

MANAGING SLEEP PROBLEMS IN INFANCY

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Sleep problems in the early years are common. Research reports show that 15% to 30% of infants and toddlers are affected. While, the majority no longer have sleep problems when they reach the preschool years, about 8% of 4-year-olds continue to do so. These findings suggest that although sleep problems seem to improve over time, many infants with sleep difficulties will have trouble sleeping later on.

Sleep problems are equally common in boys and girls. The problems have been associated with many factors, including breastfeeding, stress, maturational factors including the infant's capacity to regulate his or her own sleep cycles, quality of the caregiving environment, and temperament. Some sleep problems may be associated with some medications, colic, brain damage, and chronic illness (e.g., lung or heart disease, seizure disorder). Cultural variations and individual family differences in sleeping habits and routines are not disorders, e.g., some families and cultures have adults and children sleep in close proximity whereas others isolate children from adults during sleep.

The most common sleep disturbances during infancy include difficulties settling at bedtime and night waking. The most common sleep disorders in the preschool and school-aged children include night terrors, sleepwalking, sleeptalking, and some types of bedwetting (see Anders et al., 1980, for a review). Only settling difficulties and night waking are discussed in this article.

Definitions

a. Problems with settling and night waking

Problems with settling and night waking are considered sleep disorders when parents complain that the infant: (1) wakes three or more times per night; (2) wakes for more than 20 minutes during the night; (3) must be taken into the parents' bed in order to settle during the night; or (4) refuses to go to sleep at bedtime or requires parental presence to fall asleep. These four symptoms must have been present for at least three consecutive months and for five or more nights per week in order to be considered a sleep disorder. Whether an infant shows all or only a few of these criteria, the problems are often disruptive to family life, and are often associated with later behavioral/emotional problems and sleep deprivation in the infant, parents, and occasionally siblings.

b. Transient sleep problems in infancy

Transient sleep difficulties may be associated with physical illness (e.g., ear infection, cold) or pain due to teething during the first three years. When the illness is over, the infant's usual sleep patterns and routines return without any specific intervention.

What are problematic sleep patterns in infants?

Experts on infant sleep disorders argue that it is important to understand normal sleep patterns in order to understand sleep problems in infants and their management. Sleep has two major components: "REM" (rapid eye movement) and "non-REM" (which contains four stages — Stages I to IV — representing increasingly deeper stages of sleep). The REM and non-REM states are distinguished by brain wave activity, eye movement, and muscle tone. The REM state is the lightest stage of sleep whereas non-REM Stage IV is the deepest stage of sleep. During normal sleep, REM alternates with non-REM states, in cycles of about 1 to 3 hours. In other words, once they fall asleep, infants cycle from REM to increasingly deeper non-REM stages of sleep, then back to REM (light sleep) several times a night.

Infants who have problems settling at bedtime often have difficulty soothing themselves and falling asleep on their own. These infants often associate falling asleep with being fed, rocked, or carried, so it is not surprising that many of them also have difficulty putting themselves back to sleep when they wake during the night without someone to do it for them by feeding, rocking or carrying. Similarly, the experience of infants with night waking problems often tends to be that once they reach the REM state (light sleep), they wake and have trouble putting themselves back to sleep. Given that normal sleep cycles call for a REM state to be reached every 1 to 3 hours during the night, it is not surprising that infants with night waking problems wake their parents as often as every hour.

Studies have shown that whenever they reach the REM (light) state of sleep, almost all infants wake. The majority have learned to soothe themselves and return to sleep without external help. In fact, the difference between infants who "sleep through the night" and those who have night waking problems is that those with night waking problems have not learned to soothe themselves and return to sleep without external assistance, e.g., feeding, being held or rocked, being given a soother, etc. Therefore, the way to solve these infants' sleep problems is to help them learn ways to soothe themselves and put themselves back to sleep without external assistance.

