

Sleep disorders may influence heart disease risk factors

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Credit: American Heart Association

Sleep problems including sleeping too little or too long, may be linked to a variety of factors that may raise the risk for cardiovascular diseases, according to a new American Heart Association scientific statement published in the American Heart Association journal *Circulation*.

The first statement by the American Heart Association on sleep and heart health outlines what we currently know about sleep irregularities and cardiovascular-related risk factors, including obesity, Type 2 diabetes, heart disease and atherosclerosis, arrhythmias, high blood pressure, stroke, unhealthy levels of triglycerides and cholesterol.

"We know that short sleep, usually defined as under 7 hours per night, overly long sleep, usually defined as more than 9 hours per night and sleep disorders may increase some cardiovascular risk factors, but we don't know if improving sleep quality reduces those risk factors. Since the scientific evidence doesn't show a specific dose/response relationship between sleep duration and cardiovascular wellness, the American Heart Association cannot offer specific advice on how much sleep is needed to protect people from cardiovascular disease," said Marie-Pierre St-Onge, Ph.D., chair of the panel that reviewed the science.

Much of the scientific research about sleep and heart health focuses on insomnia or <u>sleep apnea</u>. Insomnia is defined as difficulty falling or staying asleep, for at least three nights a week for three or more months. Sleep apnea is diagnosed when someone has an average of five or more pauses in breathing, which can last seconds to minutes, per hour of sleep; the pauses are most commonly due to a narrowed airway.

Evidence linking <u>sleep problems</u> to obesity and diabetes has been studied the most, said St-Onge, associate professor of nutritional medicine at Columbia University in New York City. "Those are the two main conditions in which there are intervention studies that show that risk factors are increased when sleep is altered." In obesity, for instance, studies show sleep influences food intake and could directly impact obesity risk, she said. But the research has been for short periods and longer studies—measuring impact on actual weight—are needed.



Similarly, longer studies could help show whether sleep variations over the course of weeks impact patients' blood cholesterol, triglycerides, or inflammatory markers, St-Onge said. More and better evidence is also needed to directly link inadequate or poor sleep to diabetes, high blood pressure and cardiovascular disease, she said. Sleep research in those areas has largely been observational, establishing a connection but not proving sleep problems cause the conditions.

St-Onge said healthcare providers should ask patients about the soundness of their sleep: How long do they sleep? How well? Do they snore?

People who are overweight and snore should be referred to a sleep specialist to check for apnea, St-Onge said, while patients with inadequate sleep or insomnia should be counseled on how to improve their sleep and should receive follow-up evaluations. "Patients need to be aware that adequate sleep is important, just as being physically active and eating a balanced diet rich in fruits, vegetables, whole grains, lean meat and fish are important for cardiovascular health," St-Onge said. "Sleep is another type of ammunition that we can tailor to improve health."

About 50-70 million U.S. adults regularly don't get enough sleep or suffer from a sleep disorder, the National Heart, Lung, and Blood Institute estimates. More and more Americans are reporting sleeping fewer than seven hours, with 29.1 percent of U.S. adults reporting short sleep duration in 2009, compared with 21.6 percent in 1977. The American Academy of Sleep Medicine and Sleep Research Society recently advised that adults get at least seven hours of sleep nightly to promote overall health.

More information: Marie-Pierre St-Onge et al. Sleep Duration and Quality: Impact on Lifestyle Behaviors and Cardiometabolic Health: A Scientific Statement From the American Heart Association, *Circulation* (2016). DOI: 10.1161/CIR.00000000000000444

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