

In women, even mild sleep problems may raise blood pressure

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It is well known that chronic sleep deprivation can affect cardiovascular health. But according to a new study from Columbia University Irving Medical Center, even mild sleep problems, such as having trouble falling

asleep, can raise blood pressure in women.

Nearly one-third of adults don't get enough sleep. For women, the problem may be even bigger. Studies suggest that women are at greater risk for [sleep problems](#), with some researchers reporting that chronic insomnia may be twice as common in women as in men.

"That's concerning, since studies have shown that sleep deprivation and milder sleep problems may have a disproportionate effect on cardiovascular health in women," says Brooke Aggarwal, EdD, a behavioral scientist in the Department of Medicine at Columbia University Vagelos College of Physicians and Surgeons and lead author of the study.

The new study examined [blood pressure](#) and sleep habits in 323 healthy women. Mild sleep disturbances—poor-quality sleep, taking longer to fall asleep, and insomnia—were nearly three times more common than severe sleep disturbances, such as [obstructive sleep apnea](#).

Women who had mild sleep problems—including those who slept for seven to nine hours a night, as measured by a wristwatch-like device—were significantly more likely to have elevated blood pressure.

Some of the women allowed the researchers to extract a few endothelial cells from inside an arm vein to look for a pro-inflammatory protein that is implicated in the development of cardiovascular disease. The researchers, led by Sanja Jelic, MD, associate professor of medicine at VP&S and senior author of the study, found an association between endothelial inflammation and mild sleep disturbances.

"Our findings suggest that mild sleep problems could possibly initiate the vascular endothelial inflammation that's a significant contributor to cardiovascular disease," says Aggarwal. "Results of an ongoing clinical

trial may confirm these results. In the meantime, it may be prudent to screen women for milder [sleep disturbances](#) in an effort to help prevent cardiovascular disease."

The study, titled "Effects of Inadequate Sleep on Blood Pressure and Endothelial Inflammation in Women: Findings from the American Heart Association Go Red for Women Strategically Focused Research Network," was published in the June 19 issue of the *Journal of the American Heart Association*.

More information: Brooke Aggarwal et al, Effects of Inadequate Sleep on Blood Pressure and Endothelial Inflammation in Women: Findings From the American Heart Association Go Red for Women Strategically Focused Research Network, *Journal of the American Heart Association* (2018). [DOI: 10.1161/JAHA.118.008590](https://doi.org/10.1161/JAHA.118.008590)

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