

Association of tight glycemic control with road crashes in diabetic patients

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A study from Canada published this week in *PLoS Medicine* suggests an association between tighter glycemic control and an increased risk of a motor vehicle crash in diabetic adults. Using a population-based case control analysis over a 2 year period, Donald Redelmeier and colleagues from the University of Toronto studied the association between measured glycosylated hemoglobin (HbA1c) in diabetic drivers and the risk of a motor vehicle crash.

Looking at 795 consecutive drivers with diabetes who reported to vehicle licensing authorities between January 1, 2005 to January 1, 2007, the authors found that one-in-fourteen had been involved in a crash. The mean HbA1c (a measure of diabetes control over about 8-12 weeks) was lower for those in a crash than those who were not. Hence, lower HbA1c levels were associated with an increased risk of a [motor vehicle crash](#). In addition, the risk of a crash quadrupled when a driver had a history of severe hypoglycemia that required outside help.

Careful control of [blood glucose](#) is a cornerstone of diabetic management to reduce the long-term complications of diabetes. Some driving licensing authorities require drivers who hold commercial licenses to document glycemic control. The authors question such policies, saying that "the data suggest that a patient's HbA1c level is neither necessary nor sufficient for determining fitness-to-drive"

Redelmeier, who is also a Professor of Medicine and Staff Physician at Sunnybrook Health Sciences Centre (Canada's largest trauma center)

states that "The basic implication of our study is to underscore the difficulty in judging fitness-to-drive in adults with severe diabetes mellitus This pitfall calls into question traffic laws that prevail in the United States, United Kingdom, Canada, Germany, Holland, Australia, and other countries"

More information: Redelmeier DA, Kenshole AB, Ray JG (2009) Motor Vehicle Crashes in Diabetic Patients with Tight Glycemic Control: A Population-based Case Control Analysis. *PLoS Med* 6(12): e1000192. [doi:10.1371/journal.pmed.1000192](https://doi.org/10.1371/journal.pmed.1000192)

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