

Self-regulated sleep and unsettled babies – what can we usefully tell parents?

Amy Semple, NCT policy researcher, looks at the research on babies' sleeping patterns.

Having a baby who sleeps well at night is a goal for many parents. However variation in babies' sleep patterns and confusion about what is normal behaviour can lead to unrealistic expectations.

Babies younger than about 12 weeks cannot regulate their sleep/wake cycle; they may sleep no longer at night than during the day and need frequent feeds to satisfy demands for growth and brain development. Night waking is therefore normal for newborn babies who also need comfort and reassurance that their parents are nearby. In addition, feeding at night is essential for breastfeeding mothers to produce the right amount of milk for their baby. However, babies and toddlers' night waking can be a problem for parents in terms of their own quality of sleep and wellbeing. Night waking and excessive crying are shown to increase the risk of child abuse, such as violent shaking in babies¹ and an increased risk of depression in mothers.^{2,3}

By 12 weeks most babies have settled down into longer sleeping patterns at night,⁴ although there is a variety of behaviour within the normal range of sleep development.

The NCT review of evidence on baby sleep found that introducing a bedtime routine, placing the baby awake in his or her cot, and use of a favourite toy or blanket can help the baby develop positive sleep associations, so that they are more likely to go to sleep and return to sleep without their parents present.⁵ There was some evidence to support giving a feed between 10pm and midnight, to encourage sleep at a time convenient for the parents. These interventions were found to be acceptable to most parents. 'Extinction' methods that involve leaving the baby to cry were successful in increasing the duration of night sleep; however, many parents are

unwilling to leave their baby crying. Some extinction techniques are controversial, particularly with younger babies.⁶ It is argued that leaving babies to cry without responding to their distress may have longer-term negative effects on the development of their the personality and ability to form close social bonds.⁷ It can also lead to the restriction of night feeds and be detrimental to the breastfeeding relationship.

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New research

Some new research has explored babies' sleep behaviour and what is meant by the commonly used phrase 'sleeping through the night'. This study is the first to investigate babies' patterns of sleep at night over time, measured against: (1) sleeping for at least five hours including the period from midnight to 5am, (2) sleeping for eight hours, with time

unspecified, and (3) sleeping for eight hours during the period 10pm-6am.⁸

The greatest increase in length of sleep at night occurred within the first four months, which is consistent with previous studies.⁹ However, it took much longer for a baby to sleep at times convenient to most families (see Table 1).

By six-to-nine months, just under two-thirds (63%) were sleeping concurrently with their parents. Over a quarter of babies were still not sleeping between 10pm and 6am at 12 months (see Table 2).

There is another area of infant sleep research of interest to practitioners working with families. Recent studies suggest that the issue is not whether the baby wakes at night after 12 weeks, as this is developmentally normal, but why approximately 25% continue to 'signal' for their parents^{10,11} instead of settling themselves back to sleep alone.^{12,13,14} A retrospective study of 102 mothers found the attitudes of parents to where the baby slept, their willingness to comfort the baby back to sleep, and whether it was a first or second baby, were indicators of whether parents sought help with continued night waking.²

Four studies suggest that overall, parental behaviour was more predictive of babies' ability to sleep well at night than the baby's behaviour itself.^{15,16,2} Babies reported in one study to be 'difficult' due to crying, fussing or

Table 1: Babies' sleeping patterns over time

Criteria	Age when >50% met the criteria
5 hours sleep	3 months
8 hours sleep, time unspecified	4 months
8 hours sleep, at most 'family-friendly' time	5 months

Table 2: Babies' sleeping patterns at 6-9 and 12 months

Criteria	6-9 months	12 month
5 hours sleep	82%	87%
8 hours sleep, time unspecified	75%	86%
8 hours sleep, at most 'family-friendly' time	63%	73%

temperament were found to be developmentally normal.¹⁷ About 60% of those babies whose parents felt they had excessive crying or 'colic' at five-to-six weeks were sleeping more than five hours in one stretch six or seven nights per week by 12 weeks. Those who continued waking at night after 12 weeks were mostly influenced, the researchers found, by parenting behaviours that maintained their 'signalling' behaviour, such as feeding or comforting to sleep.¹⁸

Research has shown that when parents established a consistent bedtime routine, and put their baby to bed sleepy but awake, this helped babies to develop self-regulating behaviour. Babies learn to settle themselves to sleep and back to sleep when they wake at night,^{19,20} and one study found excessive crying in babies at night was significantly reduced within two weeks, with a noticeable reduction after five days.²¹ A reduction in parenting stress was also found.²²

These new findings support existing evidence that parental behaviour at bedtime influences night waking in babies who no longer need to physically feed frequently at night. Some parents chose to soothe their baby to sleep or to co-sleep beyond the first few weeks, finding that this fits more comfortably with their preferred parenting style and that they can sleep for longer. In order to prepare and plan for how they will look after their baby, parents may benefit from knowing about these associations.

The term 'sleeping through the night' is ambiguous for health professionals and parents alike. Henderson's study showed that most babies did not sleep concurrently with their parents until six-to-nine months. This could be a useful discussion point for use with new parents. Unsettled behaviour in babies is usually resolved with time alone, however it is important that parents get support if they are stressed and that possible

health problems are considered. So parents need reassurance about contacting their health visitor or GP if they have concerns.



Mary Newburn, NCT head of research and information, comments: 'Babies' sleep and crying present headaches and lost sleep for many parents – metaphorically and literally. Mums and dads face the challenge of how to find a balance between supporting baby-centred responsive care and establishing a pattern in which their baby can learn to go off to sleep without their comforting presence. Mothers who breastfeed exclusively for several months usually have more frequent contact with their baby, and proximity at night during the early months is known to be associated with breastfeeding for longer. Practitioners need to be sensitive to parents' concerns and values and the need to support breastfeeding. However, they also need to let parents have evidence-based information about behaviours that encourage babies to learn how to fall asleep on their own.'

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