



In the consultation room

Driving

Gwen Hall

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About this series

The aim of the “In the consultation room” series is to provide readers with brief, practical reviews of key aspects of diabetes care that should be covered in the clinic setting. A brief set of questions at the end allows readers to test their knowledge.

There seems to be some confusion among health professionals on the recommendations surrounding driving while on glucose-lowering medication. To protect ourselves, and people with diabetes, we need to be clear and ensure we discuss appropriate advice with patients during the consultation. Yet it appears that we are not good at passing on appropriate information. Surveys show that professionals are poor at emphasising the Driver and Vehicle Licensing Agency (DVLA) recommendations for drivers with diabetes in the UK (Choudhary and Amiel, 2011), but regular, reinforced structured education is advocated by the Hypoglycaemia Study Group (International Hypoglycaemia Study, 2015).

Why has this come about? The emergence of newer therapies has highlighted the risk of hypoglycaemia attached to sulphonylureas and insulin. Recently, I have stopped gliclazide in several older people who drive, owing to their risk of hypoglycaemia while driving. A “good” HbA_{1c} is not necessarily a predictor of stable blood glucose levels if it is accompanied by marked swings from high to low during the day (see *Figure 1*). A more detailed picture will

emerge from talking with the patient and by examining data from self-monitoring of blood glucose.

In people with type 2 diabetes receiving oral hypoglycaemic agents, hypoglycaemia has been found to be associated with a significantly higher risk of accidents resulting in hospital visits (Signorovitch et al, 2012), even if the person is not using insulin. We need to get this right to minimise the risk of hypoglycaemia and improve people’s quality of life.

The DVLA (2014) recommendations are clear and provide an online printable handout for patients. The basics are outlined in *Table 1*.

The law regarding driving Group 2 vehicles when using insulin has changed. If individuals can demonstrate that they meet the following criteria, then they may be able to apply to drive Group 2 vehicles.

- They have well-controlled diabetes (with evidence from 3 months of results on a blood glucose meter with a memory).
- They have had no episodes of severe hypoglycaemia in the previous 12 months.
- They do have early warning symptoms of hypoglycaemia.

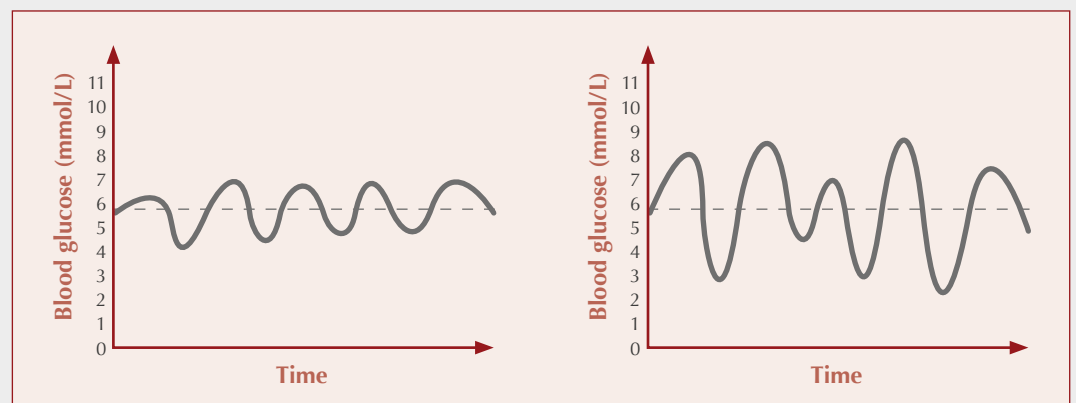


Figure 1. An illustration of why a “good” HbA_{1c} is not a predictor of stable blood glucose levels. The individuals have the same HbA_{1c} (48 mmol/mol [6.5%]) but the one whose blood glucose profile is depicted on the right has a higher rate of hypoglycaemia occurrence.

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Table 1. A summary of the Driver and Vehicle Licensing Agency (2014) recommendations.

