

Working long hours linked to increased risk of type 2 diabetes

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Credit: Darren Lewis/public domain

People working for more than 55 hours per week doing manual work or other low socioeconomic status jobs have a 30% greater risk of developing type 2 diabetes, according to the largest study in this field so far, published in *The Lancet Diabetes & Endocrinology*.

Mika Kivimäki, Professor of Epidemiology at University College London, UK, and colleagues conducted a systematic review and meta-analysis of published studies and unpublished individual-level data

examining the effects of long [working hours](#) on [type 2 diabetes](#) up to 30 April 2014.

Analysis of data from 4 published studies and 19 studies with unpublished data involving 222 120 men and women from the USA, Europe, Japan, and Australia who were followed for an average of 7.6 years, found a similar risk of developing type 2 [diabetes](#) in people working more than 55 hours a week compared to those putting in a normal 35 to 40 hour week. However, the researchers noted significant differences when the results were looked at more closely.

Further analyses revealed that individuals doing low [socioeconomic status jobs](#) who worked 55 hours or more per week had a roughly 30% increased risk of developing diabetes compared to their counterparts who worked between 35 and 40 hours a week, even after taking into account health behaviours such as smoking and physical activity, and other risk factors including age, sex, and obesity. This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type 2 diabetes.

The researchers say that further research is needed to identify the underlying mechanisms for the association between long working hours and diabetes in people doing low socioeconomic status jobs, but suggest a number of possible explanations, including working disruptive schedules that leave little time to take part in health restoring behaviours such as sleeping, unwinding, and exercise.

According to Professor Kivimäki, "The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing [low](#)

[socioeconomic status](#) jobs."

In a linked Comment, Dr Orfeu Buxton from Pennsylvania State University, PA, USA and Dr Cassandra Okechukwu from Harvard School of Public Health, MA, USA write that, "Kivimäki and colleagues' elegantly designed study provides a solid foundation for both epidemiological and intervention work on diabetes risks. The results remained robust even after controlling for obesity and physical activity, which are often the focus of [diabetes risk](#) prevention, suggesting that work factors affecting health behaviours and stress may need to be addressed as part of diabetes prevention."

More information: *The Lancet Diabetes & Endocrinology*,
[www.thelancet.com/journals/lan ... \(14\)70178-0/abstract](http://www.thelancet.com/journals/lan... (14)70178-0/abstract)

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