CHAPTER 6

The Science Behind Cosleeping

What Makes Breastsleeping Safe?

My support of cosleeping, or, more specifically, breastsleeping, as the safest and most natural way for a human baby to sleep stems from my research on how and why it occurs, what it means to mothers, how it functions biologically, and its evolutionary history.[11, 16, 33] Like human taste buds, which reward us for eating what's overwhelmingly critical for survival (i.e. fat, salt, and sugar), a consideration of human infant and parent biology and psychology reveals the existence of powerful physiological and social factors that motivate and reward us for cosleeping. This explains why parents feel the need to touch and sleep close to their babies.[31, 86, 87]

Infants usually have something to say about where they sleep, too—and for some reason they remain unimpressed with declarations as to how dangerous sleeping next to mother can be, or how important it is that they learn to be independent. Mother's

body is the only environment for which the infant is truly adapted, and for which even modern Western technology has yet to produce a substitute. Prominent physician and neuroscientist Dr. Nils Bergman describes the mother's body as the human infant's "habitat;"[88] nothing a baby can or cannot do makes sense except in light of this.

Despite dramatic cultural and technological changes in the industrialized West, we know that human infants are still born the most neurologically immature primate, with only 25% of their adult brain volume.[24] This brain immaturity relates to the underdevelopment of their immune, respiratory, cognitive, and digestive systems, their chewing abilities, and their control over movement or vocalizations. At birth, our species-wide reflexes dominate over our ability to make judgments and decisions. In those first few months of life, humans are the closest we will get to the direct, universal expression of our genetic instincts, because, of course, infants are not aware of any particular culture. We see the same exact bodily responses during breastsleeping across the world, and a universal instinct for infants to elicit close contact from a caregiver.

"Breastsleeping is biologically driven."

Breastsleeping is biologically driven, both by an infant's need for nutrition in the form of breastmilk and by its inherent need for physical contact. Staying close to the mother or other caregiver helps engage an infant's senses, which provides critical regulatory effects that protect the infant and compensate for extreme vulnerability.[28, 32, 33, 35, 47]

Neurologically-based infant responses to maternal warmth, smells (like mother's milk), movements, and touch reduce infant crying while positively regulating breathing, body temperature, absorption of calories, stress hormone levels, immune status, and oxygenation. In short, it seems to make babies happy. So, unless practiced dangerously (see Chapter 8), sleeping next to mother either on the same or a different surface is overwhelmingly good for babies and is what their bodies were designed to experience. But what is it that makes cosleeping not only beneficial, but safe?

Based on their immaturity and need for closeness from a caregiver, human infants have developed strategies to protect

themselves. As British psychologist John Bowlby argued years ago in his classic formulation of the concept of maternal-infant attachment, the social bond that develops between a mother and her infant is the result of evolved infant reflexes and attributes reducing the chances of maternal abandonment. Among these are behaviors designed to elicit the care they need to survive—evoking what animal behavior researchers call the "cute response" by way of traits which attract us to infants and make us want to respond to and protect them. These behaviors include infants moving in excitement when seeing someone familiar, and looking or smiling at them, and eventually following, grasping at, and moving toward caregivers.[89] Anthropologist Sarah Blaffer Hrdy proposes that babies developed physical features such as soft rounded cheeks, baby fat, relatively big, rounded eyes, sweet vocalizations, and other "cute" characteristics so mothers will invest in, care for, and attach to them.[23]

Infants, also have more practical survival adaptations. Since human infants are unable to regulate their body temperature by shivering, they have had to evolve ways to protect themselves from the cold. The instinct to use mother's body to keep warm is one of those ways, but human infants are also born with insulation in the form of about 9–15% body fat, which is higher than any other primate. Moreover, energy-producing brown fat tissue is distributed on the human newborn's neck, back, and shoulders that may have evolved to calorically sustain the baby between the time he or she is born and when mother's breastmilk first comes in.

Infants have also developed the ability to react and alert their caregivers in dangerous situations. Contrary to what you might infer from anti-bedsharing messages, babies do not lie still and keep quiet when something is wrong or hurting them. An experiment in the '70s recorded how healthy newborns reacted to having their airways obstructed. While the procedure is ethically problematic, it did clearly indicate that even day-old newborns are not just protoplasmic blobs lying there waiting to be suffocated by someone.

According to the researchers, "Most infants respond by opening their mouths… and by pushing out with the tongue or yawning. When this proves ineffective in getting rid of the stimulus, more vigorous movements begin, involving head rocking

from side to side, head retractions, back arching in avoidance, and, lastly, head batting of (or at) the stimulus. Frequent mouth and head responses will occur simultaneously." The researchers concluded that it was quite easy for infants to rid themselves of dangerous blockages "because of the vigor of defensive responses newborn infants make."[90]

This description is certainly dramatic, but, despite being uncomfortable to read, it accurately demonstrates that a normal newborn has every capacity to at least let a sober breastsleeping or cosleeping companion know when something is very wrong.

