatr Child Health* 11 (Suppl A): 19A-21A.

McGarvey C, McDonnell M, Chong A, O'Regan M and Matthews T. 2003. Factor relating to the infant's last sleeping environment in sudden infant death syndrome in the Republic of Ireland. *Arch Dis Child* 88: 1058-1064.

McKenna JJ and McDade T. 2005. Why babies should never sleep alone: A review of the co-sleeping controversy in relation to SIDS, bedsharing and breast feeding. *Paediatric Respiratory Reviews* (2005) 6, 134-152.

Mosko S, Richard C, and McKenna J. 1997. Maternal sleep and arousals during bedsharing with infants. *Sleep* 20(2): 142-150a.

Mosko S, Richard C, McKenna J. 1997b. Infant arousals during mother-infant bed sharing: implications for infant sleep and sudden infant death syndrome research. *Pediatrics*. 100(5): 841-9.

Nakamura S, Wind M, and Danello MA. 1999. Review of hazards associated with children placed in adult beds. *Arch Pediatr Adolesc Med*.153(10):1019-23.

Nelson E, Taylor B, Jenik A, Vance J, Walmsley K, Pollard K, et al. 2001. International child care practices study: infant sleeping environment. *Early human development* 62: 43-55.

Ostfeld BM, Perl H, Esposito L, Hempstead K, Hinnen R, Sandler A, Goldblatt Pearson, Hegyi T. 2006. Sleep environment, positional, lifestyle, and demographic characteristics associated with bed sharing in sudden infant death syndrome cases: A population-based study. *Pediatrics* 118(5): 2051-2059.

Quillin SI and Glenn LL. 2004. Interaction between feeding method and co-sleeping on maternal-newborn sleep. *J Obstet gynecol Neonatal Nurs* 33(5): 580-588.

Scragg R, Mitchell EA, Taylor BJ, and the New Zealand Cot Death Study Group. 1993. Bed sharing, smoking, and alcohol in the sudden infant death syndrome. *BMJ* 307: 1312-1318.

Sears W and Sears M. 1996. *The fussy baby book: Parenting your high-need child from birth to age five*. New York: Little, Brown and Company.

Shapiro-Mendoza CK, Kimball M, Tomashek KM, Anderson RN, and Blanding S. 2009. US infant mortality trends attributable to accidental suffocation and strangulation in bed from 1984 through 2004: are rates increasing? *Pediatrics*. 123(2):533-9.

Tappin D, Ecob R, and Brooke H. 2005. Bedsharing, roomsharing, and sudden infant death syndrome in Scotland: a case-control study. *J Pediatr*. 147(1):32-7.

Vennemann MM, Bajanowski T, Brinkmann B, Jorch G, Yücesan K, Sauerland C, Mitchell EA and GeSID Study Group. 2009. Does breastfeeding reduce the risk of sudden infant death syndrome? *Pediatrics*. 123(3):e406-10.