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PAN MERSEY AREA PRESCRIBING COMMITTEE  
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Pan Mersey

Area Prescribing Committee

## BLOOD GLUCOSE TESTING STRIPS

GREEN

The Pan Mersey Area Prescribing Committee recommends the prescribing of Blood Glucose Testing Strips in accordance with the following guidance.

**Type 1 Diabetes in adults**<sup>(1)</sup> NICE recommends routine self-monitoring of blood glucose levels for all adults with type 1 diabetes at least 4 times a day, including before each meal and before bed. This may be increased up to 10 times a day if any of the following apply:

- Desired target HbA1c level is not achieved
- Frequency of hypoglycaemic episodes increases
- There is a legal requirement to do so e.g. driving in line with DVLA
- During periods of illness
- Before, during or after sport
- When planning pregnancy, during pregnancy and while breastfeeding
- If needed for another reason e.g. impaired hypoglycaemia awareness, high risk activities, occupation or travel

**Type 2 Diabetes in adults**<sup>(2)</sup> NICE recommends not routinely offering self-monitoring of blood glucose levels for all adults with type 2 diabetes unless any of the following apply:

- The person is on insulin
- Evidence of hypoglycaemic episodes
- The person is on oral medication that may increase risk of hypoglycaemia while driving or operating machinery
- Pregnant or planning pregnancy

Take into account DVLA guidance on fitness to drive into account (see link below).

Consider short-term self-monitoring:

- When starting corticosteroid treatment
- To confirm suspected hypoglycaemia

**Type 1 and Type 2 Diabetes in children and young people**<sup>(3)</sup> NICE recommends monitoring of blood glucose levels in type 1 diabetes at least 5 times a day. More frequent monitoring may be needed e.g. with physical activity, intercurrent illness. NICE makes no recommendation on frequency of monitoring for children and young people with type 2 diabetes.

**Ketone monitoring**<sup>(1,3)</sup> NICE recommends considering monitoring of ketones in children, young people and adults as part of "sick-day rules" for managing type 1 diabetes during intercurrent illness or episodes of hyperglycaemia.

Meters should meet current ISO standards. See Pan Mersey [Blood Glucose Meters and Testing Strips](#) guideline for recommended meters.

Driver and Vehicle Licensing Agency (DVLA) guidance [At a glance guide to the current medical standards of fitness to drive](#)

### References

- 1) NICE NG 17, [Type 1 diabetes in adults](#), Aug. 2015
- 2) NICE NG28, [Type 2 diabetes in adults](#), Dec. 2015
- 3) NICE NG18, [Diabetes \(type 1 and type 2\) in children and young people](#), Aug. 2015

**Note:** Patients who are not eligible for treatment under this statement may be considered on an individual basis where their GP or consultant believes exceptional circumstances exist that warrant deviation from the rule of this policy. In this situation, follow locally defined processes.