Legendary SIDS researcher Dr. Marie Valdes-Dapena, who studied tens of thousands of infants who died from SIDS, stated, "A normal sleeping adult will be aroused by the struggles of an over-lain infant before suffocation occurs unless, of course, the adult is inebriated or under the influence of drugs."[91] She suggests that mothers are designed to respond to such dramatic infantile reactions, or even less dramatic signals. Parents are more than biologically prepared to respond appropriately and immediately to any signals of distress, as long as they are sober and invested. I find it offensive when medical professionals try to say that a mother—no matter who she is or what her circumstances are—poses an inherent risk to her baby by merely lying on the same surface for sleep.

I acknowledge that the majority of new mothers in the world are, at the very least, very, very tired. However, this does not translate to mothers being automatically unable to detect the presence of their baby next to them in bed, or unable to avoid an overlaying accident.

Let's go back a step or two. Our species' greatest protection, which co-evolved with sleep itself, is being able to awaken quickly. Humans remain highly attuned, sensitive, and responsive to the nighttime environment while asleep. We have the evolved ability to evacuate a sleep site if necessary; to respond to unexpected noises, smells, and movements; and to confront any number of attacks by micro and macro predators alike. In the case of our early ancestors, these included poisonous spiders, beetles, snakes, eagles, hyenas, leopards, jackals, or saber-tooth cats, against which our only real defense was anticipation, concealment, and our social collective actions to ward them off.

In earlier evolutionary times, before 1–1.5 million years ago

and before the discovery and control of fire, our upright walking human ancestors likely did not sleep on the ground. Instead, they would have nested themselves and their babies up in trees at night to be less vulnerable to nocturnal predators. Like our present-day infants, these early ancestral infants would have been born relatively immature, without muscles for clinging to their mother's chests. This meant that mothers needed, more than ever, to hold tightly to their infants throughout the night to prevent them from falling out of trees or from unstable cliff dwellings. This made it critical, for both infant and adult survival, to develop a level of consciousness during sleep and a high degree of maternal, sleep-related monitoring abilities.[38, 47, 54]

Our behavioral and physiological studies of contemporary bedsharing mothers and infants documented this exact thing. Mothers are able to awaken quickly from sleep in response to what an infant is doing or not doing, and vice versa (infants awaken in relationship to what their mother is doing). We found that breastsleeping mothers and infants were highly sensitive to each other's awakenings. Of the total arousal pattern of both mothers and infants, we found in one study that approximately 40% of an infant's brief awakenings occurred plus or minus two seconds following their mother's arousal. Out of the total number of maternal arousals, over 60% of them occurred plus or minus two seconds following their infant's arousal, altogether reflecting a high degree of responsiveness during sleep even when mothers were in the deepest stage of sleep.[33, 87]

Mothers are able to awaken quickly from sleep in response to what an infant is doing or not doing.

Not surprisingly, cosleeping also significantly increases the total number of nightly infant arousals. The baby gets a lot of practice in waking to the movements, awakenings, external sounds, and touches from his or her mother. This increase in arousals may help develop stronger and quicker awakening skills that can prove handy should the infant's oxygen supply decrease following a breathing pause. For breastsleeping pairs, the smell

of mother's breastmilk nearby also contributes to the infant's tendency to remain in light sleep for a longer period of time.[8, 11, 87]

Compared to solitary-sleeping or formula-feeding babies, breastsleeping babies spend more time in Stage 1 and Stage 2 of sleep, rather than the deeper Stages 3 and 4. Light sleep is thought to be physiologically more appropriate for young infants. It is easier for babies to awaken from light stages of sleep than from deep stages of sleep, which again can be helpful when infants experience breathing pauses (apneas) or other dangers. Shorter durations of deep sleep can even help protect those infants born with arousal deficiencies, which are suspected to be involved in SIDS.[8, 11, 19, 46]

In addition to altering the sleep architecture of both mother and baby, cosleeping—especially in the form of breastsleeping—provides on-going "hidden regulatory mechanisms" that are not easily observed. According to research by Dr. Myron Hofer,

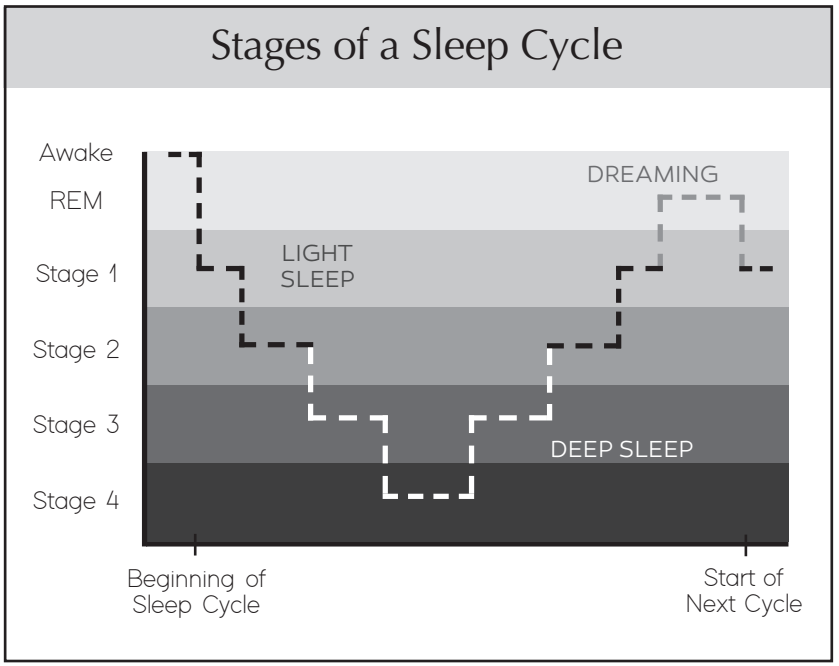


Fig. 3.1 A depiction of a normal human sleep cycle. Infants who breastsleep spend more time in Stage 1 and Stage 2 of sleep, compared to solitary sleeping infants. Babies in light stages of sleep are easier to arouse in case of apneas or arousal deficiencies.

