

# Blood Glucose Monitoring Guidance - Type 1 Diabetes

## Information on Self-Monitoring of Blood Glucose (SMBG)

- All patients with type 1 diabetes should self-monitor blood glucose and have the facility to monitor urine or blood ketones.
- Adults should test blood glucose at least 4 times a day and up to 10 times a day if:
  - The desired target for HbA1c is not achieved
  - The frequency of hypoglycaemic episodes increases
  - There is a legal requirement to do so (such as driving)
  - During periods of illness
  - Before, during and after sport
  - When planning pregnancy, during pregnancy and while breastfeeding
  - There is a need to know blood glucose levels more than 4 times a day for other reasons eg impaired awareness of hypoglycaemia, high risk activities.

Additional blood glucose testing (more than 10 times per day) should be enabled if necessary because of the person's lifestyle for example, driving for a long period of time, undertaking high-risk activity or occupation, travel) or if the person has impaired awareness of hypoglycaemia

- Children routinely perform at least 5 capillary blood glucose tests per day. More frequent monitoring is often needed for example with physical activity and during intercurrent illness, ensure enough test strips are available for this
- Patients should be taught how to INTERPRET and ACTION results
- Patient education is vital - SMBG is only as good as the way it is used
- Patients with a car or motorcycle license who are prescribed insulin must notify the DVLA
- Patients on insulin should check blood glucose no more than 2 hours before the start of first journey & every 2hrs whilst driving
- There are additional requirements for patients with a bus, coach or lorry license - see guidance

DVLA information on diabetes

<https://www.gov.uk/diabetes-driving>

Diabetes UK information on driving

[https://www.diabetes.org.uk/Guide-to-diabetes/Living\\_with\\_diabetes/Driving/](https://www.diabetes.org.uk/Guide-to-diabetes/Living_with_diabetes/Driving/)

## Number of blood glucose test strips required on prescription

	Frequency of testing	Number of boxes (of 50) every 2 months
Adults	4 times a day	5
	10 times a day	12
	More frequent testing	13+
Children	5 times a day	6
	More frequent testing (10 times a day)	12

This is a guide only (there should be no restriction on the number of test strips provided). The number of test strips required should be guided by the patient and diabetic specialist.

## Choice of meter

Criteria	Meter	Test strips	Comments
Insulin pump	Medtronic	Ascensia (Bayer) meters – Contour next link	Contour next
	Roche	Accu-Chek Aviva	Aviva
	Omnipod	Freestyle Optium	FreeStyle Optium FreeStyle Optium beta-ketone test strips
	Animas	GlucoMen Areo 2K	GlucoMen areo GlucoMen areo β-ketone
Self-funding (or a trial of) the FreeStyle Libre Flash meter	Freestyle Optium	FreeStyle Optium FreeStyle Optium beta-ketone test strips	Because these systems measure interstitial glucose drivers must also measure capillary blood glucose
Blood glucose checked by a community nurse	Follow local guidelines		
Carbohydrate counting and/or a bolus advisor	Accu-check Aviva expert FreeStyle InsuLinx	Accu-check aviva FreeStyle Lite	
None of the above and blood ketone testing (including during pregnancy)	GlucoMen areo 2K	GlucoMen areo GlucoMen areo β-ketone	
None of the above and urine ketone test	Any of the meters on the <a href="#">type 2 diabetes guideline</a>		Meters on the type 2 guideline: Accucheck peforma nano, Accucheck mobile, Contour TS, Glucomen Areo, GluNEO, GlucoRx Nexus
Children and young people	To be advised by secondary care		

**Glucomen Areo 2K**  
 (Menarini)

- GlucoMen areo Sensor £9.95/50
- GlucoMen areo Ketone sensors £9.95/10
- Meal markers
- 730 memory that cannot be deleted and contactless download to smart devices
- Carbohydrate counting app RapidCalc for apple
- No Coding required
- Cannot be provided for Ketone testing alone
- Patient support
- ☎ 0800243667
- 🌐 <http://www.glucomen.co.uk/>
- Supplies of meters to professionals ☎ 0800243667



Alternative sub £10 for 50 blood glucose / and 10 ketone test strips meters can be used instead of Glucomen Areo 2K as appropriate for the patient.

## References and further guidance

NICE NG 17 Type 1 diabetes in adults: diagnosis and management

NICE NG 18 Diabetes (type 1 and 2) in children and young people: diagnosis and management