

Short nighttime sleep duration among infants, young children associated with obesity in later life

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Insufficient amounts of nighttime sleep among infants and preschool-aged children may be a significant risk factor for developing childhood obesity, according to a report in the September issue of *Archives of Pediatrics & Adolescent Medicine*. Additionally, napping does not appear to be an adequate substitute for nighttime sleep in terms of preventing obesity.

"[Obesity](#) - defined as having age- and sex-specific body mass index (BMI; calculated as weight in kilograms divided by height in meters squared) at or above the 95th percentile of national growth standards - has doubled among [children](#) aged 2 to 5 years and adolescents aged 12 to 19 years and has tripled among those aged 6 to 11 years" during the last three decades, the authors write as background in the article. "Evidence is accumulating from cross-sectional population studies to support a robust contemporaneous relationship between shortened [sleep](#) duration and unhealthy weight status in children and adolescents."

Using existing national, longitudinal and panel survey data collected for children and adolescents, Janice F. Bell, Ph.D., M.P.H., of the University of Washington, Seattle and Frederick J. Zimmerman, Ph.D., of the University of California, Los Angeles, studied 1,930 children ages 0 to 13 years, with data collected on the same children in 1997 (baseline) and again in 2002 (follow-up). For the purposes of the study, children were separated into a "younger" group (age 0 to 59 months) and an "older"

group (age 60 to 154 months).

The authors found that, "at follow-up, 33 percent of the younger cohort and 36 percent of the older cohort were overweight or obese." For the younger children, short duration of nighttime sleep at baseline was associated with an increased risk of subsequent overweight or obesity. In the older age group, baseline sleep was not associated with subsequent weight status, however contemporaneous sleep was associated with increased odds of a shift from normal weight to overweight or from overweight to obesity at follow-up. Additionally, in the older group, nighttime sleep at follow-up was associated with marginally increased odds of obesity at follow-up while [sleep duration](#) five years prior had no meaningful effect. According to the authors, "these findings suggest that there is a critical window prior to age 5 years when nighttime sleep may be important for subsequent obesity status."

"Sleep duration is a modifiable risk factor with potentially important implications for obesity prevention and treatment," the authors conclude. "Insufficient nighttime sleep among infants and preschool-aged children appears to be a lasting risk factor for subsequent obesity, while contemporaneous sleep appears to be important to weight status in adolescents. Napping had no effects on the development of obesity and is not a substitute for sufficient nighttime sleep."

More information: Arch Pediatr Adolesc Med. 2010;164[9]:840-845.

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