

8 INFANT SLEEP FACTS EVERY PARENT SHOULD KNOW

In order to better understand the how-to's of getting you and your baby to enjoy going to sleep and staying asleep, here are some important principles of sleep that every new parent needs to understand.

1. How you sleep. After dressing or undressing for bed, most adults help themselves relax for sleep by performing various bedtime rituals: reading, listening to music, watching TV, or having sex. As you drift into sleep, your higher brain centers begin to rest; enabling you to enter the stage of deep sleep called "non-REM" (non-rapid eye movement -- NREM), or deep sleep (also called quiet sleep). Your mind and body are quietest during this stage of sleep. Your body is still, your breathing is shallow and regular, your muscles are loose, and you're really "zonked." After about an hour and a half in this quiet sleep stage, your brain begins to "wake up" and start working, which brings you out of your deep sleep and into light sleep or active sleep, called rapid eye movement or "REM" sleep. During this stage of sleep your eyes actually move under your eyelids as your brain exercises. You dream and stir, turn over, and may even adjust the covers without fully awakening. It is during this sleep stage that you may fully awaken to go to the bathroom, then return to bed and fall back into a deep sleep. These alternating cycles of light and deep sleep continue every couple hours throughout the night, so that a typical adult may spend an average of six hours in quiet sleep and two hours in active sleep. Thus, you do not sleep deeply all night, even though you may feel as though you do.

2. How babies enter sleep. You're rocking, walking, or nursing your baby and her eyelids droop as she begins to nod off in your arms. Her eyes close completely, but her eyelids continue to flutter and her breathing is still irregular. Her hands and limbs are flexed, and she may startle, twitch, and show fleeting smiles, called "sleep grins." She may even continue a flutter-like sucking. Just as you bend over to deposit your "sleeping" baby in her crib so you can creep quietly away, she awakens and cries. That's because she wasn't fully asleep. She was still in the state of light sleep when you put her down. Now try your proven bedtime ritual again, but continue this ritual longer (about twenty more minutes). You will notice that baby's grimaces and twitches stop; her breathing becomes more regular and shallow, her muscles completely relax. Her fisted hands unfold and her arms and limbs dangle weightlessly. Martha and I call this "limp-limb" sign of deep sleep. Baby is now in a deeper sleep, allowing you to put her down and sneak away, breathing a satisfying sigh of relief that baby is finally resting comfortably.

NIGHTTIME PARENTING LESSON #1:

Babies need to be parented to sleep, not just put to sleep. Some babies can be put down while drowsy yet still awake and drift

others need parental help by being rocked or nursed to sleep.

The reason is that while adults can usually go directly into the state of deep sleep, infants in the early months enter sleep through an initial period of light sleep. After twenty minutes or more they gradually enter deep sleep, from which they are not so easily aroused. As you probably know from experience, if you try to rush your baby to bed while she is still in the initial light sleep period, she will usually awaken. Many parents tell me: "My baby has to be fully asleep before I can put her down." In later months, some babies can enter deep sleep more quickly, bypassing the lengthy light sleep stage. Learn to recognize your baby's sleep stages. Wait until your baby is in a deep sleep stage before transitioning her from one sleeping place to another, such as from your bed to a crib or from carseat to bed or crib.

3. Babies have shorter sleep cycles than you do. Stand adoringly next to your sleeping baby and watch him sleep. About an hour after he goes to sleep, he begins to squirm, he tosses a bit, his eyelids flutter, his face muscles grimace, he breathes irregularly, and his muscles tighten. He is reentering the phase of light sleep. The time of moving from deep to light sleep is a vulnerable period during which many babies will awaken if any upsetting or uncomfortable stimulus, such as hunger, occurs. If the baby does not awaken, he will drift through this light sleep period over the next ten minutes, and descend back into deep sleep. Adult sleep cycles (going from light to deep sleep, and then back to light sleep) lasts an average of 90 minutes. Infants' sleep cycles are shorter, lasting 50 to 60 minutes, so they experience a vulnerable period for nightwaking around every hour or even less. As your baby enters this light sleep, if you lay a comforting hand on your baby's back, sing a soothing lullaby, or just be there next to baby if he is in your bed; you can help him get through this light sleep period without waking.

NIGHTTIME PARENTING LESSON #2:

Some babies need help getting back to sleep.

Some "resettlers" or "self-soothers" can go through this vulnerable period without completely awakening, and if they do wake up, they can ease themselves back into a deep sleep. Other babies need a helping hand, voice, or breast to resettle back into deep sleep. From these unique differences in sleep cycle design, we learn that one of the goals of nighttime parenting is to create a sleeping environment that helps baby go through this vulnerable period of nightwaking and reenter deep sleep without waking up.

4. Babies don't sleep as deeply as you do. Not only do babies take longer to go to sleep and have more frequent vulnerable periods for nightwaking; they have twice as much active, or lighter, sleep as adults. At first glance, this hardly seems fair to parents tired from daylong baby care. Yet, if you consider the developmental principle that babies sleep the way they do -- or don't -- for a vital

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reason, it may be easier for you to understand your baby's nighttime needs and develop a nighttime parenting style that helps rather than harms your baby's [natural](#) sleep rhythms. Here's where I'm at odds with modern sleep trainers who advise a variety of gadgets and techniques designed to help baby sleep more deeply through the night -- for a price, and perhaps at a risk.

