

This information sheet summarises research-based evidence about normal infant sleep, and how it develops over time.

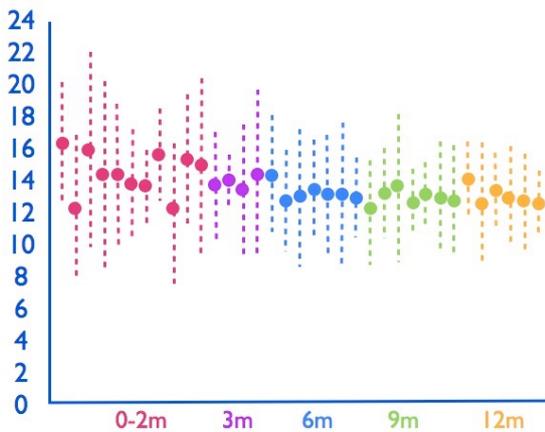
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Does everyone ask how your baby sleeps? Does everyone else's baby seem to sleep more than yours? Do you feel like you or your baby are being judged by how 'well' he or she sleeps? Has someone told you your baby 'should' be sleeping differently to how they are? You are not alone!

It is important to remember that babies operate according to their own internal biological rhythms and they are unaware of what their parents are being told. It often takes several months for a baby's day-night pattern of wake and sleep to become established. During this time many parents just need reassurance that their baby is normal, and that their baby's sleep patterns are developing as expected. In cases where we are unhappy with our infant's sleep development it may not be the baby that is problematic, but our expectations regarding sleep and babies' needs.

## Normal Infant Sleep Development

Sleep is a developmental process, and our sleep needs change throughout our lifetimes. Waking during the night is normal during early infancy, and healthy babies experience several awakenings per night at the end of sleep cycles.



Newborn babies may sleep for 18 or so hours a day, but often for only 2-3 hours at a time. During the first year overall sleep duration falls to around 15 hours, and the majority of sleep becomes concentrated during night-time as circadian rhythms (biological functions tied roughly to the 24-hour day) develop. All babies are different however! A recent study (left) shows the variation seen around these average sleep durations during the first year.

Newborn babies have very small stomachs, and need to feed often, so they wake about every 2 hours to do so. Some babies wake more often; some go longer. As babies grow they are able to last slightly longer between feeds, however human breast milk is quickly digested, and babies commonly need to feed frequently throughout day and night.

By the time babies are 3 months old some (but not all) begin to start settling (sleeping through a night-time feed for a stretch of up to 5 hours). By the time they are 5 months old half of them may have slept for an eight-hour stretch on some nights. Generally, though, babies do not sleep all night-every night until they are close to a year old, and having 'slept through', many babies return to night waking. One study found that 27% of babies had not regularly slept from 10pm to 6am by the age of 1 year, although this study did not take feeding method or sleep location into account. 13% of babies had not regularly slept through for 5 hours or more by the age of 1 year. Some normal babies therefore continue to wake several times during the night after one year.



## Why babies sleep as they do

**Human babies have a very particular set of characteristics, some of which have evolved over many millions of years and are deeply engrained in our biology and behaviour:**

- We have a long period of development after birth, during which babies' brains grow at a very fast rate, which needs a lot of energy
- So, we need to feed often and on-demand on high-calorie, low-fat milk which is digested quickly
- We are born with some well-developed senses -- especially sight, hearing and touch
- But, we are unable to cling to a care-giver and so rely on being carried to stay close
- Some aspects of our physiology take months to mature. These include body temperature, breathing and heart rate control

Throughout our evolutionary history, human babies would not have survived without the constant presence of a caregiver - in most cases the mother. Together with the need to feed frequently this means human babies are designed to be close to their mother, both day and night. Human babies are biologically evolved to sleep near to (and probably touching) their mother's body during the first months or years of life. In the past, we could not have survived without doing so. Today we live and sleep in very different environments than those we evolved in, and so understanding infant sleep involves drawing together information about what is normal for infant sleep based on our evolved biology, and the ways in which our history and culture have shaped what we consider to be normal today.

### 'Sleeping through'

**Popular beliefs about when babies should be 'sleeping through the night' are based on studies conducted in the 1950s-60s on formula-fed babies. However it is normal for babies -- especially breastfed babies -- to wake and feed at night throughout at least the first year.**

Parents can feel under pressure to help their babies become independent from an early age. Popular myths suggest 'good' babies sleep through the night, sleep alone, and do not require attention in the night. As a result, parents may try to 'help' their baby 'sleep through' as early as possible. But expecting a human baby to sleep alone, and for prolonged periods, is unrealistic and can be harmful.

Research shows that formula-fed babies sleep deeper and for longer bouts earlier than breastfed babies, although the total amount of sleep is the same. Using formula or 'sleep training' to encourage babies to 'sleep through' before they are ready to do so makes it difficult to keep on breastfeeding. It may also encourage babies to develop mature sleep patterns before other processes such as those controlling the regulation of temperature, hormone production, and the genes that control our biological rhythms, have developed. Arousal from sleep is thought to be an important mechanism protecting babies from potentially fatal heart-rate or breathing episodes associated with Sudden Infant Death Syndrome (SIDS). Encouraging long and deep periods of sleep before babies are ready may put some babies at increased risk of SIDS.



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