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## Quick reference guide

# Type 1 diabetes: diagnosis and management of type 1 diabetes in adults



## Clinical Guideline 15

Developed by the National Collaborating Centre  
for Chronic Conditions

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The recommendations relate to the diagnosis and management of type 1 diabetes in adults (people aged 18 years and older)

## This guidance is written in the following context:

This guidance represents the view of the Institute, which was arrived at after careful consideration of the evidence available. Health professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of health professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

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## Key messages

The Guideline Development Group reviewed the recommendations and summarised these key messages for implementation.

### Patient-centred care

The views and preferences of individuals with type 1 diabetes should be integrated into their healthcare. Diabetes services should be organised, and staff trained, to allow and encourage this.

### Multidisciplinary team approach

The range of professional skills needed for delivery of optimal advice to adults with diabetes should be provided by a multidisciplinary team. Such a team should include members having specific training and interest to cover the following areas of care:

- education/information giving
- nutrition
- therapeutics
- identification and management of complications
- foot care
- counselling
- psychological care.

### Education for adults with diabetes

Culturally appropriate education should be offered after diagnosis to all adults with type 1 diabetes (and to those with significant input into the diabetes care of others). It should be repeated as requested and according to annual review of need. This should encompass the necessary understanding, motivation and skills to manage appropriately:

- blood glucose control (insulin, self-monitoring, nutrition)
- arterial risk factors (blood lipids, blood pressure, smoking)
- late complications (feet, kidneys, eyes, heart).

### Blood glucose control

Blood glucose control should be optimised towards attaining DCCT-harmonised HbA<sub>1c</sub> targets for prevention of microvascular disease (less than 7.5%) and, in those at increased risk, arterial disease (less than or equal to 6.5%) as appropriate, while taking into account:

- the experiences and preferences of the insulin user, in order to avoid hypoglycaemia
- the necessity to seek advice from professionals knowledgeable about the range of available meal-time and basal insulins and about optimal combinations thereof, and their optimal use.

### Arterial risk-factor control

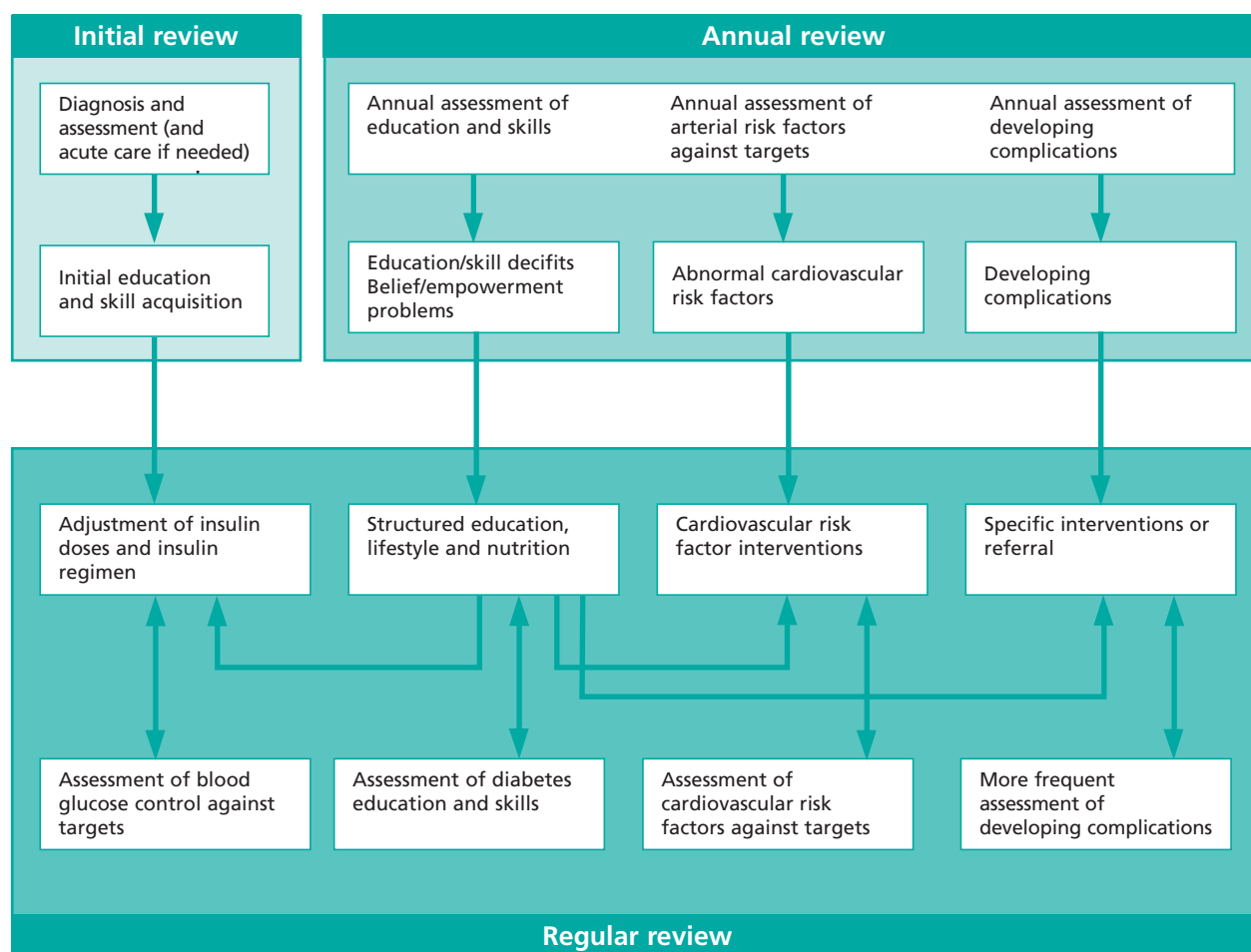
Adults with type 1 diabetes should be assessed for arterial risk at annual intervals. Those found to be at increased risk should be managed through appropriate interventions and regular review. Note should be taken of:

- microalbuminuria, in particular
- the presence of features of the metabolic syndrome
- conventional risk factors (family history, abnormal lipid profile, raised blood pressure, smoking).

### Late complications

Adults with type 1 diabetes should be assessed for early markers and features of eye, kidney, nerve, foot and arterial damage at annual intervals. According to assessed need, they should be offered appropriate interventions and/or referral in order to reduce the progression of such late complications into adverse health outcomes affecting quality of life.

## Outline algorithm of care for adults with type 1 diabetes



## Grading of the recommendations

This guidance is evidence based and the recommendations are graded as follows.

- A** Evidence from at least one randomised controlled trial or meta-analysis of randomised controlled trials
- B** Evidence from at least one controlled study without randomisation or at least one other type of quasi-experimental study, or extrapolated from a randomised controlled trial or meta-analysis
- C** Evidence from non-experimental descriptive studies or extrapolated from experimental or quasi-experimental studies
- D** Expert committee reports or opinions, and/or clinical experience of respected authorities or extrapolated from studies
- DS** Evidence from diagnostic studies
- N** Evidence from NICE clinical guideline or Health Technology Appraisal Programme

For further details, see the NICE guideline ([www.nice.org.uk/CG015NICEguideline](http://www.nice.org.uk/CG015NICEguideline)) and the full guideline ([www.nice.org.uk/CG015adultsfullguideline](http://www.nice.org.uk/CG015adultsfullguideline) or [www.rcplondon.ac.uk/pubs/books/dia/index.asp](http://www.rcplondon.ac.uk/pubs/books/dia/index.asp))

## Diabetes care structure and process

### Process

- Manage each person as an individual, rather than as a member of any cultural, economic or health-affected group. Consider individual and cultural preferences when following this guideline. **D**
- Review the person's individual care plan annually, modify according to changes in wishes, circumstances and medical findings, and record the details. **D**

### Components of an individual care plan

- Diabetes education, including nutritional advice (see 'Dietary management' page 6)
- Insulin therapy (see 'Choice of insulin and insulin regimen' page 8, 'Insulin delivery' page 9)
- Self-monitoring (see 'Self-monitoring of blood glucose control' page 7)
- Arterial risk factor surveillance and management (see 'Management of arterial risk' page 10)
- Late complications surveillance and management (see 'Late microvascular complications' page 12)
- Means and frequency of communication with the professional care team
- Follow-up consultations, including next annual review