psychiatrist and expert on developmental psychobiology, these mechanisms exist specifically to compensate for the immature biological systems of neworn mammals, helping them successfully transition to life outside the womb.[92]

Take breathing, for example. Work by biobehavioral scientist Dr. Evelyn B. Thoman from the University of Connecticut showed that human infants are extremely sensitive to the chest movements and sounds of breathing companions. She and her colleague did a study on apnea-prone newborns placed next to artificially "breathing" mechanical teddy bears. The bears had pumps inserted into their chests, timed to rise and fall at the optimal breathing rate for each particular infant. The infants had, on average, 60% fewer stop-breathing episodes when they

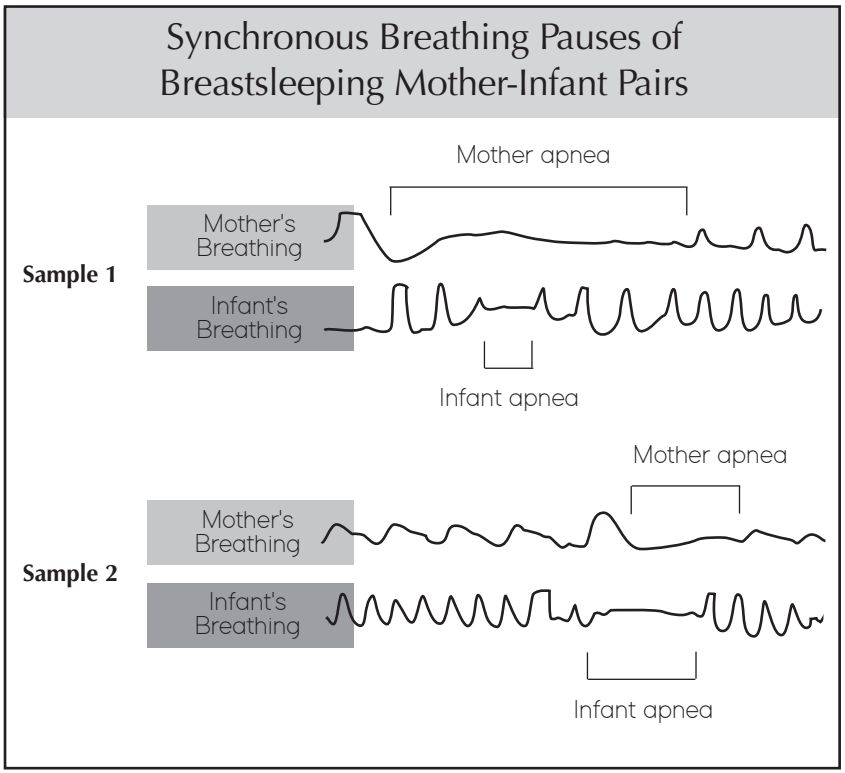


Fig. 3.2 Breathing pauses (apneas) and awakenings for bedsharing mothers and infants tend to occur at the same time, or within 2 seconds of each other. This is can be seen in polygraphic tracings from a study I worked on with Dr. Sarah Mosko, published in 1990.

were laid next to these breathing teddy bears.[93] Another study showed that other mammals, such as cats, also modify their sleep respiratory patterns based on the sounds they hear.[94]

Cosleeping infants might also experience steady breathing due to little puffs of carbon dioxide (CO_2) expelled by the mother's exhalation. When this CO_2 is inhaled by the closely positioned infant, it can potentially trigger enhanced responses of the nerve that drives the diaphragm, stimulating the lungs to release or exhale to get rid of the CO_2.

Hence, live, human breathing companions not only provide infants with rising and falling movement stimuli and audible breathing sounds (like the breathing teddy bears), but also provide these puffs of CO_2 that promote more stable breathing. Perhaps the exhaled breath caressing the infant's cheeks is another potential "hidden regulatory factor," nudging the baby to continue to breathe.[93, 95]

Through increased arousals, breathing regulation, and longer periods of time spent in lighter stages of sleep, breastsleeping naturally protects against SIDS. Ironically, these are also the same effects associated with pacifier use, though it doesn't have the added benefits of sensory stimuli.

Those AAP panelists opposed to bedsharing argue that, after breastfeeding is established, mothers should use pacifiers as one possible way to prevent SIDS. However, to my knowledge, it has never been confirmed whether falling asleep at the breast offers the same amount of protection as falling asleep while using a pacifier. It would be nice if everyone could have as much faith in what a mother's body can contribute to infant health as they do in the power of imitation nipples. I speculate that nursing at a real breast, rather than using a pacifier, should be all that is necessary to protect against SIDS, in addition to providing other kinds of sensory stimuli that are also important for healthy development.