Treatment	Group 1 (car and motorcycle)	Group 2 (bus and lorry)
Insulin	Must inform DVLA by law Must have hypoglycaemia awareness Must not have more than one severe hypoglycaemic episode in previous 12 months Should be performing appropriate blood glucose monitoring, including within 2 hours of starting driving and every 2 hours while driving	Must have had no severe hypoglycaemic episodes in the previous 12 months Must have full hypoglycaemia awareness Should be regularly monitoring blood glucose using a meter with a memory at least twice daily and at times relevant to driving and within 2 hours of starting driving and every 2 hours while driving Assessed by independent diabetes consultant annually
	Managed by tablets which carry a risk of inducing hypoglycaemia (this includes sulphonylureas and glinides)	Must not have more than one severe hypoglycaemic episode within previous 12 months It may be appropriate to monitor blood glucose at times relevant to driving Must be under regular review
Anyone with impaired awareness of hypoglycaemia	If confirmed, driving must stop Can resume if hypoglycaemia awareness is restored, as confirmed by a consultant or GP	Refusal or revocation

Police, fire and ambulance services are now subject to individual medical assessment as to fitness to drive. Pilots can now fly with diabetes but must adhere to the Civil Aviation Authority rules (<http://bit.ly/1Q8mJTj>).

Some important points of advice to cover in a consultation with people treated with medication that could cause hypoglycaemia are as follows (taken from a TREND-UK patient leaflet available at <http://bit.ly/1IW1aF9>).

- Keep glucose treatments in the car within easy reach of the driver at all times.
- Check blood glucose before driving. Do not drive if the level is less than 5 mmol/L.
- Do not drive for 45 minutes after a hypoglycaemic event.
- Do not continue to drive if hypoglycaemia symptoms are felt.
- If hypoglycaemia symptoms are felt while in a car, stop as soon as is safe to do so and remove the keys from the ignition.

People with diabetes have no more accidents than the general public (Lonnen et al, 2008) but may need to monitor their blood glucose to remain safe. Health professionals need to

examine their practice and ensure that they are not preventing people with diabetes who drive from managing their blood glucose levels appropriately (Diabetes UK, 2013). Primary care teams should arm themselves with relevant and up-to-date resources to discuss with patients and their relatives or carers. It is prudent to document that discussion in the patient's records in case of a dispute later on, however unlikely. ■

Choudhary P, Amiel SA (2011) Hypoglycaemia: current management and controversies. *Postgrad Med J* **87**: 298–306

Diabetes UK (2013) *Access to test strips – A postcode lottery?* Diabetes UK, London. Available at: <http://bit.ly/1JBsxCP> (accessed 02.09.15)

Driver and Vehicle Licensing Agency (2014) *At a glance guide to the current medical standards of fitness to drive*. DVLA, Swansea. Available at: <http://bit.ly/1IE14hC> (accessed 02.09.15)

International Hypoglycaemia Study Group (2015) Minimizing hypoglycemia in diabetes. *Diabetes Care* **38**: 1583–91

Lonnen KF, Powell RJ, Taylor D et al (2008) Road traffic accidents and diabetes: insulin use does not determine risk. *Diabet Med* **25**: 578–84

Signorovitch JE, Macaulay D, Diener M et al (2012) Hypoglycaemia and accident risk in people with type 2 diabetes mellitus treated with non-insulin antidiabetic drugs. *Diabetes Obes Metab* **15**: 335–41

Questions to test your knowledge

The answers are not necessarily found in this article.

1. Driving restrictions only apply to insulin-treated diabetes.
 - [a] True
 - [b] False
2. Which oral hypoglycaemic agents may be associated with hypoglycaemia?
 - [a] All of them
 - [b] Sulphonylureas and glinides
 - [c] Metformin and DPP-4 inhibitors
3. A person with type 2 diabetes and a low HbA_{1c} with gliclazide does not need to monitor blood glucose in relation to driving.
 - [a] True
 - [b] False
4. If someone with diabetes loses the warning signs of hypoglycaemia, that person can continue to drive but should monitor blood glucose before driving.
 - [a] True
 - [b] False
5. It is important to record driving advice given to patients for which of the following reasons?
 - [a] To prevent duplication by another member of staff
 - [b] To ensure clarity in the event of an accident
 - [c] To meet Quality and Outcomes Framework targets

Answers: 1 – [a]; 2 – [b]; 3 – [b]; 4 – [a]; 5 – [c]