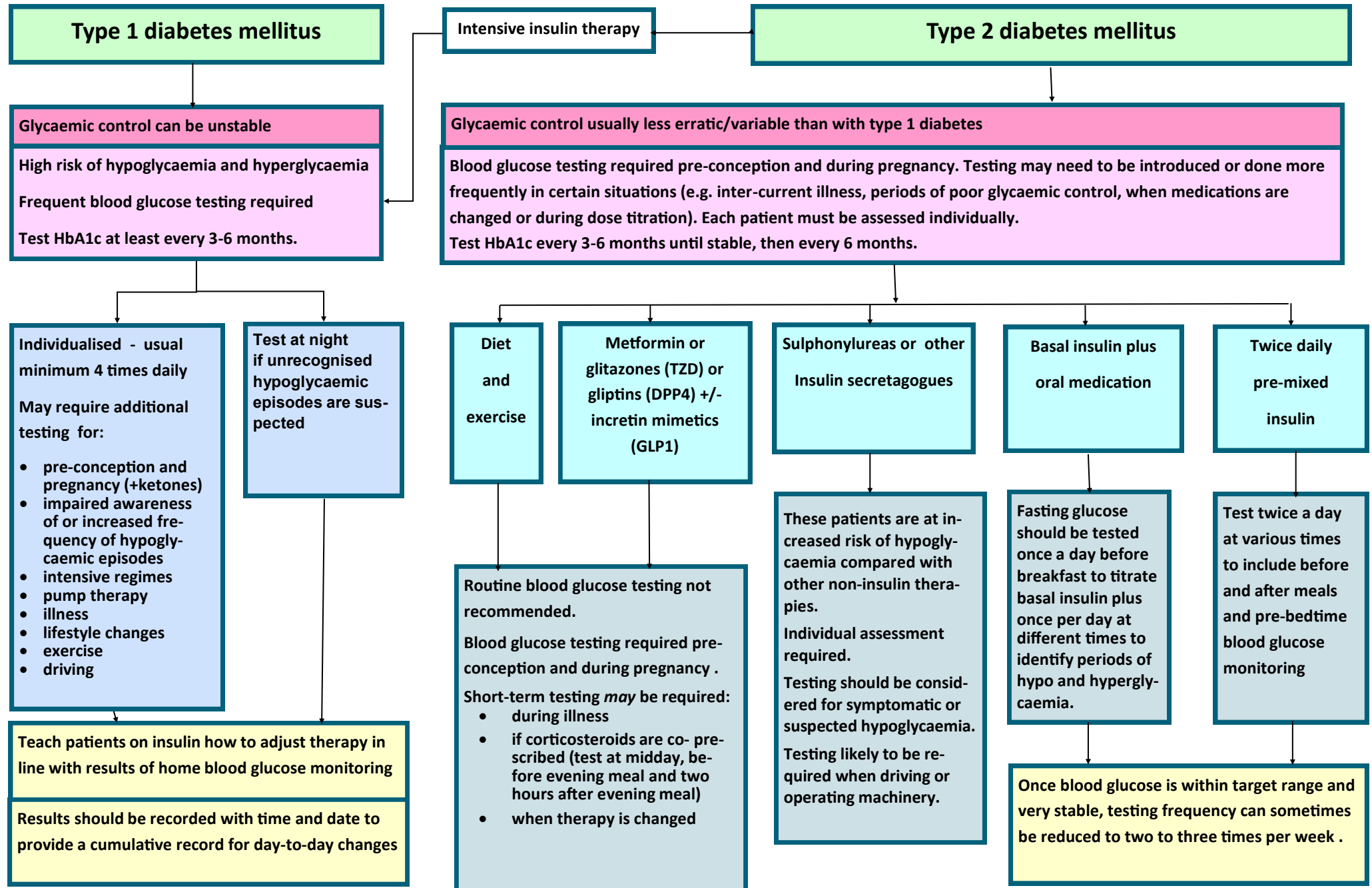


Self Monitoring of Blood Glucose



Guidance Notes

Self-monitoring of Blood Glucose (SMBG)

Routine SMBG is **recommended** for **all adult patients** with **type 1 diabetes**, with testing at least four times per day including before each meal and at bedtime. Children & young people should be advised to test at least 5 times per day. More frequent testing (up to 10 times per day) may be needed: when there is a legal requirement (e.g. before & during driving); before, during & after pregnancy; before, during or after sport; during illness; for problematic hypoglycaemia, and; when HbA1c targets are not met. Some people may need to test more than 10 times per day because of: high-risk activities or occupations; travel; long-distance driving; impaired awareness of hypoglycaemia.

Routine SMBG is **NOT recommended** for **adults** with **type 2 diabetes** not treated with insulin, unless: 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**. Short-term SMBG should be *considered*: when starting treatment with corticosteroids, and; to confirm suspected hypoglycaemia. All adults with type 2 diabetes who self-monitor blood glucose levels should have a **structured assessment at least once-a-year**. The following should be assessed: equipment used; self-monitoring skills; quality and frequency of testing; knowledge of how to interpret results and action to take; impact on quality of life, and; continued personal benefit.

The International Diabetes Federation recommends that: SMBG should be used only when individuals with diabetes (and/or their care-givers) and/or their healthcare providers have the knowledge, skills and willingness to incorporate SMBG monitoring and therapy adjustment into their diabetes care plan in order to attain agreed treatment goals. Unnecessary and unnecessarily frequent blood testing can impair quality of life, lead to anxiety and consume resources that could be more effectively deployed to support lifestyle change and other interventions.