I am sure it is already clear to you that one of the most important results of bedsharing is the promotion of breastfeeding. We know that breastfeeding provides a whole suite of health benefits for both mother and baby, including positive influences on brain growth and protection against any number of diseases, including SIDS and even forms of childhood cancers (see Chapter 7: Benefits of Cosleeping). But, along with these protective health benefits, there are also key differences in the way that

breastfeeding mother-infant pairs sleep when compared to those who bottle-feed. Breastfeeding pairs develop conditioned safety habits and heightened mutual sensitivities that protect against the risk of overlaying.

I am more concerned about the safety of bedsharing for bottle-feeding mother-baby pairs because they do not display the same degree of conditioned mutual sensitivity that breastsleeping pairs do, and they do not show the same dramatic differences in overall sleep architecture, such as more light-stage sleep.[19] The behaviors and responses of breastsleeping mothers and infants tips the risk assessment toward acceptably safe, at least in the minds of those who study breastsleeping and are interested in documenting why bedsharing outcomes can vary so much.[16, 33, 47]

I am more concerned about the safety of bedsharing for bottle-feeding pairs because they do not display the conditioned mutual sensitivity of breastsleeping pairs.

For example, breastfeeding mothers practically always place their babies in the safest sleep position—on their backs—without instruction. Sleeping supine is the only way a breastfeeding baby can get to and from the breast. Compared with bottle-feeding pairs, breastsleeping mothers tend to exhibit a universal side position with the baby at mid-chest level, under her triceps, with her legs curled up under the baby's feet. Their instinctual positioning turns the mother's body into a protective barrier, with inward-facing arms and legs preventing the mother from rolling toward the infant. Breastsleeping mothers and babies also spend most of the night facing each other, a position that lends itself to social engagements and communication opportunities, which may enhance cognitive development. Due to increased sensitivity to the mother's body combined with the scent of breastmilk, breastfed infants tend to stay in this safe position instead of moving away into potentially dangerous bed locations. Dr. Helen Ball may have been the first person to comment about the body positions of mother-baby pairs, and to call this breastsleeping

position universal.

Directing the University of Durham Infancy and Sleep Centre in Great Britain, Dr. Ball specifically studied differences between bottle-feeding and breastfeeding dyads. According to her research, formula- or bottle-feeding mothers tend to place their baby by

Characteristic Differences Among Breast and Formula-Fed Infants

Average Orientation to Mother	Formula-Fed	Breastfed
Mother facing infant (portion of the night)	59%	73%
Infant facing mother (portion of the night)	46%	65%
Face to face (portion of the night)	32%	47%
Average Infant Sleep Positions		
Infant on back (portion of the night)	83%	40%
Infant on side (portion of the night)	6%	54%
Infant on tummy (portion of the night)	0%	0%
Height of Infant in Bed Relative to Mother		
Infant face level with mother's face or chin	71%	0%
Infant face level with mother's chest	29%	100%
Average Feeding Frequency		
Number of bouts (per night)	1	2.5
Total feeding time (per night)	9 minutes	31 minutes
Awakening Frequency		
Maternal arousals (per night)	0–4	3–5
Infant arousals (per night)	0–3	2–5
Mutual arousals (per night)	0–2	1–4

Fig. 3.3 A study lead by Dr. Helen Ball compares the behavior and sleep positions that affect nighttime safety for bedsharing mother-infant pairs, based on whether or not the infant is breastfed.

their face, closer to or on top of pillows that can potentially be a suffocation hazard.[96, 97, 98]

Dr. Ball also noted that breastsleeping mothers and babies tend to arouse more quickly in response to each other's stirrings than non-breastfeeding, bedsharing mothers and babies. My own research also clearly showed this increased sensitivity, even when comparing consistently bedsharing, breastfeeding pairs to other breastfeeding pairs who only bedshare part of the time.[11, 19, 99]

One of our studies found that the average breastfeeding interval of routinely breastsleeping mothers is close to an hour and a half, which is approximately the length of the human sleep cycle.[100] This supports the possibility that the nutritional needs of breastfeeding infants influenced the evolved average length of the human sleep cycle, so that mothers complete their sleep cycles at about the same time their infant needs to be fed again. This speculation could be tested by looking at other mammals, comparing the milk composition and total calories per feed to the characteristics and average length of their adult sleep cycle.

For the same reasons that it is safer for breastfeeding mother-baby pairs to bedshare, it is also best for breastsleeping infants to sleep between the mother and the side of the bed, rather than between the mother and any other adult sharing the sleep surface. Breastsleeping infants do not have the same sensitivities to their non-breastfeeding parent or any other adult who may be in the bed.

The overall physiological and behavioral characteristics that accompany breastsleeping, considered alongside humanity's long history of evolved nighttime care abilities, explain why telling parents to never sleep with their baby is not going to work. If an evolved taste for fats and sugars mirrors our biological drive to bedshare, then trying to stop bedsharing altogether is like suggesting nobody should eat fats and sugars at all. Excessive fats and sugars can lead to obesity or death from heart disease, diabetes, or cancer, but, obviously, there's a whole lot more to the story. Our bodies still need these things to function, and as long as we make careful and thoughtful choices about how we incorporate them into our lives, they can contribute greatly to our overall health and satisfaction.

