

Lack of sleep could be more dangerous for women than men

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Women who get less than the recommended eight hours sleep a night are at higher risk of heart disease and heart-related problems than men with the same sleeping patterns.

Research by the University of Warwick and University College London has found that levels of [inflammatory markers](#) vary significantly with sleep duration in [women](#), but not men.

The study, published today (Weds) in the American journal *Sleep*, found levels of Interleukin-6 (IL-6), a marker related to coronary [heart disease](#), were significantly lower in women who reported sleeping eight hours as compared with 7hours.

A second marker, High-sensitivity C-reactive protein (hs-CRP), is predictive of future cardiovascular morbidity. Levels of hs-CRP were significantly higher in women who reported sleeping five hours or less.

Lead author of the study, Associate Professor of Biochemical Medicine at Warwick Medical School Michelle Miller said short-term sleep deprivation studies have shown that inflammatory markers are elevated in sleep-deprived individuals, suggesting that inflammatory mechanisms may play a role in the cardiovascular risk associated with sleep deprivation.

She said: "Our study may provide some insight into a potential mechanism for the observation in previous studies which indicates an

increased risk of death from cardiovascular disease in individuals who have less than five hours sleep per night and increased risk of non-cardiovascular death in long sleepers."

This is the first large-scale study to describe the associations between measures of inflammation and sleep duration in both men and women.

The study involved more than 4,600 white participants from the University College London-based Whitehall II cohort study; 73% were men. Participants between the ages of 35 and 55 years were recruited between 1985 and 1988 from 20 London-based civil service departments. Data for this study is from the phase 3 follow-up (1991-1993). Sleep duration was determined by subjective questionnaires, and general health was assessed during a screening examination.

Dr Miller added: "These findings add to the growing body of evidence which suggests that there is a non-linear relationship between cardiovascular risk factors and duration of sleep. Furthermore, they support the idea that short sleep is associated with an increase in cardiovascular risk and that the association between [sleep duration](#) and [cardiovascular risk](#) factors is markedly different in men and women.

"Further prospective studies are required to ascertain causality but the results also are consistent with the idea that sleeping seven or eight hours per night appears to be optimal for health."

Source: University of Warwick ([news](#) : [web](#))

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