Monitoring in pregnancy: In Pregnancy, type 1 diabetics should be prescribed Contour Next Strips for the Contour One Glucometer. The change in the meter is required as patients have typically wide ranging haematocrit in pregnancy.

DRIVING: The DVLA **requires** drivers of buses and lorries who use insulin or take oral medicines carrying risk of hypoglycaemia to test blood glucose levels at least twice every day (even when not driving), and to test no more than 2 hours before the start of the first journey and at least every 2 hours while driving. The DVLA **recommends** the same precautions for drivers of cars and motorbikes who use insulin. The DVLA **notes** that it is appropriate to offer SMBG at times relevant to driving to enable the detection of hypoglycaemia by drivers of cars and motorbikes who take oral medicines carrying risk of hypoglycaemia. See [DVLA guidance](#) for details.

Blood glucose targets

Adults with type 1 diabetes should aim for 5–7 mmol/litre on waking and 4–7 mmol/litre before meals at other times of the day. Non-pregnant adults who choose to test after meals should aim for 5–9 mmol/litre at least 90 minutes after eating. Bedtime targets should be individualized, taking account of timing of last meal; related insulin dose, and; recommended fasting level on waking. Targets for children differ. Targets may need to be individualized for older adults, people with certain co-morbidities, during pregnancy and for people engaged in certain high risk activities. **NICE have not recommended targets for instantaneous blood glucose levels in type 2 diabetes.**

HbA1c

HbA1c is the most appropriate measure of long-term blood glucose control in both type 1 and type 2 diabetes. Patients should be involved in decisions about their individual HbA1c target. Individual targets should take account of factors such as the person's daily activities, aspirations, likelihood of complications, comorbidities, occupation and history of hypoglycaemia. Adults with type 1 diabetes, and adults with type 2 diabetes treated with lifestyle and diet +/- a single drug not associated with hypoglycaemia, should be supported to aim for 48mmol/mol (6.5%). People with type 2 diabetes taking drugs associated with hypoglycaemia or requiring more than one drug should be supported to aim for 53mmol/mol (7.0%). Relaxed targets should be considered for people with type 2 diabetes who: are unlikely to achieve longer-term benefits; at high risk of the consequences of hypoglycaemia, or; have significant comorbidities.

Testing Strips & Lancets Quantity Guide.

Patients with	Quantities / Packs		
	Testing Strips-packs of 50	LANCETS – packs of 100	
Type 1 diabetes & Type 2 diabetes treated with intensive insulin therapy	2-3 packs every month	1 to 1½ packs every month	Quantities shown are based on typical testing routines. Individual requirements will vary & depend on recommended testing frequency. Expiry dates should be taken into account. Both strips and lancets are for single-use and equal quantities should be needed/provided. Continuation and frequency of use should be evaluated at each diabetes review. Consider issuing as acute or automatic rather than as repeat prescriptions.
Type 2 diabetes treated with basal or pre-mixed insulin	1 pack every month initially	1 every two months	
Type 2 diabetes at risk of hypoglycaemia due to insulin secretagogues	1 pack every three months	1 pack every six months	

Durham and Tees Valley Formulary choices for Blood Glucose Testing Strips, Ketone Test Strips, Pen Needles and Lancets

Functionality	Test Strips	Cost (@Feb 2020)	Meter Name	Company details	Contact	Website
1st Line - Standard	GlucoRx Q Test Strips	50 strips @ £5.45	Gluco Rx Q	Gluco Rx	01483 755133 / 0800 007 5892 (freephone)	info@glucorx.co.uk orders@glucorx.co.uk
Visually Impaired	GlucoRx Nexus Test Strips	50 strips @£8.95	Gluco Rx Nex-us Voice	Gluco Rx	01483 755133 / 0800 007 5892 (freephone)	info@glucorx.co.uk orders@glucorx.co.uk
Meters that have ketone testing	CareSens Pro test strips Ketosens test strips	Glucose strips 50 @ £12.75 Ketone strips 10 @ £9.95	CareSens Dual	Spirit Health	0800 881 5423	cs@spirit-healthcare.co.uk
Meters that have Carb Counting	Mobile Test Cassette	50 tests @ £9.99	AccuCheck Mobile	Roche	0800 731 5711	https://www.accu-chek.co.uk/help/blood-glucose-meters/mobile
Medtronic Insulin Pump	Contour Next Strips	50 strips @ £15.60	Contour Next One	Ascensia	0345 600 60 30	https://www.contournextone.co.uk/help-and-support/
Omnipod Insulin Pump	Freestyle Lite test strips	50 strips @ £16.40	Freestyle	Abbott	0800 170 1177	https://www.myfreestyle.com/content/adc/myfreestyle/countries/us/en/pages/freestyle-freedom-lite-meter
Pen Needles	Gluco Rx care point	100 @ £2.75		Gluco Rx	01483 755133 / 0800 007 5892 (freephone)	info@glucorx.co.uk orders@glucorx.co.uk
Safety Needles	BD Autosshield Duo	100 @ £25.00		BD	0800 917 8776	BDUK_customerservice@bd.com
	Or Microdot dual	100 @ £25.00		Microdot	0800 088 3920	https://www.microdot.biz/contact/
Lancets	Gluco Rx Lancets	100 @ £2.25		Gluco Rx	01483 755133 / 0800 007 5892 (freephone)	info@glucorx.co.uk orders@glucorx.co.uk