Why Cosleeping Is Important for Breastfeeding, Bottle-Feeding, and Formula-Feeding

Due to the low-calorie composition of human breastmilk, which is genetically suited to the human infants' underdeveloped gut, infants must nurse frequently around the clock, including at night. Anthropologist Dr. Carol Worthman from Emory University followed breastfeeding Kalahari !Kung Bushmen mothers and

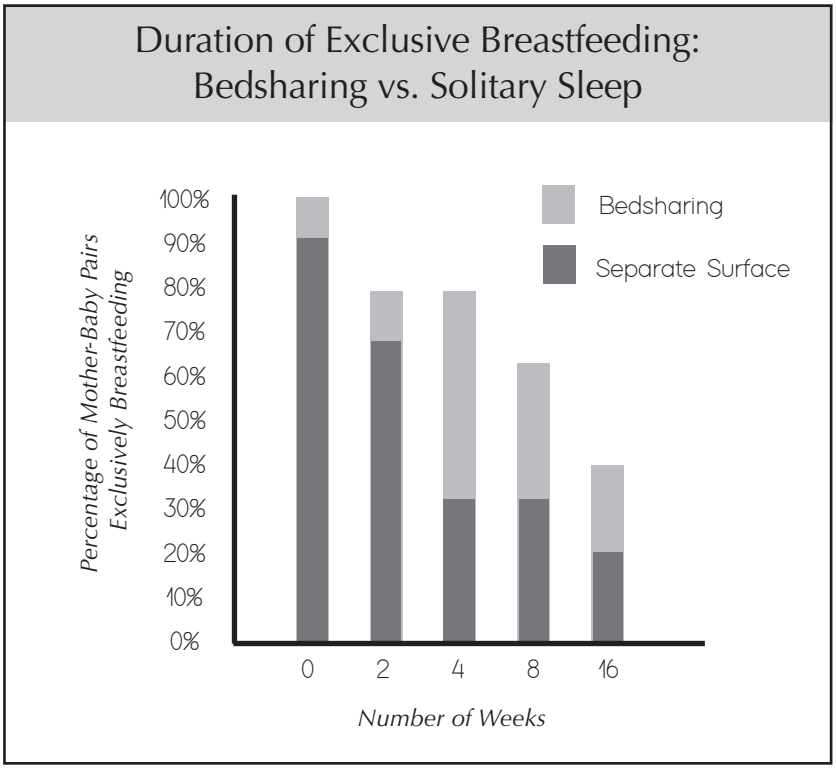


Fig. 3.4 Dr. Helen Ball's research shows here that, compared with solitary-sleeping mothers, breastsleeping mothers are more likely to breastfeed their infants for a greater number of weeks, and are more likely to meet their breastfeeding goals.

babies during the day as the women gathered nuts and berries. She found that these carried babies consistently snacked on breastmilk every 13 minutes for a few minutes at a time.[101] While most mothers in Western societies are unable to carry their babies throughout the day, keeping babies close at night can help meet their nutritional and emotional needs.

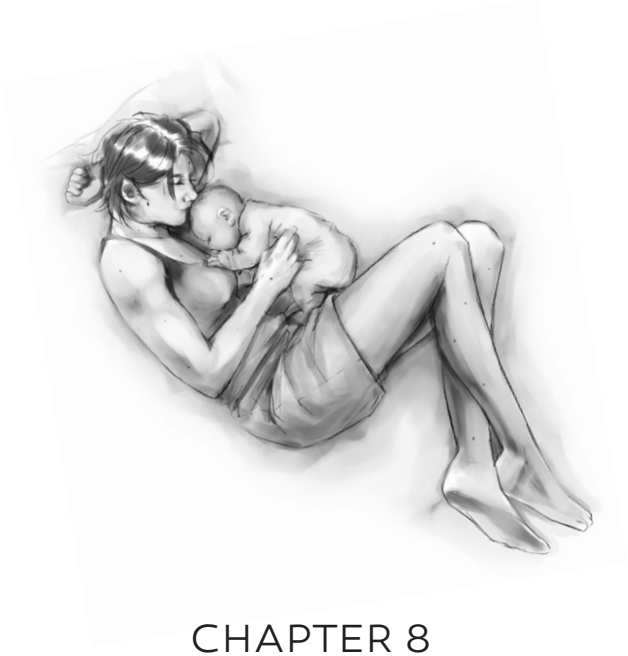
For those mothers who feel as though they are missing out on essential aspects of motherhood, cosleeping may help counter these concerns. As one parent phrased it to me, spending nights beside her baby helped "validate her role as a loving mother." This may be particularly helpful for parents who spend many daytime hours away from their baby while at work.[16, 36] The fact that U.S. employers offer little to no maternity leave means most American new mothers need to return to work before the recommended time required to meet optimal breastfeeding recommendations. This may explain, in part, what has caused such a cultural shift toward increased cosleeping behavior. Approximately 81% of U.S. mothers leave the hospital breastfeeding, and even mothers who never intended to bedshare soon discover how much easier breastfeeding is, and how much more satisfied they feel, with their baby sleeping alongside them.

