

Lack of Sleep Linked to Depression in Adolescents

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Later parent-set bedtimes and correspondingly shorter sleep durations appear to be related to the development of depression in adolescents, a cross-sectional analysis showed.

In addition to depression, adolescents with later bedtimes also had a greater risk of having suicidal thoughts, James Gangwisch, PhD, of Columbia University in New York City, and colleagues reported in the Jan. 1 issue of *Sleep*.

The study "lends support to the idea that short sleep duration can be a risk factor for depression as opposed to simply being a symptom of depression," Gangwisch said in an interview.

If a "clinician comes into contact with an adolescent who does suffer from depression, that's an area that they would want to delve into -- is the adolescent getting adequate sleep."

Action Points

- Explain to interested patients that this cross-sectional study could not establish a causal relationship between lack of sleep and depression or suicidal ideation.

Gangwisch and his colleagues explored the relationship between parent-set bedtimes, sleep duration, and depression using data from the National Longitudinal Study of Adolescent Health (Add Health), which conducted in-home interviews with adolescents and their parents.

The analysis included a nationally representative sample of 15,659 children and teens in grades seven through 12.

The average sleep duration was just shy of eight hours, which is less than the nine hours previously estimated to be needed for adolescents, according to the researchers.

Shorter sleep durations were associated with progressively later average bedtimes set by the parents. School start times likely contributed to this phenomenon by limiting how long the participants could sleep in the morning, Gangwisch and his colleagues noted.

More than two-thirds (69.7%) of the students reported complying with their parents' set bedtimes. Two-thirds of those who didn't comply with their parents' wishes said they went to bed within an hour of the established bedtime.

Adolescents who had a set bedtime of midnight or later were at increased risks of depression (OR 1.24, 95% CI 1.04 to 1.49) and suicidal ideation (OR 1.20, 95% CI 1.01 to 1.41) compared with those with a bedtime of 10 p.m. or earlier after controlling for several factors.

However, after additional adjustment for sleep duration and the perception of getting enough sleep, the associations were no longer significant, as the researchers had hypothesized.



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Those who said they thought they were getting enough sleep at night were less likely to suffer from depression (OR 0.35, 95% CI 0.28 to 0.43) and to have suicidal thoughts (OR 0.71, 95% CI 0.61 to 0.84).

"Later parental-set bedtimes therefore appear to result in shorter sleep durations and a higher likelihood of not getting enough sleep, which in turn are associated with depression and suicidal ideation," the researchers wrote.

Lack of sleep could lead to depression through a couple mechanisms, they said.

First, too little sleep might result in inappropriate modulation of the emotional brain responses to aversive stimuli, they said.

Second, moodiness resulting from not getting enough sleep could interfere with teens' ability to cope with daily stresses and impair interpersonal relationships, eventually leading to depression.

Lack of sleep could cause suicidal ideation by impairing judgment, concentration, and impulse control, they wrote.

"Behavioral interventions that involve educating adolescents and their parents about healthier sleep hygiene practices and helping them modify maladaptive sleep habits could serve as primary preventive measures against depression and suicidal ideation," the researchers concluded.

They listed some limitations of the study:

- Parent-set bedtimes could be influenced by characteristics and behaviors of the child.
- The cross-sectional nature of the analysis limits the ability to determine temporal relationships between bedtimes, sleep duration, and depression.
- The data set did not include information on school start times.
- Sleep duration was self-reported.

The study was supported by a grant from the Robert Wood Johnson Health and Society Scholars Program at Columbia University. It used data from Add Health, a program project funded by a grant from the Eunice Kennedy Shriver National Institute of Child Health and Human Development with cooperative funding from 17 other agencies.

Gangwisch reported no conflicts of interest. One of his co-authors reported receiving research support from Actelion, Ancile Pharmaceuticals, Arena, Aventis, Cephalon, Elan, Epix, Evotec, Forest, GlaxoSmithKline, H. Lundbeck A/S, King Pharmaceuticals, Merck, Neurim, Neurocrine Biosciences, Neurogen, Organon, Orphan Medical, Pfizer, Respiroics, sanofi-aventis, Sanofi-Synthelabo, Schering-Plough, Sepracor, Somaxon, Takeda, Targacept, Transcept, UCB Pharma, Predix, Vanda, and Wyeth-Ayerst Research; serving as a consultant for Actelion, Alexza, Arena, Aventis, Biovail, Boehringer Ingelheim, Cephalon, Elan, Eli Lilly, Evotec, Forest, GlaxoSmithKline, Jazz, King Pharmaceuticals, Ligand, McNeil, Merck, Neurocrine Biosciences, Organon, Pfizer, Renovis, sanofi-aventis, Select Comfort, Sepracor, Shire, Somnus, Takeda, Vela, and Wyeth-Ayerst Research; participating in speaking engagements for Neurocrine Biosciences, King Pharmaceuticals, McNeil, sanofi-aventis, Sanofi-Synthelabo, Sepracor, Takeda, Vela, and Wyeth-Ayerst Research; and having ownership in and serving as a director of Clinilabs IPA and Clinilabs Physicians Services.

Primary source: Sleep

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[Gangwisch J, et al "Earlier parental set bedtimes as a protective factor against depression and suicidal ideation" *Sleep* 2010; 33: 97-106.](#)