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Management of sleep problems in infants

Several prescribed, “natural,” or over-the-counter medications have been used by physicians and parents to manage sleep problems in infants and toddlers. To date, no medication has been consistently helpful. In fact, many medications have been associated with paradoxical reactions, i.e., the sleep problems get worse. On the other hand, behavioral management of sleep problems has consistently shown more encouraging results when used properly.

For instance, Ferber (1985) described a simple method to deal with most problems with settling at bedtime and night waking. The goals of the intervention are to help the child: a) learn how to soothe himself; and b) how to put himself to sleep without needing the parent, a soother, a bottle, etc. The intervention has three major components: 1) structured bedtime routine; 2) “transitional object”; and 3) sleep program.

1) Provide a structured bedtime routine

It is important to place the child in his/her crib when still awake and to provide a structured, relaxing, bedtime routine in the child's bedroom. The bedtime routine, e.g., reading a bedtime story; should *not* exceed 5 minutes; should *not* include nursing, drinking, or feeding in the child's bedroom (to help the child learn to no longer associate falling asleep with feeding); and should *not* include rocking (to help the child learn to no longer associate falling asleep with rocking and being held).

2) Provide a “transitional object”

If the child has a favorite teddy bear, blanket or other object, that object should be placed in the child's crib to use as a “soother” if needed. If the child does not have a favorite object, a few potential transitional objects can be offered to help the child soothe himself to sleep. Such potential transitional objects may be a small blanket, a teddy bear or other cuddly toy, or even a piece of clothing from the parent. Try to avoid pacifiers because infants often lose these in the middle of the night and parents then have to go and retrieve the pacifier, defeating the purpose of the intervention. Only the child can decide what transitional object is soothing.

3) Sleep program

When the bedtime routine is completed, potential transitional objects have been provided, and the parent has said good night to the child, the parent should leave the room. Parents should then begin to time themselves, going into the child's bedroom at speci-

fied intervals (after 2 minutes of crying, then after 5 minutes, 10 minutes, 15 minutes, 20 minutes, and then every 30 minutes until child falls asleep). Each time parents go into the child's bedroom, they should remain for a maximum of 15 seconds, and use a structured routine that does not inadvertently provide direct soothing to the infant.

- **Provide a structured bedtime routine.**
- **Provide a “transitional object.”**
- **Follow a sleep program.**

After 2 minutes (then after 5, 10, 15, 20, and then every 30 minutes if the child is still crying), the parent should go into the child's bedroom, put the child back into his/her usual sleeping position, gently stroke the child and say something reassuring, e.g.,

“daddy loves you but it's night-night,” before leaving the room again. The parent should NOT PICK UP or rock the child, so that the child is given the opportunity to find his/her own soothing method. The child is the only one who can find out what to use to soothe himself back to sleep. By not interfering with this process, but instead going into the child's bedroom at regular intervals to give reassurance that the parent has not abandoned the child, the parent allows the child to find his own way. It is also important for parents to not react to the child in any way, e.g., not get angry because this may frighten the child, and not be overly comforting thus inadvertently making it very difficult for children to soothe themselves.

If a child is ill, the sleep program should not be used. Instead, parents should attend to the child's needs. As soon as the child is well again, the program can resume.

Three elements seem to be essential for the success of the sleep program: 1) The parents should be at the end of their rope and really want the sleep problem to be solved; 2) The sleep program should not be modified in any way and should be implemented by only one person in order to provide as much consistency as possible. Later, the other parent can be involved; and 3) The use of the transitional object and the structured bedtime routine must be used in conjunction with the sleep program. When the entire program is used consistently, most sleep problems in 6 to 12 month old infants are solved within about one week. The process usually takes longer if the infant is older.

References

- Anders TF, Carskadon MA, & Dement WC (1980). *Sleep and sleepiness in children and adolescents*. Pediatric Clinics of North America, 27, 29-43.
- Ferber R (1985). *Solving your child's sleep problems*. New York: Simon & Schuster.