

Measure HbA_{1c} levels every 3-6 months in adults with type 1 diabetes.

Use methods to measure HbA_{1c} that have been calibrated according to International Federation of Clinical Chemistry (IFCC) standardisation.

Consider measuring HbA_{1c} levels more often in adults with type 1 diabetes if the person's blood glucose control is suspected to be changing rapidly; for example, if the HbA_{1c} level has risen unexpectedly above a previously sustained target.

If HbA_{1c} monitoring is invalid (because of disturbed erythrocyte turnover or abnormal haemoglobin type), estimate trends in blood glucose control using one of the following:

- fructosamine estimation
- quality-controlled blood glucose profiles
- total glycated haemoglobin estimation (if abnormal haemoglobins).

Agree an individualised HbA_{1c} target with each adult with type 1 diabetes, taking into account factors such as the person's daily activities, aspirations, likelihood of complications, comorbidities, occupation and history of hypoglycaemia.

Support adults with type 1 diabetes to aim for a target HbA_{1c} level of 48 mmol/mol (6.5%) or lower, to minimise the risk of long-term vascular complications.

Support people with type 1 diabetes to test at least 4 times per day, and up to 10 times a day if any of the following apply:

- the target for blood glucose control, measured by HbA_{1c} level (see recommendation 1.6.6), is not achieved
- the frequency of hypoglycaemic episodes increases
- there is a legal requirement to do so (such as before driving, in line with the Driver and Vehicle Licensing Agency [DVLA] At a glance guide to the current medical standards of fitness to drive)
- during periods of illness
- before, during and after sport
- when planning pregnancy, during pregnancy and while breastfeeding (see the NICE guideline on diabetes in pregnancy)
- if there is a need to know blood glucose levels more than 4 times a day for other reasons (for example, impaired awareness of hypoglycaemia, high-risk activities).

Enable additional blood glucose testing (more than 10 times a day) for adults with type 1 diabetes if this is 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.

Advise adults with type 1 diabetes to aim for:

- a fasting plasma glucose level of 5-7 mmol/litre on waking and
- a plasma glucose level of 4-7 mmol/litre before meals at other times of the day.

Advise adults with type 1 diabetes who choose to test after meals to aim for a plasma glucose level of 5-9 mmol/litre at least 90 minutes after eating. (This timing may be different in pregnancy - for guidance on plasma glucose targets in pregnancy, see the NICE guideline on diabetes in pregnancy).

Consider real-time continuous glucose monitoring for adults with type 1 diabetes who are willing to commit to using it at least 70% of the time and to calibrate it as needed, and who have any of the following despite optimised use of insulin therapy and conventional blood glucose monitoring:

- More than 1 episode a year of severe hypoglycaemia with no obviously preventable precipitating cause.
- Complete loss of awareness of hypoglycaemia.
- Frequent (more than 2 episodes a week) asymptomatic hypoglycaemia that is causing problems with daily activities.
- Extreme fear of hypoglycaemia.
- Hyperglycaemia (HbA_{1c} level of 75 mmol/litre [9%] or higher) that persists despite testing at least 10 times a day (see recommendations 1.6.11 and 1.6.12). Continue real-time continuous glucose monitoring only if HbA_{1c} can be sustained at or below 53 mmol/mol [7%] and/or there has been a fall in HbA_{1c} of 27 mmol/mol [2.5%] or more.