Management of type 1 diabetes

Do people with diabetes have more road traffic accidents?

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The question of whether people with diabetes are more likely to have road traffic accidents may seem a simple one, but it has proved difficult to answer. Now that we are in an era of tight glucose control to prevent complications and know that this is inevitably associated with more episodes of hypoglycaemia, the question becomes even more important.

This recent multicentre study strongly suggests that unfortunately the answer is yes – people with diabetes do have more road accidents – and that it is the younger group with type 1 diabetes and the highest rates of hypoglycaemia who are most at risk.

The strength of this paper is its size. The major weakness is the design – relying on self-reported accident rates over the previous 2 years. But it seems likely that this would lead to an underestimate rather than an overestimate of the problem.

Interestingly, European drivers with type 1 diabetes reported fewer severe episodes of hypoglycaemia than did US drivers. The authors' interpretation of this was that the regulations in Europe restrict driving in people with severe hypoglycaemia or hypoglycaemic unawareness, indiacting that Europeans are more aware of the risks of driving and hypoglycaemia. An alternative explanation is that European drivers know the 'correct' answer to the question if they want to keep their driving licence.

How should this paper influence practice? Only half of the people with type 1 diabetes remembered ever discussing driving with their clinicians. The simple message is that driving and hypoglycaemia is a problem and does need to be discussed. This does not, however, mean that the clinician should also be the policeman. If, in acknowledging the problem, the patient then loses his/her driving licence, this is not likely to encourage discussion. Perhaps the review of fitness to drive should be taken out of the diabetes clinic.

DIABETOLOGIA

Cognitive efficiency decline in diabetes

Readability	✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓ ✓

1 Diabetes is associated with an increased risk of mild brain dysfunction. The mechanisms behind this have not been elucidated.

2 Alterations in the cognitive performance of 103 young and middle-aged adults with type 1 diabetes in relation to microvascular and macrovascular complications were assessed over 7 years.

3 Participants were evaluated with neurocognitive tests and were assessed for signs of clinically significant complications.

4 Measures of psychomotor efficiency declined significantly in adults with diabetes in comparison with controls.

5 The development of proliferative retinopathy and autonomic neuropathy during the follow-up period predicted a decline in psychomotor speed, as did microvascular complications, systolic blood pressure at follow-up and duration of diabetes.

6 Any intervention that reduces the risk of complications may have a similarly beneficial effect on the brain and reduce the risk of neurocognitive dysfunction in people with diabetes.

Ryan CM, Geckle MO, Orchard TJ (2003) Cognitive efficiency declines over time in adults with type 1 diabetes: effects of micro- and macrovascular complications. *Diabetologia* **46**: 940–8

DIABETES CARE

Increased risk of driving mishaps in people with diabetes

Readability	✓ ✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓ ✓

1 Although there is evidence to suggest that hypoglycaemia may impair driving ability, the exact nature of the relationship between diabetes and risk of driving accidents is unclear.

2 There were 341 adults with type 1 diabetes, 332 with type 2 diabetes and 363 controls in this cross-sectional multicentre survey. Participants were selected from clinics in the US and Europe.

3 Nineteen per cent of adults with type 1 diabetes, 12% of those with type 2 diabetes and 8% of controls reported having at least one auto crash in the past 2 years.

4 Drivers with type 1 diabetes also had more episodes of hypoglycaemic stupor than those with type 2 diabetes or controls.

5 There was a similar rate of driving mishaps among those with type 2 diabetes and controls. The use of insulin or oral agents had no effect on the frequency of driving mishaps.

6 Drivers with type 1 diabetes who had crashes also had more frequent episodes of hypoglycaemia while driving and less frequent blood glucose monitoring before driving.

7 Half of patients with type 1 and three-quarters of those with type 2 diabetes had never discussed hypoglycaemia and driving with their doctor.

8 Doctors should discuss hypoglycaemia and driving with patients with type 1 diabetes.

Cox DJ, DeGroot M, Penberthy JK et al (2003) Diabetes and driving mishaps. *Diabetes Care* **26**: 2329–34