

Children's sleep patterns tracked for the first time by researchers

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Sleep patterns of children and how many hours may be optimal for their health and wellbeing has been tracked and recorded for the first time by researchers at the Institute.

Up until now, optimal childhood [sleep](#) parameters have been based on opinion rather than empirical evidence. To provide accurate data on age-specific [sleep patterns](#) in Australian [children](#), researchers studied 10,000 children involved in the Longitudinal Study of Australian Children. From the age of four months to nine years, the researchers looked at duration of sleep, number and length of night wakes and number of sleep episodes.

The study found a striking range in sleep patterns. Researchers found a huge variation at all ages in [sleep duration](#), bed time and wake time. From four months to nine years, 24-hour sleep duration fell from an average peak of 14 hours at four-to-six months, to 10 hours at nine

years. This was mainly due to a progressively later bed time, shifting from 8pm to 9pm with age, and a declining length of sleep during the day from three hours to less than half an hour. The number and duration of wakes during the night also fell.

Whilst the number and duration of most sleep parameters decreased with age, the variation in sleep duration and number of night wakes increased around school age. Weekend and weekday bed and wake times also become less synchronised in school-aged children.

Lead researcher, Dr Anna Price said the study highlighted the wide range in 'normal' child sleep across early childhood.

"Whether a child is getting enough sleep or how much sleep a child needs is a major concern to many parents. In this study we found there is a wide range in 'normal' child sleep from four months to nine years old."

"Health professionals can now use these charts to discuss normal sleep with families, as this is the first research to formally track sleep times in children. In future, we hope that these charts can help families understand whether there is an optimal amount of sleep or bed or wake-up time that is healthiest for them."

In future research, these parameters will now be used to empirically determine optimal child sleep patterns for child and parent outcomes like mental and physical health.

The study, published in the *Archives of Disease in Childhood*, is the largest and most detailed prospective study to document child sleep using accurate time-diary data, and is the first to present bed and wake times.

Provided by Murdoch Childrens Research Institute

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