

# Lincolnshire Prescribing and Clinical Effectiveness Bulletin

Volume 13 No 2, January 2019

Optum in association with Lincolnshire Clinical Commissioning Groups, Lincolnshire Community Health Services, United Lincolnshire Hospitals Trust and Lincolnshire Partnership Foundation Trust

## Blood Glucose Meters and Test Strip Options

**There are currently over 40 different types of Blood Glucose Test (BGT) strips available in the UK. The purpose of this list is to aid clinicians in the selection of an appropriate BGT strip for people with type 1 and type 2 Diabetes.**

### Recommendation in type 2 diabetes patients:

Blood glucose monitoring requires the use appropriate equipment. They greatly range in price therefore promoting the use of more cost effective test strips first line will enable savings to be made whilst not affecting patient care.
Rationalising the amount of BGT meters and test strips in use allows the education healthcare professionals who in turn can better assist patients with their testing. Patients should therefore be switched from more expensive meters to cost effective options.
All BGT meters on the list comply with required ISO 15197:2015 accuracy standards.
NHS England and NHS Clinical Commissioners have issued a further consultation on items which should not be routinely prescribed in primary care. This includes a recommendation that patients newly diagnosed with type 2 diabetes should not be initiated on blood glucose test strips that cost in excess of £10.00 per 50 strips.
Exceptions: Type 2 diabetics may require the facility to count carbohydrates that have been trained to utilise an appropriate carb counting meter. Suitable meters for this group will be included in the section covering meter/test strip choices for specific patient groups.
It is recommended to periodically review all those receiving blood glucose test strips and evaluate the need for self-monitoring, on an individual basis, determining frequency of monitoring and the minimum number of test strips required.
NICE guideline (NG28) Type 2 diabetes in adults: management recommends self-monitoring of capillary blood glucose in those patients with type 2 diabetes that are: <ul style="list-style-type: none"> <li>• On insulin therapy</li> <li>• Take oral medication that may cause hypoglycaemia</li> <li>• Pregnant or planning pregnancy</li> <li>• Have experience hypoglycaemia</li> <li>• Short term whilst on steroid medication</li> </ul>
For further information on self-monitoring: <a href="https://www.nice.org.uk/guidance/ng28/chapter/1-Recommendations#self-monitoring-of-blood-glucose">https://www.nice.org.uk/guidance/ng28/chapter/1-Recommendations#self-monitoring-of-blood-glucose</a>

Driving: The DVLA requires 3 month stored readings from meter for group 2 drivers, so consideration should be made regarding number of tests to be performed and storage capacity of meter.

Advice to follow when assessing drivers with diabetes:

<https://www.gov.uk/guidance/diabetes-mellitus-assessing-fitness-to-drive>

## FIRST LINE – meets the needs of majority of type 2 patients:

First choice meter	Company	Test strips	Benefits	Cost strips per box	Memory capacity
<b>Finetest Lite</b>	Neon	Finetest Lite	GDH-FAD Technology Result available in 5 seconds Uses 0.5µl blood volume. Compatible with Blue Tooth technology Strip ejection function	£5.95	500

- **Finetest Lite** should be used in all patients newly diagnosed with type 2 diabetes, unless the patient falls into a specific patient group (as outlined on page 3) where use of alternative meters, which meet a specific need, may be more appropriate.
- Those with type 2 diabetes (not in a specific patient group) currently using meters requiring test strips in excess of £10.00 per 50 strips, should be reviewed at the earliest opportunity and switched to Finetest Lite strips.
- The purpose of this guidance is to encourage use of the most cost effective option, when self-monitoring of blood glucose is indicated, without adversely affecting patient care. To maximise potential cost savings all patients should be reviewed to ensure they are only receiving the number of test strips appropriate for their current level of testing. Those previously using a meter which uses test strips costing <£10.00 for 50 strips should be assessed at their next review, with consideration to changing to Finetest Lite test strips, where appropriate.
- For patients who have difficulties using the first line meter, then an alternative meter utilising a low cost (<£10 per 50 strips) could be considered. The products listed in the table below are meters which the diabetes nurse specialists consulted in the development of this guidance have most experience with.

