

# Sleeping too much or too little can be bad for your heart

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Getting too little sleep – or even too much – appears to spell trouble for the heart. New data reveal that adults who get less than six hours of sleep a night are at significantly greater risk of stroke, heart attack and congestive heart failure. Even those who reportedly sleep more than eight hours a night have a higher prevalence of heart problems, namely chest pain (angina) and coronary artery disease, a narrowing of the blood vessels that supply blood and oxygen to the heart, according to research presented today at the American College of Cardiology's 61st Annual Scientific Session. The Scientific Session, the premier cardiovascular medical meeting, brings cardiovascular professionals together to further advances in the field.

While these findings echo those from previous, smaller studies, investigators say this is the first nationally representative sample to find an association between sleep duration and heart health, and the first to look at five different conditions at one time. Researchers retrospectively studied approximately 3,019 patients over the age of 45 years who participated in the National Health and Nutrition Examination Survey (NHANES), a survey of U.S. households that assessed a broad range of health issues. Analyses showed that people getting too little sleep were two times more likely to have a stroke or heart attack and 1.6 times more likely to have congestive heart failure. Those reporting more than eight hours of sleep a night were two times more likely to have angina and 1.1 times more likely to have coronary artery disease.

"We now have an indication that sleep can impact heart health, and it

should be a priority," said Rohit R. Arora, MD, FACC, chairman of cardiology and professor of medicine, the Chicago Medical School, and the study's principal investigator. "Based on these findings, it seems getting six to eight hours of sleep everyday probably confers the least risk for cardiovascular disease over the long term."

Insufficient sleep has previously been linked to the hyper-activation of the sympathetic nervous system, glucose intolerance, diabetes and an increase in cortisone levels, blood pressure, resting heart rate and inflammatory markers – all of which are associated with cardiovascular disease. However, researchers are still unclear as to why longer sleep duration might be linked to heart problems.

Dr. Arora speculates that the people sleeping more than eight hours, who report chest pains to their doctor, may have been given a greater clinical workup than people getting less than six hours of sleep, who are not presenting chest pains, which may explain why there are more significant cardiovascular events in this group; however, this needs to be evaluated in future long-term studies. In addition, unknown factors not yet elucidated and other co-morbid conditions like diabetes mellitus, obesity or hypertension may cause higher risk in those sleeping under six hours.

What is clear, according to Dr. Arora, is the need for clinicians and patients to talk about sleep patterns.

"Clinicians need to start asking patients about sleep, especially with those who are already at greater risk for heart disease," he said. "It's a really simple thing to assess as part of a physical exam, it doesn't cost anything and it may help encourage patients to adopt better sleep habits."

Respondents were asked about sleep duration and subsequently stratified into one of three categories: 1) less than six hours of sleep a night, 2)

between six and eight hours of sleep a night, 3) over eight hours of sleep a night. Each patient was also asked if they were ever told they had congestive heart failure, heart attack, coronary artery disease, angina or stroke. Analyses adjusted for covariates such as age, gender, total cholesterol, high-density lipoprotein, systolic blood pressure, smoking status, diabetes mellitus and body mass index. Investigators also controlled for sleep apnea and other sleep disturbances that have previously been linked to heart problems.

Dr. Arora says larger prospective studies are needed to confirm these findings and, if proven, to determine whether asking about sleep patterns presents a cost-effective way to further screen and identify patients who may be at high risk for heart disease.

Provided by American College of Cardiology

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