### Structure

- Provide advice to people with type 1 diabetes using a coordinated approach, with professionals working together to deploy a range of skills. **D**
- Make available:
  - advice on a walk-in/telephone-request basis during working hours
  - helpline to people with specific diabetes expertise on a 24-hour basis. **D**
- Establish diabetes registers to support recall systems for surveillance of complications and vascular risk, and for quality management. **D**

### Support groups

- Make people with diabetes aware of support groups and their functions. **C**

### Transition from adolescent to adult care services\*

- Agree protocols for transfer from paediatric to adult services.
- Organise age-banded clinics.
- Encourage attendance at clinics 3 or 4 times per year.
- Allow time for young people to familiarise themselves with the practicalities of transition.
- Inform young people that some aspects of diabetes care will change at transition.
- Transfer should:
  - take account of physical development and emotional maturity
  - take account of local circumstances
  - occur at a time of relative stability of health
  - be coordinated with other life transitions.

\* From the recommendations for the treatment and care of children and young people with type 1 diabetes in the NICE guideline (see back cover for details).

## Diagnosis of type 1 diabetes

- If classical symptoms present, confirm diagnosis by a single laboratory glucose measurement. **D**
- If classical symptoms not present, confirm diagnosis by two laboratory glucose measurements. **D**
- HbA<sub>1c</sub> measurement may support diagnosis. **D**
- Where a person appears to have type 2 diabetes, consider type 1 diabetes if:
  - ketonuria is detected, or
  - weight loss is marked, or
  - the person does not have features of the metabolic syndrome or other contributing illness. **D**
- Consider the possibility that apparent type 1 diabetes is not type 1 diabetes in younger people:
  - with obesity or
  - with a family history of diabetes especially if of non-white ethnicity. **D**
- Do not routinely use measurement of specific auto-antibodies or C-peptide to confirm the diagnosis of type 1 diabetes – consider their use to discriminate type 1 from type 2 diabetes. **D**

### Initial management plan

- Agree between the professional team and the person with type 1 diabetes a plan for their early diabetes care. **D**

#### Elements of the assessment necessary to form a robust agreed care plan

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Medical assessment               <ul style="list-style-type: none"> <li>– acute medical history</li> <li>– complications history/symptoms</li> <li>– long-term/recent diabetes history</li> <li>– other medical history/systems</li> <li>– family history of diabetes/arterial disease</li> <li>– drug history/current drugs</li> <li>– vascular risk factors including smoking</li> <li>– general examination, weight/body mass index</li> <li>– foot/eye/vision examination</li> <li>– urine albumin excretion/urine protein/serum creatinine</li> <li>– psychological well-being</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Environmental assessment               <ul style="list-style-type: none"> <li>– social, home, work and recreational circumstances of the individual and carers</li> <li>– immediate family and social relationships and availability of informal support</li> <li>– preferences in nutrition and physical activity</li> <li>– other relevant factors such as substance use</li> </ul> </li> <li>• Cultural and educational assessment               <ul style="list-style-type: none"> <li>– attitudes to medicine and self-care</li> <li>– prior knowledge of diabetes</li> </ul> </li> </ul> |
|---|---|

- Ensure care plan (see 'Diabetes care structure and process' page 4) is individualised and culturally appropriate. **D**
- Implement the plan without inappropriate delay. **D**
- Modify the plan as required. **D**

## Diet and lifestyle

### Dietary management

- Offer nutritional information from diagnosis onwards. **D**
- Provide information that:
  - is sensitive to personal needs and culture
  - is offered individually and as part of a diabetes education programme
  - includes advice from professionals with specific and approved training
  - takes account of associated features of diabetes (excess weight and obesity, underweight, eating disorders, raised blood pressure, renal failure). **D**
- Offer education programmes that enable people to make:
  - optimal choices about the foods they wish to consume
  - insulin dose changes when taking different quantities of those foods. **A**
- Be aware of contemporary and appropriate nutritional advice on the many common topics of concern and interest to people living with type 1 diabetes, and be prepared to seek advice from colleagues with specialist knowledge. **D**
- Assess education needs annually, agree when further help is needed and provide that at the agreed intervals. **D**