## BLOOD GLUCOSE TESTING STRIPS

<b>Education and Lifestyle interventions</b>		
Blood glucose testing should only be initiated if the need/purpose is clear & agreed with the patient. Patient should receive education relevant to <b>appropriate testing, understanding when to test &amp; what to do with the result</b> . ALL PATIENT SELF-MONITORING SHOULD BE ENCOURAGED TO USE MINIMUM NUMBER OF TESTS REQUIRED TO IMPROVE CONTROL		
		Typical weekly strip usage
<b>Newly diagnosed type 2 patient + Diet control only</b>		
Self-monitoring may be required at diagnosis e.g. assessing effect of different foods. Self-monitoring not routinely recommended except during pregnancy or planning pregnancy, or short-term when starting corticosteroid treatment. Healthcare professional should advise patient when self-monitoring becomes necessary. <b>Recommended regime(s): ( A )</b>		1 – 2 strips / week if self-monitoring needed
<b>Type 2 patient prescribed oral therapy</b>		
Self-monitoring not routinely recommended except where evidence of hypoglycaemic episodes, where oral medication +/- GLP1 analogue may increase risk of hypoglycaemia while driving or operating machinery or pregnant or planning pregnancy. If self-monitoring necessary the healthcare professional should tailor monitoring regime to individual patient need depending on diabetes control. Special focus needed on testing to prevent hypoglycaemia especially in sulphonylurea therapy <b>Recommended regime(s): ( A ) ( B ) ( C )</b>		1 – 7 strips / week if self-monitoring needed
<b>Type 2 patient prescribed insulin</b>		
Self-monitoring is recommended in all cases with daily testing on initiation of insulin. Once a patient is stable, frequency of testing can be reduced to profiles on one or two days a week or daily at varying times (week profile) Stable patients are those whose blood glucose varies little from day to day & who are not having intensive changes of treatment. <b>Recommended regime(s): ( B ) ( D ) ( E )</b>		4 – 8 strips / week
<b>Type 1 patients prescribed insulin</b>		
Self-monitoring is recommended in all cases. Self-monitoring should be used to adjust insulin dose before meals where this is appropriate. Self-monitoring should be at least 4 times a day, including before each meal and before bed. <b>Recommended regime(s): ( F )</b>		28 strips / week
<b>Type 1 or 2 patient prescribed insulin - Intensive monitoring</b>		
Intensive monitoring required in patients, for example: - Desired target HbA1c level is not achieved - Frequency of hypoglycaemic episodes increases - There is a legal requirement to do so e.g. driving in line with DVLA - During periods of illness - Before, during or after sport - When planning pregnancy, during pregnancy and while breastfeeding - If needed for another reason e.g. impaired hypoglycaemia awareness, high risk activities, occupation or travel. - Patients on carbohydrate counting with dose adjustment or other intensive insulin programme, insulin pump. Self-monitoring up to 10 times a day <b>Recommended regime(s): ( G )</b>		Up to 70 strips / week
<b>Examples of typical self-monitoring regimes</b>		<b>Blood Ketone Testing</b> <b>Appropriate<sup>(1)</sup></b> :- Type 1 diabetes where blood glucose monitoring indicates high reading and/or acute illness. Women with type 1 diabetes planning pregnancy, or pregnant, should test for ketonaemia if hyperglycaemic/ unwell.  <b>Cystic Fibrosis Related Diabetes (CFRD) controlled by insulin</b> :- Patients often have variable glucose levels which can change rapidly and are more prone to hypoglycaemia. It is imperative that patients monitor blood glucose levels intensively including post meals. Blood ketone testing not required in CFRD.
<b>Regime A</b> One or two tests a week		
<b>Regime B</b> Once daily at various times (week profile)		
<b>Regime C</b> Two tests daily, twice a week		
<b>Regime D</b> Four tests at different times on one day (day profile)		
<b>Regime E</b> Day profile twice a week		
<b>Regime F</b> Test before meals and at bedtime each day		
<b>Regime G</b> Test before meals, snacks, exercise, driving and bed up to 10 times a day		
<b>Blood glucose monitoring targets</b>		<b>Increase testing Frequency during:</b> Pregnancy. Times of illness. Changes in Therapy. Change in Routine. Times of Poor Control. When risk of Hypoglycaemia.  <b>Remember: UK DVLA guidance states that all people who are insulin treated are advised to test their blood glucose before driving then every 2 hours during long journeys.</b>
Fasting 5 – 7 mmol/L on waking. At other times of the day pre-prandial 4–7 mmol/L, post prandial 5 - 9 mmol/L at least 90 minutes after eating (timing may be different in pregnancy)		
Self-monitoring does not replace regular HbA1c testing, which remains the gold-standard test, and should only be used in conjunction with appropriate therapy as part of integrated self-care.		

**The recommended number of testing strips in the above table is only a GUIDE, some patients may require more or less depending on the individual.**