Our intensive laboratory studies reveal that babies who are breastfed and share a room with their mothers tend to nurse more often, and for longer periods of time, than breastfeeding mothers and infants sleeping in separate rooms.[12]

"Mothers who breastsleep with their infants often report that they hardly need to wake up when the baby is hungry."

Mothers who breastsleep with their infants often report that they hardly need to wake up when the baby is hungry, or that they need only awaken for a few minutes to get the baby latched on. The baby nurses as needed, and mom continues to sleep with subconscious awareness of how the baby is doing.

According to the American Academy of Pediatrics Policy Statement, in the section about breastfeeding, babies should not have to cry in order for caregivers to know they are hungry. The AAP and other lactation scientists



CHAPTER 8

Safety First

How to Breastsleep Safely

Keep in mind that every family naturally has its own set of goals, needs, and philosophies. Where a baby sleeps reflects the unique convergence of each family's values, the infant's feeding method, and multiple relational, psychological, and emotional characteristics of the parents and children. Even socioeconomic factors matter here, alongside, of course, the unique temperament and personality of the infant. This constellation of factors makes it impossible for even parents themselves to predict what type of sleeping arrangement will prove the most satisfying and beneficial for them.

Many parents discover that it is impractical to use a nursery, even if they have already invested a lot of time and money into preparing a beautiful space for their baby. Infants are biologically designed for physical contact. More than a pretty crib or bedroom, infants simply need their parents' proximity for their safety, development, and emotional security.

While I suggest that all parents keep their infants sleeping

at least in the same room with them for at least the first six months, I don't feel that all families necessarily should or need to breastsleep. There are many other separate-surface cosleeping options to explore from which important benefits can still be gained. However, if you are the kind of parent who wants to feel the warmth, security, peace, and nurturing that comes with breastsleeping, then it is important to establish your bedsharing environment in a thoughtful, organized, and safe manner. By definition, breastsleeping occurs in an environment that is free from risk factors. In order to uphold the safety level of proper breastsleeping, you have to know what those risk factors are, and how to avoid them.

Let's start with the basics of creating a safe cosleeping environment. If you have a partner, having an honest talk about how each person feels about the sleeping arrangement is important. Also, keep in mind that decisions you make during pregnancy may not necessarily work out after the baby is born. Especially for first-time parents, experiencing the birth of your baby, holding your baby, and looking into his or her face can change everything you had decided.

If you transition into thinking you want to have your baby sleep in bed with you, I think it is appropriate for any adult who will share the bed to agree to take responsibility for the baby being there. Just like those little signs attached to cars that say "Baby on Board," before you enter the bed where a baby will sleep, be sure to think "Baby in Bed." Both parents need to share in responding to that baby's presence. It takes a conscious decision to be responsive, just as you decide not to roll out of your bed, or decide that you WILL wake up early before your plane leaves. Sleeping with a baby is more than a physical act, it is a mental act required of both parents in the bed, even though one may be responding to the baby more frequently than the other.

If you and your partner both agree to breastsleep, the first question must be: is your mattress firm enough? Dr. Ronald L. Somers, from Adelaide University in Australia, devised a clever way to find out, demonstrated in a video called "Babies and soft surfaces" posted on his YouTube channel. The process involves laying two full, one-liter milk or juice cartons on top of a stack of 12 CD disks, to test how far they sink into the mattress. If the computer disks sink to the point where the overhanging edge of

the milk carton touches the mattress, that indicates that the bed is too soft and may be a suffocation hazard. Further details and a visual diagram can be found in Dr. Somers' 2012 publication in the *Australian and New Zealand Journal of Public Health*.[150]

Aside from the softness, another thing to look out for is the cleanliness of the mattress. For the sake of hygiene, it should be in good condition. It is also a good idea to check the label for potentially harmful materials.

Regardless of what mattress or sleeping arrangement you choose, always lay your baby on his or her back for sleep. It represents the species-wide natural sleep position for babies and helps facilitate breastfeeding, since a stomach-sleeping infant can't latch very easily, if at all, to the breast. Sleeping on their backs also induces babies to arouse more often, keeping them in a lighter-stage sleep and helping them awaken quickly following an apnea. Researchers have found that babies are at a much-reduced risk of succumbing to SIDS if they sleep on their backs, on a firm mattress with tight-fitting sheets, with their faces unobstructed by pillows, blankets, or stuffed animals, in a smoke-free setting.

If a mother smoked tobacco during her pregnancy, or smokes now, she should avoid bedsharing and instead have the baby sleep next to her on a separate surface. If the father smokes, it is likewise best to have the baby sleep alongside the bed, rather than in the bed. Dr. Peter Fleming's epidemiological study found that bedsharing with a smoking father also raises risk of SIDS to a problematic level.[151]

Smoking or ingesting marijuana may also pose a risk, although there is not enough research available to determine exactly how dangerous it is. According to a study in 2018, the main psychoactive ingredient in marijuana, THC, can remain in breastmilk for up to six days, and can accumulate in an infant's body fat. The authors speculate, "There is a concern for accumulation of the various cannabinoids in the nursing infant because of slow elimination from body fat stores and continuous daily exposure," but there have not been any studies confirming whether or not this THC build-up negatively affects brain development or contributes to SIDS in the same way as tobacco smoke.[152]

However, marijuana intake in any form, within a few hours

before bed, does increase the risk of SUID for bedsharing infants in the sense of altering the parent's awareness and ability to be sensitive to their baby's needs throughout the night. This is true for any drug.