## Second LINE – type 2 diabetics who have difficulties using the First line meter

Second choice meter ( type 2 diabetics) For patients who have difficulties using the first line meter.	Manufacturer	Test strips	Cost strips per box (50)	Memory capacity
TEE2	Spirit healthcare	TEE2	£7.75	1000
Wavesense Jazz	Agamatrix	Wavesense Jazz	£8.74	1865
Glucomen Aero	Menarini	Glucomen Aero	£9.95	730
Contour	Bayer	Contour	£9.95	450
GlucorX Nexus/mini nexus	GlucorX	GlucorX Nexus	£9.95	1000
Accu-Chek Performa NANO	Roche	Performa	£9.95	500
Accu-Chek mobile	Roche	Accu-chek Mobile cassette	£9.99	2000

- TEE2, Wavesense Jazz or Glucomen Aero and GlucorX meters may be indicated if a larger memory capacity is required.
- Accu-Chek comes with a cassette which contains 50 tests. May be appropriate choice for patients where it is difficult to dispose of lancets and used test strips whilst working.
- Contour and Accu-Chek Performa NANO included at request of ULHT DSN team.

## Preferred list of meters for specific patient groups

Patient group	BGT - Meter	Manufacturer	Test strips	Cost strips per box (50 unless stated)
<ul style="list-style-type: none"> <li>• Patients on insulin pumps.</li> <li>• Glucose meters paired with insulin pumps. These cannot be swapped without specialist advice.</li> <li>• This list is not exhaustive, please check with specialist.</li> <li>•</li> </ul>	1. Contour Link (Medtronic)	Ascensia	Contour Next	£15.04
	2. Omnipod system	Insulet	Freestyle Lite	£15.97
	3. Accu-Chek Aiva Combo	Roche	Aviva	£16.21
	4. Accu-Chek insight	Roche	Aviva	£16.21
Carbohydrate counting required ( may also be required for small number of type 2 patients)	1. Contour Next one	Ascensia	Contour Next	£15.04
	2. Accu-Chek Aiva Expert	Roche	Aviva	£16.21
Visual impairment where sound is	GlucorX Nexus	GlucorX	GlucorX Nexus	£9.95

Patient group	BGT - Meter	Manufacturer	Test strips	Cost strips per box (50 unless stated)
required.				
Impaired manual dexterity	1. MyLife Pura	Ypsomed	MyLife Pura	£9.50
	2. Accu-Chek Mobile	Roche	Accu-chek Mobile cassette	£9.99
Ketone testing	1. Glucomen Aero 2K	Menarini	<ul style="list-style-type: none"> <li>Glucomen aero sensor (Glucose)</li> <li>Glucomen Aero (Ketone)</li> </ul>	£9.95 £9.95 (10)
	2. Freestyle Optium	Abbott	<ul style="list-style-type: none"> <li>Freestyle Optium (Glucose)</li> <li>Freestyle Optium β (Ketone)</li> </ul>	£16.12 £21.53 (10)
Gestational diabetes	Contour Next	Ascensia	Contour Next	£15.04
Pregnancy in established diabetes types 1 & 2	Flash glucose monitoring system – Freestyle Libre please refer to PACEF guidance.			
Type 1 patients	Flash glucose monitoring system – Freestyle Libre please refer to PACEF guidance.			

### **Additional information**

- AccuChek mobile – test strips included as part of meter. Device does have risk of falsely high readings if test procedures not followed
- MyLife Pura - Strip slides in horizontally at top of meter, making it easier to use with limited hand movements. Test strip also larger and rigid in design which makes it easier to manipulate.
- The BGT meters referred to in this list are recommended in Lincolnshire at the time of publication and meet the majority of the patients needs whilst complying with the ISO standards. The list is neither exhaustive nor exclusive and subject to change due to product updates and changes.

### **References**

1. MIMS and dm&d for prices plus test strip and meter compatibility - accessed online January 2019
2. Locally agreed preferred Blood glucose testing meters – Greater Nottingham
3. Blood Glucose and Ketone Meter Formulary – Mansfield and Ashfield CCG, Nottinghamshire Health Care, Newark and Sherwood CCG.
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5. Leicestershire Medicines Strategy Group – Self Monitoring of Blood Glucose.
6. Greater Manchester Medicines Management Blood Glucose Test Strip evaluation and protocol and results.
7. PACE Bulletin Vol 12 No 1 Flash Glucose Monitoring System Freestyle Libre®
8. Guideline for blood glucose monitoring .NHS Nene & NHS Corby. April 2018.
9. NHS Clinical commissioners. Items which should not routinely be prescribed in primary care: an update and a consultation on further guidance for CCGs. 28<sup>th</sup> November 2018.

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January 2019



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