

## Clocking up 45+ working hours/week linked to heightened risk of diabetes in women

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Clocking up 45 or more working hours in a week is linked to a heightened risk of diabetes in women, finds an observational study published online in the journal *BMJ Diabetes Research & Care*.

No such heightened risk was found among women working 30 to 40 hours a week, the findings show, prompting the researchers to suggest that sticking to this total might help curb the risk of the disease.

Global estimates indicate that 439 million adults will be living with [diabetes](#) by 2030—an increase of 50 percent on the figures for 2010. In 2015 alone, diabetes cost the global economy US \$1.31 trillion.

Previous research has pointed to a link between long working hours and heightened [diabetes risk](#), but most of these studies have focused exclusively on men.

To try and provide a more comprehensive picture, the researchers tracked the health of 7065 Canadian workers between the ages of 35 and 74 over a period of 12 years (2003-15), using national health survey data and [medical records](#).

Participants' weekly working (paid and unpaid) hours were grouped into four time bands: 15-34 hours; 35-40 hours; 41-44 hours; and 45 or more hours, and a range of potentially influential factors were considered.

These included age; sex; marital status; parenthood; ethnicity; place of

birth and of residence; any [long term health](#) conditions; lifestyle; and weight (BMI).

Workplace factors, such as shift work, the number of weeks worked in the preceding 12 months, and whether the job was primarily active or sedentary, were also included in the analysis.

During the monitoring period, one in 10 participants developed type 2 diabetes, with diagnoses more common among men, older age groups, and those who were obese.

The length of the working week wasn't associated with a heightened risk of the disease among men. If anything, the incidence of diabetes tended to fall, the longer was a man's working week. But this wasn't the case among women.

Among those who worked 45 or more hours a week the risk was significantly higher (63%) than it was among those who worked between 35 and 40 hours.

And the effect was only slightly reduced when potentially influential factors, such as smoking, [physical activity levels](#), alcohol consumption and BMI, were taken into account.

This is an observational study, so no definitive causal effect can be established. What's more, working hours were measured at one time point only, and it wasn't possible to deduce from the medical records which type of diabetes participants had, although type I diabetes accounts for only around one in 20 adult cases.

Nor is there an obvious explanation for the gender differences the researchers found, although they suggest that women might work longer hours, when all the household chores and family responsibilities are

taken into account.

And long working hours might prompt a chronic stress response in the body, so increasing the risk of hormonal abnormalities and insulin resistance, they suggest.

"Considering the rapid and substantial increase of [diabetes prevalence](#) in Canada and worldwide, identifying modifiable risk factors such as long work hours is of major importance to improve prevention and orient policy making, as it could prevent numerous cases of diabetes and diabetes related chronic diseases," they conclude.

**More information:** Adverse effect of long work hours on incident diabetes in 7065 Ontario workers followed for 12 years, *BMJ Diabetes Research & Care*, [DOI: 10.1136/bmjdr-2017-000496](https://doi.org/10.1136/bmjdr-2017-000496)

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