



Synthesis on sleeping behaviour

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How important is it?

Newborn infants spend about 16 hours a day sleeping. As they develop and grow, their sleep time diminishes; by age five, they sleep 10 to 12 hours daily. When a child experiences problems sleeping, it can cause significant stress within a family – so much so that infant sleep problems constitute the most common concern physicians hear from parents during routine appointments.

What do we know?

Developing children's [sleep-wake system](#) and stabilizing their night-time sleep represents a significant process in early childhood. Studies show that the rate at which a child's stable 24-hour sleep-wake rhythm is established varies greatly. Some children can seemingly fall into a comfortable pattern while others may struggle to develop a routine. There can be many reasons for this. Time cues, as well as biological and environmental factors, regulate the rhythm. [Environmental factors](#) include alternating light and darkness, sound levels, the mother-child relationship and pain.

The extent to which these factors play a role may vary significantly depending on the development of the child. In typically developing [infants and toddlers](#), temperament, attachment classification, parental stress and maternal depression are associated with sleep problems. In atypically developing infants, sleep problems are often attributed to neurological or physical abnormalities.

[Vulnerable populations](#), such as children who are at high risk for developmental and behavioural problems due to poverty, parental substance abuse and mental illness, or violence in the home, are doubly disadvantaged when it comes to their sleep problems. For example, a chaotic home life or neglect puts children at greater risk of developing sleep problems, while limited access to health-care services means that they are less likely to be diagnosed with sleep problems *and* that they will likely suffer more serious consequences as a result.

Sleeping difficulties can negatively affect children's behaviour. Children who experience [broken or insufficient sleep](#) may be less able to inhibit their emotional responses. This may make them more prone to impulsive or violent outbursts. Sleeping and waking relate to the [psychosocial development](#) of preterm infants both directly, through effects on infant responsiveness and brain development, and indirectly, by influencing the types of social stimulation that preterm infants receive.

Some parental responses to children's sleeping problems can have their own drawbacks. For some parents, [co-sleeping](#), when child and parent sleep in the same

bed, represents an acceptable response to their child's sleeping difficulties. However, co-sleeping is associated with more night waking and complaints about sleep. It appears to be dependent on socio-cultural factors.

What can be done?

Some empirically supported [behavioural treatments](#) exist for bedtime problems and night waking in infants and young children. These include extinction, scheduled awakenings, positive routines, bedtime fading, positive reinforcement and [parent education](#). In particular, when parents learn early on how to manage their child's sleep and to regulate breastfeeding to optimize the duration of the sleep, it can help with the child's sleep development and may prevent sleep disorders.

Behavioural therapy can benefit both parent and child. [Successful behavioural therapy](#) has repeatedly been associated with reduced child problem behaviour and improved parental mental health or marital satisfaction. In view of the [diverse benefits](#) of effective treatment, researchers suggest that health systems should create innovative ways to support cross-disciplinary treatment approaches that are most likely to be cost-effective to society over the long term.

Child sleep disorders occur frequently enough that they constitute a serious public health problem. Accordingly, researchers argue that policy-makers should invest in [epidemiological studies](#) of children's day/night rhythms (the structure of their sleep and their daytime behaviour) and promote educational programs that begin in early pregnancy to prevent sleep disorders in newborns.

By focusing on education, prevention and appropriate treatment approaches (both behavioural and medical), we can help ensure that children's sleep problems are recognized, diagnosed and appropriately treated. Society needs to balance its focus between the sleeping and waking halves of children's lives – and recognize and understand the [connection](#) between the two.