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[American Academy of Sleep Medicine](#)

Chronic insomnia with short sleep duration is a significant risk factor for hypertension

Findings suggest that chronic insomnia is a major public health concern, and its diagnosis and appropriate treatment should become the target of public health policy

Westchester, Ill. — A study in the April 1 issue of the journal *SLEEP* is the first to demonstrate that chronic insomnia with objectively measured short sleep time is an independent and clinically significant risk factor for hypertension.

Results indicate that participants with insomnia and an objectively measured, severely short sleep duration of less than five hours had a risk for hypertension that was 500 percent higher than participants without insomnia who slept more than six hours. People with insomnia and a moderately short sleep duration of five to six hours had a risk for hypertension that was 350 percent higher than normal sleepers.

In contrast, neither insomnia with a normal sleep duration of more than six hours nor a short sleep duration without a sleep complaint was associated with a significant risk for hypertension. This suggests that there is an additive or synergistic effect on hypertension risk when insomnia occurs in combination with a short sleep duration.

According to lead author Alexandros N. Vgontzas, MD, director of the Sleep Research and Treatment Center at the Penn State College of Medicine in Hershey, Pa., one of the study's strengths is that sleep duration was measured objectively by overnight polysomnography.

"It should be emphasized that many times the amount that we feel we slept is different from the actual amount," said Vgontzas. "Thus self-reported sleep duration cannot replace measured sleep duration."

The study involved a random sample of 1,741 men and women in central Pennsylvania with an average age of 49 years. Eight percent were classified as having chronic insomnia with

symptoms persisting for at least one year; 22 percent were poor sleepers with a moderate to severe complaint of difficulty falling asleep, staying asleep, early final awakening or unrefreshing sleep; and 70 percent were normal sleepers. Twenty-one percent had a severely short sleep duration of less than five hours; 23 percent had a moderately short sleep duration of five to six hours; and 56 percent had a normal sleep duration of more than six hours.

Although the cross-sectional nature of the study did not allow for causality to be determined, the authors note that large amounts of clinical and research data indicate that it is most likely that insomnia leads to hypertension. Previous reports have shown that insomnia with short sleep duration is associated with the hypersecretion of cortisol, increased catecholaminergic activity, increased heart rate and 24-hour metabolic rate, and impaired heart rate variability. All of these conditions may lead to hypertension and other cardiovascular events.

Because the study sample is representative of the general population, the authors estimate that eight percent to 10 percent of the U.S. population may be at risk for hypertension and other significant medical complications related to chronic insomnia.

According to Vgontzas, the study indicates that people with insomnia should seek evaluation and treatment from their medical provider. Although the results suggest that people with insomnia have a lower risk for physical problems if their sleep duration is normal, they still are at risk for depression and may suffer from the behavioral effects of insomnia.

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A media fact sheet about insomnia is available from the AASM at <http://www.aasmnet.org/Resources/FactSheets/Insomnia.pdf>.

Information about insomnia for patients and the public is available from the AASM at <http://www.sleepeducation.com/Disorder.aspx?id=6>.

SLEEP is the official journal of the Associated Professional Sleep Societies, LLC (APSS), a joint venture of the American Academy of Sleep Medicine and the Sleep Research Society. The APSS publishes original findings in areas pertaining to sleep and circadian rhythms. *SLEEP*, a peer-reviewed scientific and medical journal, publishes 12 regular issues and 1 issue comprised of the abstracts presented at the SLEEP Meeting of the APSS.

For a copy of the study, "Insomnia with Objective Short Sleep Duration is Associated with a High Risk for Hypertension," or to arrange an interview with the study's author, please contact Kelly

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AASM is a professional membership organization dedicated to the advancement of sleep medicine and sleep-related research. As the national accrediting body for sleep disorders centers and laboratories for sleep related breathing disorders, the AASM promotes the highest standards of patient care. The organization serves its members and advances the field of sleep health care by setting the clinical standards for the field of sleep medicine, advocating for recognition, diagnosis and treatment of sleep disorders, educating professionals dedicated to providing optimal sleep health care and fostering the development and application of scientific knowledge.
