

Study links quitting smoking with deterioration in diabetes control

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Credit: Vera Kratochvil/public domain

Sufferers of type 2 diabetes mellitus (T2DM) who quit smoking are likely to see a temporary deterioration in their glycaemic control which could last up to three years, according to new research published today in *The Lancet Diabetes & Endocrinology*.

The research team, led by Dr Deborah Lycett of Coventry University and funded by the National Institute for Health Research's School for Primary Care Research, examined the primary care records of 10,692 adult smokers with T2DM over six years to investigate whether or not quitting was associated with altered diabetes control.

The study found that in the 3,131 (29%) people who quit and remained abstinent for at least one year, HbA1c - which is an average measurement indicating how well the body is controlling [blood glucose](#) levels - increased by 2.3mmol/mol (0.21%) before decreasing gradually as abstinence continued.

In the same period, 5,831 (55%) continual smokers - who did not change their [smoking](#) status during

the study - experienced a more gradual increase in HbA1c, such that HbA1c levels in quitters became comparable with the levels seen in continual smokers three years after quitting.

The researchers used a regression model which examined each cohort with and without weight change data, concluding that weight changes often associated with [quitting smoking](#) did not significantly alter the association between [smoking cessation](#) and HbA1c levels.

Previous research has shown that a 1% (11mmol/mol) reduction in the HbA1c level of someone with diabetes will result in them being 16% less likely to suffer heart failure and 37% less likely to experience microvascular complications - indicating the significance of small percentage changes in HbA1c levels.

Principal investigator Dr Deborah Lycett from Coventry University's Faculty of Health and Life Sciences said:

"Knowing that deterioration in blood glucose control occurs around the time of stopping smoking helps to prepare those with diabetes and their clinicians to be proactive in tightening their glycaemic control during this time.

"Stopping smoking is crucial for preventing complications that lead to early death in those with diabetes. So people with [diabetes](#) should continue to make every effort to stop smoking, and at the same time they should expect to take extra care to keep their blood glucose well controlled and maximise the benefits of smoking cessation."

More information: The study, entitled 'The Association between Smoking Cessation and HbA1c Control of Type 2 Diabetes Mellitus: A THIN database cohort study', is published today online.

Provided by Coventry University

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