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Update to Guidance on Blood Glucose Self-Monitoring for Adult patients with Diabetes

Introduction

From the recent Association of Clinical Diabetologists (ABCD) / DVLA guidance 2012, requests for blood glucose strips by some patients may increase (1).

The Guideline Development Group (GDG) for NICE Clinical Guidelines states clearly that 'The frequency of monitoring is useful to someone with diabetes is highly individual and it is inappropriate to put an artificial restriction on this'.(2)

Blood Glucose monitoring for patients with Type 2 diabetes on oral medication 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.(3)

Self monitoring is appropriate for patients with Type 1 diabetes and those with Type 2 diabetes who use insulin 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

Stability of diabetes	Minimum frequency of testing	Suggested units of testing reagents/year (minimum requirement)
Stable control	Blood glucose monitoring 1-2 times a week, at different times of the day	2 boxes of 50 strips per year
Newly diagnosed patients, those whose diabetes is difficult to control, intercurrent illness and varying doses eg: steroids will need to test more frequently and therefore should be prescribed larger quantities.		

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
Pre existing Pregnancy	7-8 times daily pre and post prandial	N/A



DVLA and Driving Advice

The DVLA / DUK advice on Hypoglycaemia and blood glucose monitoring can be found at:

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

At a glance Guide to the current Medical Standards of Fitness to Drive Chapter 3 Dec 2011

https://www.diabetes.org.uk/Documents/catalogue/Driving_and_diabetes.1211.pdf

Suggested monitoring frequencies

Frequency and timing of self-monitoring should be determined individually by the clinical needs of the patient. This may vary from one or two tests a week for patients with stable type 2 diabetes to 3 times a day before meals and again at night for some patients on insulin, where there are problems with control or hypoglycaemia.

'Blood glucose testing, combined with education, provides people with Type1 and Type 2 diabetes to make day to day decisions about food, physical activity and treatment to maintain optimum control of blood glucose' (2)

If self-monitoring of blood glucose is carried out, then its purpose should be clearly defined within an effective management plan for the patient

NICE Type 2 Guidelines (3):

Self-monitoring of plasma glucose should be available:

- _ to those on insulin treatment
- _ to those on oral glucose lowering medications to provide information on hypoglycaemia
- _ to assess changes in glucose control resulting from medications and lifestyle changes
- _ to monitor changes during intercurrent illness
- _ to ensure safety during activities, including driving.

Assess at least annually and in a structured way:

- _ self-monitoring skills
- _ the quality and appropriate frequency of testing
- _ the use made of the results obtained
- _ the impact on quality of life
- _ the continued benefit
- _ the equipment used.

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References

1. Gallen I, Amiel S, Robinson T, MacKnight J (2012) Practical Diabetes Vol 29 No 1
2. Diabetes UK Position Statement. Self - monitoring of blood glucose (2009)
3. NHS Diabetes Self monitoring of blood glucose in non- insulin treated Type 2 diabetes 2009
4. NICE Clinical Guideline 66 –Type 2 diabetes 2008