

key points

SELECTED BY

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Type 1 diabetes affects around 370,000 adults in the UK, about 10% of all those diagnosed with diabetes. In type 1 diabetes there is a lack of beta cell insulin secretion as a result of autoimmune destruction of the beta cells. However, patients are not affected by insulin resistance, and so do not routinely experience the features of metabolic syndrome that occur in type 2 diabetes.

NICE recommends considering further investigation with autoantibody testing or measurement of C-peptide when: type 1 diabetes is suspected but the presentation includes atypical features (e.g. age ≥ 50 , BMI ≥ 25 kg/m², slow evolution of hyperglycaemia or long prodrome); type 1 diabetes has been diagnosed and treatment started but there is a clinical suspicion that the patient may have a monogenic form of diabetes, and C-peptide and/or autoantibody testing may guide the use of genetic testing; classification is uncertain, and confirming type 1 diabetes would have implications for therapy.

Structured education is the cornerstone of care providing tools to allow effective self-management. Following a new diagnosis of type 1 diabetes structured education should be offered within 12 months. DAFNE has been shown to reduce HbA_{1c} by 11 mmol/mol (1.0%), without increasing frequency of hypoglycaemia, and to improve quality of life.

NICE advises that newly diagnosed patients should be offered a regimen including a basal (long-acting) insulin with bolus (rapid-acting) insulin given at mealtimes. The optimal regimen, which should be offered from diagnosis, is a combination of twice daily insulin detemir and a rapid-acting analogue given at mealtimes. However, where glycaemic control is already optimised on an alternative insulin regimen this should not be discontinued.

Adults with type 1 diabetes should test their blood glucose at least 4 times per day, including before each meal and before going to bed. However support should be given to test up to 10 times per day if: the desired target for blood glucose control is not achieved; frequency of hypoglycaemic episodes increases; there is a legal requirement to do so; during illness; before, during and after sport; when planning, and during, pregnancy and while breastfeeding; there is a need to know blood glucose levels > 4 times a day for other reasons (e.g. impaired awareness of hypoglycaemia, high-risk activities). Testing > 10 times per day should be offered if this is necessitated by lifestyle (e.g. driving for a long period, high-risk activity or occupation, travel) or if the patient has impaired awareness of hypoglycaemia.

Most patients should achieve an HbA_{1c} < 53 mmol/mol. Insulin pump therapy, continuous glucose monitoring, structured education and the care of problematic hypoglycaemia should be delivered in centres with specialist expertise. In most cases primary care will take the lead on monitoring and surveillance. Annual review should include screening for hypoglycaemia awareness.