5. Nightwaking has survival benefits. In the first few months, babies' needs are the highest, but their ability to communicate their needs is the lowest. Suppose a baby slept deeply most of the night. Some basic needs would go unfulfilled. Tiny babies have tiny tummies, and mother's milk is digested very rapidly. If a baby's stimulus for hunger could not easily arouse her, this would not be good for baby's survival. If baby's nose was stuffed and she could not breathe, or was cold and needed warmth, and her sleep state was so deep that she could not communicate her needs, her survival would be jeopardized.

One thing we have learned during our years in pediatrics is that babies do what they do because they're designed that way. In the case of infant sleep, research suggests that active sleep protects babies. Suppose your baby sleeps like an adult, meaning predominantly deep sleep. Sounds wonderful! For you, perhaps, but not for baby. Suppose baby had a need for warmth, food, or even unobstructed air, but because he was sleeping so deeply he couldn't arouse to recognize and act on these needs. Baby's well being could be threatened. It appears that babies come wired with sleep patterns that enable them to awaken in response to circumstances that threaten their well being. We believe, and research supports, that frequent stages of active (REM) sleep serve the best physiologic interest of babies during the early months, when their well being is most threatened.

NIGHTTIME PARENTING LESSON #3:

Encouraging a baby to sleep too deeply, too soon, may not be in the best survival or developmental interest of the baby. This is why new parents, vulnerable to sleep trainers' claims of getting their baby to sleep through the night, should not feel pressured to get their baby to sleep too long, too deeply, too soon.

6. Nightwaking has developmental benefits. Sleep researchers believe that babies sleep "smarter" than adults do. They theorize that light sleep helps the brain develop because the brain doesn't rest during REM sleep. In fact, blood flow to the brain nearly doubles during REM sleep. (This increased blood flow is particularly evident in the area of the brain that automatically controls breathing.) During REM sleep the body increases its manufacture of certain nerve proteins, the building blocks of the brain. Learning is also thought to occur during the active stage of sleep. The brain may use this time to process information acquired while awake, storing what is beneficial to the individual and discarding what is not. Some sleep researchers believe that REM sleeps acts to auto-stimulate the developing brain, providing beneficial imagery that promotes mental development. During the light sleep stage, the higher centers of the brain keep operating, yet during deep sleep these higher brain centers shut off and the baby functions on her lower brain centers. It is possible that during this stage of rapid brain growth (babies' brains grow to nearly seventy percent of adult volume during the first two years) the brain needs to continue functioning during sleep in order to develop. It is interesting to note that premature babies spend even more of their sleep time (approximately 90 percent) in REM sleep, perhaps to accelerate their brain growth. As you can see, the period of life when humans sleep the most and the brain is developing the most rapidly is also the time when they have the most active sleep. One day as I was explaining the theory that light sleep helps babies' brains develop, a tired mother of a wakeful infant chuckled and said, "If that's true, my baby's going to be very smart."

7. As they grow, babies achieve sleep maturity. "Okay," you say, "I understand this developmental design, but when will my baby sleep through the night?" The age at which babies settle -- meaning they go to sleep easily and stay asleep varies widely among babies. Some babies go to sleep easily, but don't stay asleep. Others go to sleep with difficulty but will stay asleep. Other exhausting babies neither want to go to sleep nor stay asleep.

In the first three months, tiny babies seldom sleep for more than four-hour stretches without needing a feeding. Tiny babies have tiny tummies. Yet, they usually sleep a total of 14-18 hours a day. From three to six months, most babies begin to settle. They are awake for longer stretches during the day and some may sleep five-hour stretches at night. Between three to six months, expect one or two nightwakings. You will also see the period of deep sleep lengthen. The vulnerable periods for nightwaking decrease and babies are able to enter deep sleep more quickly. This is called sleep maturity.

NIGHTTIME PARENTING LESSON #4:

An important fact for you to remember is that your baby's sleep habits are more a reflection of your baby's temperament rather than your style of nighttime parenting. And keep in mind that other parents usually exaggerate how long their baby sleeps, as if this were a badge of good parenting, which it isn't. It's not your fault baby wakes up.

8. Babies still wake up. When babies mature into these adult-like sleep patterns varies among babies. Yet, even though babies achieve this sleep maturity some time during the last half of the first year, many still wake up. The reason? Painful stimuli, such as colds and teething pain, become more frequent. Major developmental milestones, such as sitting, crawling, and walking, drive babies to "practice" their new developmental skills in their sleep. Then between one and two years of age, when baby begins to sleep through the above-mentioned wake-up stimuli, other causes of nightwaking occur, such as separation anxiety and nightmares.

Even though you understand why babies are prone to nightwaking, you realize it's still important for parents and babies to get a restful night's sleep, otherwise, baby, the parents, and their relationship won't thrive.

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