



## Guidance on Blood Glucose Self-Monitoring for Adults with Diabetes Updated December 2015

### Introduction

NICE Clinical Guideline NG28 (Dec 2015) states that clinicians should:-

- Take the Driver and Vehicle Licensing Agency (DVLA) At a glance guide to the current medical standards of fitness to drive into account when offering self-monitoring of blood glucose levels for adults with type 2 diabetes (see overleaf for summary)
- Do not routinely offer self-monitoring of blood glucose levels for adults with type 2 diabetes unless:
  - the person is on insulin **or**
  - there is evidence of hypoglycaemic episodes **or**
  - the person is on oral medication that may increase their risk of hypoglycaemia while driving or operating machinery **or**
  - the person is pregnant, or is planning to become pregnant. For more information, see the NICE guideline on diabetes in pregnancy.
- Consider short-term self-monitoring of blood glucose levels in adults with type 2 diabetes (and review treatment as necessary):
  - when starting treatment with oral or intravenous corticosteroids **or**
  - to confirm suspected hypoglycaemia.
- Be aware that adults with type 2 diabetes who have acute intercurrent illness are at risk of worsening hyperglycaemia. Review treatment as necessary.
- If adults with type 2 diabetes are self-monitoring their blood glucose levels, carry out a structured assessment at least annually. The assessment should include:
  - the person's self-monitoring skills
  - the quality and frequency of testing
  - checking that the person knows how to interpret the blood glucose results and what action to take
  - the impact on the person's quality of life
  - the continued benefit to the person
  - the equipment used.

Blood Glucose monitoring for patients with Type 2 diabetes on oral medication that increase the risk of hypoglycaemia, should only be used within a care package, accompanied by structured education which should include clear instructions as to the place of monitoring and how results can be used to reinforce lifestyle change, adjust therapy or alert health care professionals.

Self monitoring is appropriate for patients with Type 1 diabetes and those with Type 2 diabetes who use insulin and certain oral medication and adjust their dose according to the trends of their results, or for all patients with insulin who have inter-current illness.

### Type 2 Diabetes on oral medication

Treatment	Recommendation	Suggested frequency and units of testing reagents/year (minimum requirement)
Type 2 diabetes and any of the following as monotherapy or in combination: Diet and lifestyle Metformin Pioglitazone DPP4 inhibitors SGLT2 inhibitors GLP-1 receptor agonists	<b>Should not be routinely offered.</b> However an agreed period of SMBG may be useful: <ul style="list-style-type: none"> <li>• During periods of acute illness</li> <li>• When changing therapy to assess effectiveness</li> <li>• To provide feedback on lifestyle changes when newly diagnosed and following structured education</li> <li>• Preconception and duration of pregnancy</li> </ul>	Blood glucose monitoring 1-2 times a week, at different times of the day  2 boxes of 50 strips per year



Type 2 diabetes using: Sulphonylureas or Glinides as monotherapy or in combination with any of the above	<b>Routinely offered due to potential for hypoglycaemia.</b> <ul style="list-style-type: none"> <li>• Especially in the first 3 months of treatment</li> <li>• Those who experience episodes of hypoglycaemia, particularly drivers</li> <li>• Those who have reduced awareness of hypoglycaemia</li> <li>• Those who fast, especially if drivers</li> <li>• Drivers – see below</li> </ul>	Blood glucose monitoring 1-2 times a week, at different times of the day  Drivers and those prone to hypos will require larger quantities of testing strips. Please make an individual assessment and agree plan with patient.
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**Type 1 Diabetes and Type 2 on insulin**

Frequency of insulin injection	Minimum frequency of testing	Suggested units of testing reagents/year (minimum requirement)
Once a day (night-time)	Once a day, prior to breakfast (more if unwell or hypo)	7 boxes of 50 strips per year
Twice a day	Twice a day at varying times (more if unwell or hypo)	15 boxes of 50 strips per year
Four times a day	Four times a day (more if active or intercurrent illness or poor hypo awareness)	30 boxes of 50 strips per year
Gestational diabetes	Four times a day (Alternate days pre and post prandial)	N/A
Via insulin pump	Pre and Post Prandial	50 boxes of 50 strips per year
Existing diabetes in pregnancy	7-8 times daily pre and post prandial	N/A

**DVLA and Driving Advice**

The DVLA gives specific instructions regarding SMBG for people who drive and use insulin:

**Group 1 Drivers**

“There must be appropriate blood glucose monitoring. This has been defined by the Secretary of State’s Honorary Medical Advisory Panel on Driving and Diabetes as no more than 2 hours before the start of the first journey and every 2 hours while driving. More frequent testing may be required if for any reason there is a greater risk of hypoglycaemia, for example after physical activity or altered meal routine.”

**Group 2 (lorries and buses)**

“regularly monitors blood glucose at least twice daily and at times relevant to driving, (no more than 2 hours before the start of the first journey and every 2 hours while driving). More frequent be required if for any reason there is a greater risk of hypoglycaemia, for example after physical activity or altered meal routine, using a glucose meter with a memory function to measure and record blood glucose levels. At the annual examination by an independent Consultant Diabetologist, the last 3 months of blood glucose readings must be available.”

**Driving and oral hypoglycaemics**

The DVLA instructions are not very specific for group 1 drivers managed by tablets which carry a risk of inducing hypoglycaemia (this includes sulphonylureas and glinides): “It may be appropriate to monitor blood glucose regularly and at times relevant to driving to enable the detection of hypoglycaemia.”

Group 2 drivers on these agents are instructed to regularly monitor blood glucose at least twice daily and at times relevant to driving.

The DVLA / DUK advice on Hypoglycaemia and blood glucose monitoring:

<http://www.dft.gov.uk/dvla/medical/ata glance.aspx>

At a glance Guide to the current Medical Standards of Fitness to drive accessed on 07/12/15

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