How Do They Sleep?

For all three McKenna and Mosko studies, the results were the same. When sleeping together, mothers and babies are extraordinarily in sync. This is the synchronized nocturnal dance that McKenna predicted from his early naps with son Jeff, but the footwork continues to surprise both of these researchers and the other colleagues who have joined their team. The most obvious result is that the sleepers are physiologically entwined; the movements and the breathing of one partner, mother or baby, affect the other. When one partner arouses, the other too moves through sleep levels. This echoing of sleep pattern even includes transient arousals, those fleeting moments of moving quickly up to lighter levels of sleep and then back down again. Why might this be important? Each time the baby responds to an arousal by its mom, an extra arousal from the baby’s point of view, the response sets in motion a cycle that gives infants additional practice in breathing. Even healthy babies experience apneas, pauses in breathing, several times during the night. Apneas are the result of an arousal and a large gulp of air; the baby doesn’t breathe because it doesn’t have to yet. As the infant returns to sleep, the reason to breathe kicks in again. And so when the mother moves through levels of sleep and the baby moves with her, the child gets more practice at navigating through the nocturnal storm.  

Since babies are born so neurologically unfinished, it makes sense that the external environment, even during sleep, would be so helpful in their “learning” how to sleep safely through the night.

McKenna and Mosko also discovered that co-sleeping babies, even when they are more used to sleeping alone, sleep differently when with their mothers. The babies seem to spend a greater percentage of their sleep time in levels 1-2 and less time at the deeper levels, exhibit more REM sleep, and are awake longer. In other words, they are more often moving among sleep levels, and they sleep lighter.

Christopher Richard, Mosko, and McKenna have also found that
most co-sleeping pairs spend the entire night facing each other. Even if mothers normally put their babies face down on the solitary night, they position the baby on its back or side on the co-sleeping night and instinctively in a position so that mother and baby are in face. Babies seem to know this is what they want; on the co-sleeping night, even if they are on their backs and have a choice of where to look, they move their heads to face the mother. This might, at first, seem like a potentially dangerous situation. Indeed, the researchers have shown that adult women breathe out a hazardous amount of carbon dioxide at close range, especially when a blanket forms a pocket before an adult’s face. But an atmosphere of CO₂ in the face might also be beneficial for infants because it changes the immediate atmospheric environment for the baby and triggers the brain to breathe. Other studies have shown further physiological benefits for co-sleeping babies. Work with preterm infants has shown that skin-to-skin contact increases infant skin temperature, and since babies have trouble staying warm in cold climates this is an advantage as long as they don’t get overheated. Such contact also stabilizes infant heart rate and reduces crying and sleep apneas. If nothing else, co-sleeping clearly makes for a very different external environment than sleeping alone.

But the most startling result of McKenna’s research can be observed, even by the novice, on the videotapes. No one can miss the fact that co-sleeping results in more attention by the mothers. When McKenna scored mothers’ co-sleeping behaviors and compared them to what mothers did when they slept in a different room and got up at night to attend the baby, co-sleeping mothers exhibited five times the protective behaviors toward their babies. They repeatedly kissed, touched, and repositioned the baby. They readjusted blankets and comforted the baby when it fretted. And sometimes these mothers, as the polygraph showed, were not even conscious. They reached out and cuddled their offspring instinctively, keeping them from harm’s way.

Co-sleeping babies, then, are under constant physical supervision, and are just a whisper, a pat, and molecule of carbon dioxide away from the person who is looking after them. Solitary babies, although fed when
they cry and picked up when they whimper, never receive this kind of intimate treatment during the night.

*Why Is Co-sleeping Important?*

No one knows why animals sleep, but we do have a pretty good idea how sleep occurs. Like most physical states, sleep involves a number of biological or physiological mechanisms. Sleep is controlled by the primitive brain stem at the base of the brain where differentiated cells send messages to and from the heart, the lungs, muscles around the diaphragm and ribs, and hormone-producing organs—all systems that monitor and regulate the choreography of sleep. During sleep, just as during periods of wakefulness, adult humans shift through periods of controlled neocortical-driven breaths and automatic brain-stem-initiated breaths. Adults are able to manage the shift between these types, but infants do it less easily. Infants are born with neurologically unfinished brains, and they don't develop the ability to easily navigate types of breathing until they are at least three to four months old. And the sleep patterns of newborns reflect this. As I discussed earlier, they are unable to consolidate periods of sleep and don't distinguish between day and night; they also spend more time in REM sleep than adults do. When sleeping with its mother, a baby reacts to her movements and goes through any number of changes in sleep stages, far more than when the infant sleeps alone, practicing the repeated hop from one kind of breathing to another. Left alone, babies must steer through night sleep with little training, and no external environmental stimuli or cues. Most babies eventually develop the skill to shift between types of breathing as their brains develop with the nerves, becoming more myelinated and thus connected and hence more adult-like, ultimately managing night breathing just fine. But for some babies, this shift among types of breathing may be harder; they could benefit from the external metronome of parental breathing. Co-sleeping, with all its entwined movements through various levels of sleep,
and its physical checkpoints, may be exactly what nature intended to make sure babies survive through the night as well as learn how to sleep and breathe on their own.

For McKenna, the attachment between mother and infant so clearly seen in the physiological realm is presumably echoed in the psychological. Although we think of the infant as independent of its mother at birth, because the mother is no longer involved in regulating its physical being, there is still physical entrainment. Some might wish their babies were independent, but babies, as this sleep research shows, clearly need to be in contact, connected, and part of an adult biological system while they develop and mature at their own biological pace.

Most parents in Western culture, by opting not to co-sleep, have thus altered the physical parent–baby entrainment state during sleep hours. But it is important for parents who have done so to realize that they have opted for this setting because of cultural reasons, not out of biological appropriateness. What these well-meaning parents do not realize is that they might also be putting their babies unnecessarily at risk.

**Co-sleeping and Sudden Infant Death**

Sudden Infant Death Syndrome (SIDS) is the leading cause of infant death in the United States, and it has been identified in most societies across the globe. A baby goes to sleep, apparently healthy, and dies without warning. SIDS is not a disease per se, but a syndrome, meaning the etiology is complex and the cause of death might be attributed to any number of physiological origins. Signs often point to respiratory failure, an inability to control the cycle of breathing during sleep, or perhaps an inability to breathe again after a sleep apnea. To McKenna and others, it is no coincidence that management of breathing ability comes developmentally at three to four months of age—just at the same period when babies are most vulnerable to SIDS. Also, some babies in cold climates die of SIDS during winter because they have been wrapped