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Short sleepers at higher risk of diabetes and heart disease

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People who sleep less than six hours a night may be three times more likely to develop a condition which leads to diabetes and heart disease, according to researchers at the University of Warwick.

A study by a team of researchers from Warwick Medical School and the State University of New York at Buffalo has found short sleep duration is associated with an elevated risk of a pre-diabetic state, known as incident-impaired fasting glycaemia (IFG).

IFG means that your body isn't able to regulate glucose as efficiently as it should. People with IFG have a greater risk of developing type 2 diabetes and are at an increased risk of heart disease and stroke.

The study has just been published in the *Annals of Epidemiology* journal. The researchers looked at six years of data from 1,455 participants in the Western New York Health Study.

All participants were aged between 35 and 79 years old and all completed a clinical examination that included measures of resting blood pressure, height and weight. They also completed questionnaires about their general health and wellbeing and sleeping patterns.

Lead author at Warwick Medical School Dr Saverio Stranges said: "We found that short sleep, less than six hours, was associated with a significant, three-fold increased likelihood of developing IFG, compared to people who got an average of six to eight hours sleep a night."

This study is the first to look at the association between sleep duration and IFG. Dr Stranges said there were a number of ways in which sleep loss could lead to disordered glucose metabolism.

He said: "Previous studies have shown that short sleep duration results in a 28% increase in mean levels of the appetite stimulating hormone ghrelin so it can affect feeding behaviours. Other studies have also shown that a lack of sleep can decrease glucose tolerance and increases the production of cortisol, a hormone produced in response to stress."

"More research is needed but our study does suggest a very strong correlation between lack of sleep and type 2 diabetes and heart disease."

Professor Francesco Cappuccio, Head of the Sleep, Health & Society Programme at the University of Warwick said: "These results are welcome and confirm our early reports that both sleep quantity and quality are strong predictors of the development of type 2 diabetes, strokes and heart attacks",

Provided by University of Warwick

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