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New study shows people sleep even less than they think

A study of the sleep characteristics of 669 middle-aged adults found that people sleep much less than they should, and even less than they think. Published in the July issue in the American Journal of Epidemiology, the study also found that blacks sleep less than whites, men sleep less than women, and the poor sleep less than the wealthy.

Although participants spent an average of 7.5 hour a night in bed, they spent only 6.1 hours asleep. White women slept the most, 6.7 hours a night, followed by white men at 6.1 hours, black women at 5.9 hours and black men at 5.1 hours. Higher income also was associated with more sleep.

"People don't think they get enough sleep and they get less sleep than they think," said study author Diane Lauderdale, Ph.D., associate professor of health studies at the University of Chicago. "As we learn more and more about the importance of sleep for health, we find evidence that people seem to be sleeping less and less."

Studies suggest that average sleep times have declined since 1900, when people reported sleeping nine hours a night. Studies from the 1970s reported average sleep times closer to seven hours a night.

"Our study tells that we can't entirely trust those earlier surveys," Lauderdale said, "because people do not know how much they sleep."

This was one of the first large studies to combine sleep diaries with a technique called wrist actigraphy that uses a motion sensor -- worn like a watch -- to measure not just when people go to bed but when they fall asleep. Participants wore the device in the home for three days and nights. They also kept a log of their hours in bed.

Using the Actiwatch and nightly logs, Lauderdale and colleagues recorded how long people spent in bed (on average, 7.5 hours), how long it took them to fall asleep (22

minutes), how long they slept (6.1 hours), and their total sleep "efficiency" -- time asleep divided by time in bed (81 percent).

Sleep	All	White women	White men	Black women	Black men
Time in bed	7.51	7.84	7.34	7.55	7.10
Sleep latency	22.33	13.30	18.52	28.36	35.93
Sleep duration	6.13	6.71	6.09	5.90	5.10
Sleep efficiency	80.8%	85.7%	82.4%	78.2%	73.2%

They found that sleep duration and sleep efficiency were "remarkably lower" than values reported in most previous studies, noted Stuart F. Quan of the University of Arizona in a commentary.

The researchers were particularly surprised by the short span and poor quality of sleep among African-American men -- 5.1 hours a night and 73 percent sleep efficiency.

"Although sleep scientists have generally accepted that the average sleep duration of Americans has been declining in parallel with our transformation to a frenetic 24-hour society," Quan wrote, "most sleep clinicians would consider those values indicative of sleep deprivation even by current standards."

Lack of sleep has long been connected with reduced ability to concentrate, trouble learning, decreased attention to detail and increased risk of motor vehicle accidents. More recent studies have tied chronic partial sleep deprivation to medical problems, including obesity, diabetes and hypertension.

This study may someday connect sleep loss to coronary artery disease. The 669 volunteers, aged 38 to 50, were recruited from the Chicago site (based at Northwestern University) of the CARDIA study, an ongoing project, begun in 1985, designed to assess long-term cardiovascular risk factors.

Although the study found significant variation based on race, sex and income it was not designed to get at the causes of those differences.

"People who make more money may have fewer worries," Lauderdale suggested, "or they may have more control over their sleep environment."

The findings, however, are "consistent with sleep being on the causal pathway between socioeconomic status (or race) and disease risk," the authors conclude.

"There are many temptations to sleep less," said Lauderdale, "but there is a growing body of evidence that this would be unwise."

"I try to get at least seven hours a night," she said. "I can't function the next day without it."

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Additional authors of the paper include Kristen Knutson and Paul Rathouz from the University of Chicago, Lijing Yang and Kiang Liu from Northwestern University, Stephen Hulley from the University of California at San Francisco, and Steve Sidney Kaiser Permanente Northern California. The study was supported by grants from the National Institutes of Health.
