

## **Guidance on Patient Self Monitoring of Blood Glucose (SMBG) and Prescribing of Blood Glucose Testing Strips**

This Guidance aims to support people with diabetes and health care professionals involved in their care, to achieve optimal glycaemic control through the effective use of self monitoring of blood glucose and HbA1c testing.

**The following groups should be prescribed Gloucestershire formulary recommended blood glucose testing strips on the NHS** and provided with meters:

- Patients on insulin therapy or being considered for insulin therapy
- Commercial lorry or bus drivers (DVLA Group 2 drivers)
- Car and motorcycle drivers (DVLA Group 1 drivers) on medication which carries a risk of hypoglycaemia (eg. sulphonylureas and glinides)
- Women with diabetes who are either pregnant or considering pregnancy
- Patients advised to test for other specific reasons by diabetes specialists

Blood glucose monitoring should also be considered **temporarily** where there may be **periods of unstable glucose levels** e.g. patients on weight loss programs, especially those on sulphonylureas; during periods of illness or changes in therapy; during a course of steroid treatment.

In these cases patients should be informed at the outset that the monitoring is indicated for a limited period of time only. Testing strips should **not** be placed on repeat prescription for patients for whom blood glucose testing is only indicated on a temporary basis.

**In all other groups** there is limited evidence that either random or routine blood glucose monitoring is of clinical benefit.

Patients who wish to monitor their blood glucose more frequently than is clinically indicated **will need to purchase their own strips.**

Twice yearly HbA1c testing is recommended as a minimum by NICE.

## **Use of Blood Glucose Level (BGL) Testing Advice for patients using Hypoglycaemic Medications**

The use of BGL testing is helpful for getting an instant guide of a person's fasting glucose level. Since the advent of using HbA1c, the use of BGL has become less common but does have a role for certain situations. The majority of diabetics do not need BGL monitoring meters and are adequately maintained by use of HbA1c results. There are however certain circumstances in which it would be recommended that patients have access to BGL meters:

- **People using Insulin:** This is the commonest requirement BGL monitoring, it gives the patient an immediate record of fasting glucose and hence an indication of the insulin dosage they should be giving themselves. The strips should be readily accessible for both T1DM/T2DM on insulin and any other insulin using patient.

- **People using Sulphonylureas (SUs) who are car drivers:** Since the DVLA have changed their recommendations regarding Class 2 licensing to recorded twice daily monitoring for the HGV driver population, it has been suggested that Class 1 drivers should also have the ability to test (1). Although this is not a legal requirement it is recommended. Therefore despite the evidence for the clinical benefit offered from this approach being limited, BGL meters should be provided to this cohort to give them the option to test before driving.

- **People using Sulphonylureas (SUs) who are not car drivers:** As SUs can potentially cause hypoglycaemia, all patients on SUs should be considered for test strips with advice on appropriate frequency of use.

- **Changes in medication and the direct effect on BGL.** This cohort of patients should be advised to use BGL for short times only, after changes in medication have occurred without waiting 2-3 months for an HbA1c. This empowers the patient and gives them confidence in the treatment plans.

- **People who have frequent or unexpected hypoglycaemic events.** It is imperative that this group are given access to BGL meter strips. Hypoglycaemia events are potentially an avoidable situation that has physical and psychological consequences for people. Monitoring may allow reduction in the frequency of events but also potentially avoidable use of paramedics or hospital admissions.

- **Sick day rules.** All people who have diabetes, whatever the underlying pathophysiology will become systemically unwell at some point in their journey. Those that have tendency to do this frequently may need to monitor their BGL closely. There is standardised guidance with regard to sick day rules, but the base line assessments are using BGL meters to advise further treatment.

- **People who have been advised by a diabetes specialist to test.** This cohort of people may have ongoing issues with their diabetic control that needs monitoring closely by their Diabetes Specialist, or a range of other specific conditions necessitating testing. This group could include patients on courses of steroids; chemotherapy; following acute illness; maybe nondiabetics with symptoms suggestive of hypoglycaemia; patients post pancreatitis or pancreatectomy; renal patients. The need for this type of testing is likely to be short term in many cases.

In summary, the use of BGL testing is variable throughout the county. Blood glucose testing strips should only be NHS prescribed if there is good reason to do so. The results of Blood Glucose Level testing should be seen as a snapshot of the control but not as the long term trends that should be used to help plan treatment regimes. Primary care practitioners who are unsure about the need for ongoing blood glucose testing for any particular patients should consider an “advice and guidance” referral or assessment by the Community Diabetic Specialist Nurse (DSN) team.

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#### **DVLA blood glucose monitoring requirements:**

- **Commercial lorry or bus drivers (DVLA Group 2) on insulin or sulfonylureas** (eg. glibenclamide, glicazide) **or glinides** (eg. nateglinide, repaglinide) should regularly monitor blood glucose at least twice daily and at times relevant to driving eg. no more than 2 hours before the start of the first journey and every 2 hours while driving.
- **DVLA Group 2 drivers on insulin** should use a meter with a memory function capable of storing 3 months of readings available for assessment.
- **DVLA requirements for car & motorcycle drivers (DVLA Group 1)** diabetics managed by tablets (not on insulin) which carry **a risk of inducing hypoglycaemia (eg. sulphonylureas and glinides)**: if needed for the detection of hypoglycaemia, appropriate blood glucose monitoring at times relevant to driving and clinical factors, including frequency of driving.
- The DVLA requirements for **Group 1 drivers on insulin** are blood glucose testing no more than 2 hours before the start of the first journey and every 2 hours while driving.

Reference: <https://www.gov.uk/government/collections/assessing-fitness-to-drive-guide-for-medical-professionals>

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This Guidance has been agreed by the Formulary subgroup of the Gloucestershire Diabetes Clinical Programme Group