Pathologist Dr. Claire Thornton made a statement about an infant who passed away in 2014 while bedsharing with her mother who had smoked marijuana before taking the infant to bed. Dr. Thornton said that, while the infant showed no signs of accidental or non-accidental injury or infection, and it was "impossible to tell" if the infant had been suffocated, the combination of marijuana and cosleeping created "an inestimably high risk" of SUID.[153]

Aside from the issue of smoking, if routinely breastsleeping, it is ideal to pull your bed into the center of the room—away from walls and surrounding furniture, strip away the metal or wood framework, and lay the box spring on the floor with the mattress on top. As shown by U.S. Consumer Product Safety Commission (CPSC) data, the most significant risk to a baby sleeping in a bed with an adult is not, as many assume, an adult overlaying or rolling onto the baby, but rather the baby becoming wedged or trapped between the mattress and a wall or a piece of furniture (like a bedside table), or the bed frame, headboard, or footboard.[154]

"The most significant risk to a baby sleeping in a bed with an adult is not, as many assume, an adult overlaying or rolling onto the baby."

If you are unable or unwilling to pull your bed apart and place it in the center of a room, at the very least check regularly for gaps and holes around your bed and inspect the furniture and other objects that surround your mattress. Make sure no furniture arrangement creates a gap between the furniture and the bed into which an infant could slip. Be sure that your headboard, footboard, and frame are tightly pressed to the mattress as well. Assume your baby will find a hole to fall into, if one exists.

Do not assume that pushing a mattress tightly against a wall is safe. Babies have suffocated when the parents did not notice the bed pulling away from the wall, leaving just enough space for the

baby to become wedged in between.

When breastsleeping, it is also important to remember to set the thermostat a bit lower. Your own body next to the baby's acts to keep the baby warm; excessive warmth for an infant increases the chances of SIDS. Light blankets are best, and little sleep suits might work well for your baby as long as the infant's arms are not constricted. Infants should always be able to swipe at objects obstructing their nose or mouth. Keep your baby away from duvets or heavy blankets that can flop over and cover his or her face, and use hard, angular pillows pushed well above the infant's head. Also, be sure to keep other children and pets out of your bed when your baby is sleeping in it.

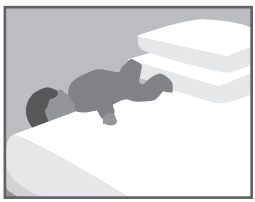
If you have extremely long hair, you should tie it up in a way that does not dangle like a cord near the infant. I know of one occasion where a baby got so tangled up in the mother's long hair that the father had to cut her hair off to save the infant from being

The Consequences of Unsafe Bedsharing

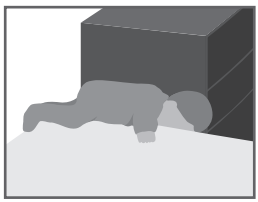
DO NOT BEDSHARE, even in the form of breastsleeping, if there is any space between the bed and the wall or other furniture where the baby could roll and become trapped.

Make sure the mattress fits tightly against the headboard and footboard, and remove the bed frame if at all possible.

If you do not take proper precautions,
the following could happen to your baby:



Entrapment between bed and wall



Entrapment between bed and object

Entrapment in footboard of bed

strangled. The baby was resuscitated, but it was a very close call.

Careful considerations also need to be made if either adult sleeping in the bed is obese. Excess weight might create a depression or space that the baby may roll into while sleeping. A particularly stiff mattress may compensate for this situation. No hard and fast rule about parental obesity and bedsharing can be empirically justified, except where no breastfeeding occurs or other risk factors exist or predominate, in which case bedsharing should be avoided. These families can cosleep by placing the baby on a surface near the bed rather than in the bed itself. One study of the relationship between obesity and cosleeping on a couch (a dangerous cosleeping environment for anyone) shows a tremendously elevated risk if both factors are present, although the data also documents multiple other independent risk factors.[155]

If you or your partner feel cramped in your bed, or if the bed is smaller than a queen size, then it is best not to bedshare. You should have enough room to spread apart. The new folded mattresses or quilted mattresses appear not to be flat or stable enough for maximum protection of your baby, so it is best to avoid sleeping with your baby on those particular mattresses. Never bedshare, even in the form of breastsleeping, if you sleep on a waterbed. I hope someday authorities and manufacturers will begin to think about bed furniture that is, by design, safer for babies.

For information about naptime safety, see Chapter 11.

The Proper Way to Bedshare

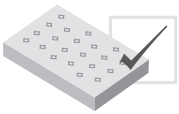
An idealized sketch of bedsharing shows parents who do not smoke, are sober, have chosen to bedshare, and are breastfeeding their baby. The bed frame has been completely removed and the mattress has been placed at the center of the room away from walls and furniture. Light blankets and firm, square pillows are being used. No older children, pets, or stuffed animals are in the bed.

