

MacLeod Diabetes & Endocrine Centre Royal Devon & Exeter Hospital

Insulin-treated diabetes, hypoglycaemia awareness and driving

At the end of 2011, DVLA made changes relating to diabetes and driving. The definitions of hypoglycaemia and hypoglycaemia awareness for all drivers were subtly modified. The changes also allow group 2 licences (bus, lorry) for insulin-treated drivers who meet strict criteria.

Important sources of information

DVLA – *At a glance guide to the current medical standards of fitness to drive* – available from their website. Just search for “DVLA at a glance”.

Diabetes UK – comprehensive advice. Just search for “Diabetes UK driving”.

Please also read DVLA guidance

No contradiction of DVLA advice is intended; if you find a contradiction then assume DVLA advice to be correct, and let us know. We are happy to discuss. This document does describe how we interpret DVLA’s guidance, which is not always unambiguous.

Normal symptoms of hypoglycaemia

People with insulin-treated diabetes experience hypoglycaemia from time to time (the average in type 1 diabetes is about 1-2 episodes per week). Hypoglycaemia usually causes physical symptoms, such as hunger, tremor, sweating, palpitations, headache. At lower blood glucose levels, there are neurological effects, such as inattention, disorientation or confusion.

What is impaired hypoglycaemia awareness?

Over the years, and particularly if hypos are frequent, changes to the symptoms may occur:

- *Altered blood glucose threshold.* Symptoms starting at a lower blood glucose level.
- *Altered symptoms.* Weaker physical symptoms (hunger, tremor, palpitations, sweating) and more neurological symptoms (loss of attention, disorientation).
- *Less reliable detection of hypos.* Friends or relatives may notice hypos first. There may be frequent low measurements on routine testing, without prior symptoms.
- *Inability to self-treat.* Either because unaware of hypos, or too disorientated or weak by the time the hypo is noticed to take action.

What is a normal blood glucose level for hypo symptoms?

Hypoglycaemia awareness is not defined by blood glucose measurements. Although we often describe hypoglycaemia as below 4 mmol/L, people in normal health may not notice symptoms until around 3 mmol/L. Furthermore, portable glucose meters are not very accurate. A reading of 2.5 can easily be seen when the true blood glucose is 3 mmol/L, and even bigger discrepancies can occur.

However, it is still useful to look at blood glucose measurements. Frequent measurements below about 2.5 mmol/L could prompt a more in-depth discussion about hypo awareness. Measurements above 4 mmol/L would suggest another cause for symptoms.

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Group 1 driving licences for insulin-treated diabetes

Regarding hypoglycaemia, DVLA states:

- *Must have awareness of hypoglycaemia.*
- *Must not have had more than one episode of hypoglycaemia requiring the assistance of another person in the preceding twelve months.*
- *Impaired awareness of hypoglycaemia has been defined by the Secretary of State's Honorary Medical Advisory Panel on Driving and Diabetes as, 'an inability to detect the onset of hypoglycaemia because of a total absence of warning symptoms'.*

The wording is subtly different from Group 2 licences (lorries and buses), where the requirement is "Must have full hypoglycaemia awareness." Thus, we interpret that a Group 1 licence can be held if hypo warning symptoms are reduced but not totally absent. We do not regard inattention, confusion or disorientation as warning symptoms – these are the very effects to be avoided when driving.

Considering severe hypos "requiring the assistance of another person", common sense is indicated. If a person receives help, but could have managed without, we do not regard that as a severe hypo. Conversely, if a patient is mentally or physically incapacitated by hypoglycaemia but eventually recovers without assistance because nobody else is around, we do regard that as a severe hypo.

Previously, DVLA only considered severe hypos during waking hours – people who suffered severe hypos exclusively during sleep were licensed. From 2011, no such distinction is made.

Therefore, we consider that a person meets DVLA Group 1 criteria for hypoglycaemia awareness if:

1. They have had no severe hypos, or just one severe hypo, in the last 12 months. A severe hypo can occur at any time of day or night, is incapacitating or requires assistance from another person, and could not have been safely treated by the patient if they had been alone.

AND

2. They have at least some warning symptoms before the onset of confusion or disorientation.

Group 2 driving licences for insulin-treated diabetes

Group 2 applications need assessment by a hospital consultant. In brief, the requirements are:

1. No severe hypos at all within the last 12 months.
2. Full warning symptoms for hypos. We interpret this to mean completely undiminished.
3. Blood testing at least twice daily plus when driving, confirmed by examination of meter.
4. Good understanding of hypoglycaemia.
5. No other debarring conditions.

Applicants must present 3 months' of blood glucose data before applying for the licence; realistically, a further period of weeks or months will be required for the application to be processed.

This means that existing Group 2 licence holders must stop driving when they commence insulin therapy, but should be able to regain their licence after 3-6 months.