### Dietary education – discussion topics

- Hyperglycaemic effects of different foods in the context of the insulin preparations chosen to match the person's food choices **A**
- Effects of consuming different food types and the insulin preparations available to match them **D**
- Choice of content, timing and amount of snacks taken between meals and at bedtime – modify on the basis of self-monitoring tests **D**
- Healthy eating to reduce arterial risk (low glycaemic index foods, fruit and vegetables, types and amount of fat) **D**
- If the person wants it, information on:
  - effects of different alcohol-containing drinks on blood glucose excursions and calorie intake
  - use of high-calorie and high-sugar 'treats'
  - use of foods with a high glycaemic index **D**

### Other lifestyle recommendations

#### Physical activity

- Advise that physical activity can reduce enhanced arterial risk in the medium and longer term. **C**
- Give information (if the person chooses to increase physical activity) on:
  - appropriate intensity and frequency of physical activity
  - self-monitoring of changed insulin and/or nutritional needs
  - effect of exercise on blood glucose levels when insulin levels are adequate (risk of hypoglycaemia) or when hypoinsulinaemic (risk of exacerbation of hyperglycaemia)
  - appropriate adjustments of insulin dosage and/or nutritional intake for exercise and for 24 hours afterwards
  - interactions of exercise and alcohol
  - where to find more information. **D**

#### Smoking

- Advise young adult non-smokers never to start smoking. **D**
- Advise people who smoke on smoking cessation and use of smoking cessation services (where appropriate). **D**
- Reinforce messages at least annually in continuing smokers (and at every clinical contact if the person might consider stopping smoking). **D**

# Clinical monitoring and self-monitoring of blood glucose control

## Clinical monitoring

- Measure HbA<sub>1c</sub> (high precision DCCT-aligned method) every 2–6 months at the time of, or a few days before, consultation. **D**
- Communicate the results (as 'A1c' for simplicity) to the person with diabetes. **D**
- If haemoglobinopathy or haemoglobin turnover are abnormal, use other methods (total glycated haemoglobin estimation, or assessment of glucose profiles). **A**
- Avoid fructosamine measurement as a routine. **B**
- Consider continuous glucose monitoring systems if:
  - there is repeated hyper- or hypoglycaemia at the same time of day, or
  - hypoglycaemia unawareness is unresponsive to conventional insulin dose adjustment. **B**

## Self-monitoring of blood glucose control

- Advise use of self-monitoring as part of an integrated package including:
  - appropriate insulin regimens
  - other diabetes education. **D**
- Advise use of meters and strips chosen to suit individual needs (but not use of sites other than the fingertips for self-monitoring). **D**
- Advise a frequency of self-monitoring depending on:
  - characteristics of an individual's blood glucose control
  - insulin treatment regimen
  - personal preference in using the results to achieve the desired lifestyle. **D**
- Teach self-monitoring skills close to time of diagnosis and initiation of insulin therapy. **D**
- Interpret results in the light of clinically significant life events. **D**
- Reassess skills, use of results and equipment used at least annually. **D**

## Targets

### Clinical monitoring

- HbA<sub>1c</sub> < 7.5 % **B**
- If increased arterial risk: HbA<sub>1c</sub> ≤ 6.5 % (see 'Management of arterial risk' page 10) **N**
- Advise that any improvement is beneficial, even if target HbA<sub>1c</sub> levels are not reached (and the greater the improvement, the more the benefit) **B**

### Self-monitoring **D**

- Pre-prandial blood glucose level 4.0–7.0 mmol/litre
- Post-prandial blood glucose level < 9.0 mmol/litre

- With lower HbA<sub>1c</sub> levels, beware of:
  - undetected hypoglycaemia
  - risk of disabling hypoglycaemia
  - risk of hypoglycaemia unawareness. **D**
- Avoid inappropriately pursuing tight blood glucose control if quality of life is compromised despite otherwise optimal care, or the risk of hypoglycaemia is significant to the individual. **D**

## Insulin therapy and hypoglycaemia

### Choice of insulin and insulin regimen

- Prescribe the types of insulin that allow people optimal well-being. **A**
- Use multiple insulin injection regimens in adults who prefer them in an integrated package with education, food, skills training and appropriate self-monitoring. **A**
- Advise twice-daily insulin regimens (often biphasic pre-mixes; analogues in those prone to hypoglycaemia at night) for those:
  - who want them
  - who find adherence to lunch-time insulin injections difficult
  - with learning difficulties who may require assistance. **D**