Illustration by Andrew Barthelmes

Breastsleeping Dos and Don'ts

DO:

Ask your partner or anyone else sharing the bed if they are comfortable with the baby sleeping there, and if they are willing to share responsibility for the baby's safety throughout the night.



Make sure your baby is sleeping on a clean, firm, non-quilted surface, with plenty of space for all occupants. A mattress in the middle of the room with no frame is ideal.

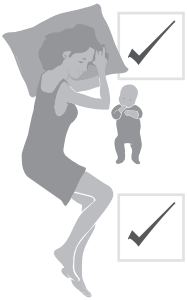
Tie up long hair in a bun or other style that will not be able to wrap around the infant. For extremely long hair, even a ponytail or braid may pose a hazard.

Thoroughly check for any gaps or bars that may cause entrapment.

Remove stuffed animals or dolls, heavy blankets, thick duvets, extra pillows, or any other objects that may pose a suffocation risk. Light sheets and breathable blankets are acceptable.

Keep pets out of the bedroom if they are able to climb onto the bed.

Provide a smoke-free environment for your baby. If anyone sharing the bed smokes tobacco (no matter where or when they smoke), have your baby sleep on a separate surface.



Place your baby on his or her back to sleep. Position the baby's head by the breastsleeping mother's chest, and not by the pillows. When breastfeeding in bed, make sure the baby returns to this position at the end of each feed.

Place your baby between the breastsleeping mother and the edge of the bed, so the baby is not between two individuals. If the second adult is fully and enthusiastically invested in the baby being there, and is confident that they can respond to the infant's needs, this may be more flexible.

Assess your ability to respond to your baby throughout the night.

DON'T:

Do not breastsleep if you or your partner smoke, or if you smoked tobacco during your pregnancy.

Do not breastsleep if anyone sharing the bed has consumed sedatives, medications, alcohol, marijuana, or any substance that causes altered consciousness or marked drowsiness.

Do not breastsleep if anyone sharing the bed, especially the breastsleeping mother, is ill or tired to the point where it would be difficult to respond to the baby.

Don't leave any space between the bed and the wall where the baby could roll and become trapped. Make sure that the mattress fits tightly against the headboard and footboard, and remove the bed frame if at all possible.

Do not breastsleep if a parent is markedly obese, unless he or she feels confident that the mattress is stiff enough to compensate for the greater weight differential.

Do not allow older siblings who do not understand the risks of suffocation to sleep in the same bed with infants less than one year old.

Do not breastsleep if pets are able or likely to climb into the bed.

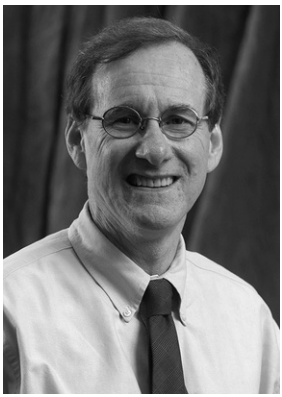
Don't use thick bedding, and don't allow anything to cover the head or face of the baby. Sheets and blankets should be porous, preferably cotton. In cold weather, use layers of thin bedding rather than one heavier blanket.

Don't dress your baby too warmly or set the thermostat too high. If you are comfortable, your baby probably is too. Remember, close bodily contact increases body temperature.

Never leave long hair down or wear nightclothes with strings or ties. These pose a strangulation risk for the baby.

Never place babies alone in an adult bed. Babies should always sleep under supervision.

About the Author



DR. JAMES J. MCKENNA founded and directed the revolutionary Mother-Baby Behavioral Sleep Laboratory at the University of Notre Dame and taught in the Anthropology Department there for 22 years. He received his undergraduate degree in anthropology from the University of California, Berkeley, his Master's Degree from San Diego State University, and his Ph.D. in biological anthropology from the University of Oregon, Eugene.

He pioneered the world's first studies of the physiology and behavior of cosleeping mothers and infants, and has published over 165 scientific articles in medical and anthropological journals on the topics of cosleeping, breastfeeding, evolutionary medicine, and SIDS. He has also authored several books, including *Ancestral Landscapes in Human Evolution*, *Evolutionary Medicine* (two volumes, 1999 and 2008), *Sleeping with Your Baby*, and *Researching the Sudden Infant Death Syndrome: The Role of Ideology in Biomedical Science*. Dr. McKenna is a sought-after speaker at medical, parenting, and policy conferences around the world and remains a chief spokesperson to the U.S. media on breastfeeding, SIDS, and bedsharing issues.

He recently retired from the University of Notre Dame, having received before his departure the highest honor the University can bestow, the Presidential Award, "for sustained exceptional contributions." He will remain (in absentia) an Emeritus Professor there, continuing to direct the sleep lab he created as an information and resource center. Having accepted a special Endowed Professorship at Santa Clara University in California, he will continue his teaching, research, lecturing, and writing activities. He resides in San Francisco with his wife, Joanne, both of whom just became grandparents to their son's first child. Dr. McKenna can be reached at Dr.McKenna@PlatypusMedia.com