

Poor sleep linked to buildup of dangerous plaques throughout body, study says

By Sandee LaMotte, CNN

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1 of 8

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(CNN) — Here's another reason why getting a good night's sleep should be on your must-do list: Sleeping fewer than six hours a night or waking frequently raises your risk of developing damaging plaque in arteries throughout your body, not just your heart.

Previous research has shown poor sleep to be strongly associated with coronary heart disease, but "This is the first study to show that objectively measured sleep is independently associated with atherosclerosis throughout the body," José Ordovás, director of nutrition and genomics at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, said in a statement. Ordovás was senior author of [a study](#) on these findings, published Monday in the journal of the American College of Cardiology.



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The increase of plaque, called atherosclerosis, in your extremities puts you at increased risk for strokes, digestive problems and poor circulation that leads to numbness and pain in your extremities, as well as heart disease.

Objective measurements

The study looked at nearly 4,000 Spanish men and women, with an average age of 46, who had no history of heart disease. Each person wore an actigraph, a small device that measured the length and quality of sleep, over seven nights. Quality of sleep was defined by how often they woke up and how often they moved during the sleep phases.

The subjects were divided into four groups based on their sleep duration: fewer than six hours, six to seven hours, seven to eight hours and more than eight hours. And each person underwent both a cardiac CT scan and a 3D ultrasound of

This use of objective means to quantify sleep was one of the strengths of the research, Dr. Daniel Gottlieb and Dr. Deepak Bhatt of Boston's Brigham and Women's Hospital wrote in an editorial published alongside the study.

Another strength was the size of the study and the exclusion of anyone with existing heart disease or obstructive sleep apnea. Prior research had typically included patients with existing heart and other chronic diseases, and used patient questionnaires to capture sleep length and quality, which are subject to recall error.

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"What people report and what they do are often different," said Dr. Valentin Fuster, editor-in-chief of the journal of the American College of Cardiology, who led the new research.

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After factoring out traditional risk factors for heart disease, the researchers found that subjects who slept fewer than six hours were 27% more likely to have atherosclerosis throughout the body than those who slept seven to eight hours. Participants with fractured sleep were 34% more likely to have plaque buildup than those who slept well.

"These results highlight the importance of healthy sleep habits for the prevention of cardiovascular disease," the study authors wrote.

Impact of poor sleep

The impact of crummy sleep on our health is well-documented. Science has linked poor slumber with high blood pressure, a weakened immune system, weight gain, a lack of libido, mood swings, paranoia and a higher risk of diabetes, stroke, cardiovascular disease and some cancers.

A [lab-based sleep study](#) found that people who were sleeping fewer than six hours a night for two weeks -- and who thought they were doing just fine -- functioned as badly on cognitive

and reflex tests as people who were deprived of sleep for two full nights.

A chronic lack of sleep is also closely tied to anxiety and depression, as the body struggles to cope with the stress of sleepiness. There's even growing evidence that poor sleep early in life can lead to the development of the plaques and tangles that cause Alzheimer's and other kinds of dementia.

Sleep is critical to the body's rejuvenation. Deep sleep, the kind that comes only after a full cycle, is necessary for the body to release hormones designed to repair cells and build tissue in the body and brain.

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You can sleep better

It's up to you to improve your sleep, and you can do that by training your brain. Start by setting up your sleep environment and establish a relaxing bedtime routine. It's that repetition that will train your brain to recognize that



And don't forget exercise. According to the [National Sleep Foundation](#), as little as 10 minutes a day of walking, biking or other aerobic exercise can "drastically improve nighttime sleep quality."

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