

# Regular bedtimes linked to better language, reading and math skills in preschool children

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Children in households with bedtime rules and children who get adequate sleep score higher on a range of developmental assessments, according to a research abstract that will be presented Monday, June 7, 2010, in San Antonio, Texas, at SLEEP 2010, the 24th annual meeting of the Associated Professional Sleep Societies LLC.

Results indicate that among sleep habits, having a regular bedtime was the most consistent predictor of positive developmental outcomes at 4 years of age. Scores for receptive and expressive language, phonological awareness, literacy and early math abilities were higher in [children](#) whose parents reported having rules about what time their child goes to bed. Having an earlier bedtime also was predictive of higher scores for most developmental measures.

The study also provides a wealth of information about typical [sleep patterns](#) in 4-year-old children. According to the American Academy of Sleep Medicine, preschool children should get a minimum of 11 hours of sleep each night. Getting less than this recommended amount of sleep, the study's authors found, was associated with lower scores on phonological awareness, literacy and early math skills. The data show that many children are not getting the recommended amount of sleep, which may have [negative consequences](#) for their development and school achievement.

"Getting parents to set bedtime routines can be an important way to make a significant impact on children's emergent literacy and language

skills," said lead author Erika Gaylor, PhD, early childhood policy researcher for SRI International, an independent, nonprofit research institute in Menlo Park, Calif. "Pediatricians can easily promote regular bedtimes with parents and children, behaviors which in turn lead to healthy sleep."

Gaylor recommended that parents can help their preschooler get sufficient sleep by setting an appropriate time for their child to go to bed and interacting with their child at bedtime using routines such as reading books or telling stories.

The study involved a nationally representative sample of approximately 8,000 children who completed a direct assessment at 4 years of age as part of the Early Childhood Longitudinal Study - Birth Cohort. This analysis included information from parent phone interviews when their child was 9 months old and again when their child was 4 years old. Nighttime sleep duration was based on parent-reported usual bedtime and wake time. Developmental outcomes were assessed using a shortened set of items from standardized assessments. Results were controlled for potential confounders such as child and bedtime characteristics.

"This is by far the largest study of its kind to date. Previous studies have included up to 500 children in this age group," Gaylor said. "It's fortunate to have this rich dataset available for analysis."

Last year a study in the August 2009 issue of Sleep Medicine also emphasized the importance of an early bedtime and consistent bedtime routine for children. It reported that children with a bedtime after 9 p.m. took longer to fall asleep and had a shorter total sleep time. Children without a consistent [bedtime](#) routine also were reported to obtain less [sleep](#).

Provided by American Academy of Sleep Medicine

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