

A good night's sleep may mitigate infant obesity risks

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Scientists have long suggested that getting enough sleep at night is vital to staying healthy. Few studies, however, highlight the necessity of sufficient sleep during the first months of life. New research from

investigators at Brigham and Women's Hospital, Massachusetts General Hospital and collaborators suggests that newborns who sleep longer and wake up less throughout the night are less likely to be overweight in infancy. Their results are published in *Sleep*.

"While an association between insufficient sleep and [weight gain](#) is well-established in adults and [older children](#), this link has not been previously recognized in [infants](#)," said study co-author Susan Redline, MD, MPH, senior physician in the Division of Sleep and Circadian Disorders at the Brigham. "In this study, we found that not only shorter nighttime sleep, but more sleep awakenings, were associated with a higher likelihood of infants becoming overweight in the first six months of life."

To conduct this research, Redline and colleagues observed 298 newborns born at Massachusetts General Hospital between 2016 and 2018. They then monitored their [sleep patterns](#) using ankle actigraphy watches—devices that measure patterns of activity and rest over multiple days. Researchers extracted three nights' worth of data at the one- and six-month marks while parents kept sleep diaries, recording their children's sleep and wake episodes.

To collect growth measurements, scientists measured infant height and weight and determined their body mass index. Infants were classified as overweight if they fell into or above the 95th percentile on the World Health Organization's growth charts.

Notably, researchers found that just one additional hour of sleep correlated with a 26 percent decrease in infants' risk of being overweight. In addition, infants that woke up less throughout the night faced a lower risk of excess weight gain. While it's unclear exactly why this correlation exists, scientists speculate that getting more sleep promotes routine feeding practices and self-regulation, factors that mitigate overeating.

Investigators note that African American individuals and families of lower socioeconomic statuses were underrepresented in their dataset. Additionally, confounding variables, such as breastfeeding duration, could have impacted infant growth. In the future, the researchers aim to extend this study to evaluate how sleep patterns impact growth within the first two years of life and identify key factors that mediate the correlation between sleep and weight gain. They also aim to evaluate interventions for promoting healthy sleep habits.

"This study underscores the importance of healthy sleep at all ages," said Redline. "Parents should consult their pediatricians on the best practices to promote healthy sleep, like keeping consistent sleep schedules, providing a dark and quiet space for sleeping, and avoiding having bottles in bed."

More information: Xiaoyu Li et al, Longitudinal association of actigraphy-assessed sleep with physical growth in the first 6 months of life, *Sleep* (2021). [DOI: 10.1093/sleep/zsab243](https://doi.org/10.1093/sleep/zsab243)

Provided by Brigham and Women's Hospital

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