### Choices of insulin

**Meal-time insulin:** use unmodified ('soluble') insulin or rapid-acting insulin analogues. **D**

- Use rapid-acting insulin analogues rather than unmodified insulin:
  - where nocturnal or late inter-prandial hypoglycaemia is a problem
  - to avoid need for snacks, while maintaining equivalent blood glucose control. **A**

**Basal/nocturnal insulin supply:** use isophane (NPH) insulin or long-acting insulin analogues (insulin glargine).

- Use isophane (NPH) insulin or long-acting insulin analogues (insulin glargine) for basal/nocturnal insulin supply (isophane (NPH) insulin given at bedtime, or given twice daily with meal-time insulin analogues). **D**
- Use long-acting insulin analogues (insulin glargine) when:
  - nocturnal hypoglycaemia is a problem on isophane (NPH) insulin
  - morning hyperglycaemia on isophane (NPH) insulin results in difficult day-time blood glucose control
  - rapid-acting insulin analogues are used for meal-time blood glucose control. **D**
- Advise detailed review of regimens and monitoring for people whose nutritional and physical activity patterns vary considerably from day to day. **D**

Avoid the general use of oral glucose-lowering drugs in people with type 1 diabetes. **D**

### Special situations

**Eating before fasting or sleeping:** consider use of a rapid-acting insulin analogue. **D**

**Erratic and unpredictable blood glucose control:** consider:

- resuspension of insulin and injection technique
- injection sites
- self-monitoring skills
- knowledge and self-management skills
- nature of lifestyle
- psychological and psychosocial difficulties
- possible organic causes such as gastroparesis. **D**

**Recurrent severe hypoglycaemia problems despite optimised control:** see NICE guidance on insulin pumps ([www.nice.org.uk/TA057](http://www.nice.org.uk/TA057)). **N**

**Adults starting insulin therapy:** consider partial insulin replacement if it can meet control targets. **D**

**Concurrent illness:** provide guidelines and protocols ('sick day rules') prospectively as part of the education programme. **D**

## Insulin delivery

- Provide the device (usually injection pen[s]) that allows optimal well-being – special devices are useful in some people with special needs. **D**
- Injection: into deep subcutaneous fat, using needles of length appropriate to the individual. **D**
- Site: usually the abdominal wall (if not a problem) but thigh may give better absorption for isophane (NPH) insulin. **D**
  - Rotate within a site, but not between sites, for insulin given at one time of day. **D**
- Monitor injection sites annually, or more often if glucose control problem. **D**

**Disposal of needles:** provide sharps containers and arrangements for their disposal. **D**

## Hypoglycaemia prevention and management

### Aim

- Aim for hypoglycaemia avoidance, while maintaining blood glucose control as close to optimum levels as is feasible (see 'Insulin therapy and hypoglycaemia' page 8). **B**

### Managing hypoglycaemia

**Self-managed event:** take any available glucose/sucrose-containing substance that can be swallowed. **A**

#### Decreased consciousness level and unable to take oral treatment safely:

- give intramuscular glucagon (administered by trained user) or intravenous glucose (administered by a skilled professional)
- if level of consciousness is not improving significantly at 10 minutes, give intravenous glucose
- give oral carbohydrate when safe, and ensure continuing observation for risk of relapse. **D**

### Problematic hypoglycaemia

- Review:
  - insulin regimens (dose distributions/insulin types)
  - meal and activity patterns, including alcohol
  - injection technique and skills, including insulin resuspension
  - injection site problems
  - possible organic causes, including gastroparesis
  - changes in insulin sensitivity (drugs/renal failure)
  - psychological problems
  - physical activity
  - appropriate knowledge and skills for self management. **D**
 (See also 'Insulin therapy and hypoglycaemia' page 8.)

### Hypoglycaemia unawareness

- Assume secondary to undetected periods of hypoglycaemia (commonly at night) until excluded by monitoring. **D**
- Offer specific education on detection and management. **D**

**Nocturnal hypoglycaemia (symptomatic or detected on monitoring)**

- Review knowledge, self-management skills, insulin regimen, evening eating habits and earlier physical activity.
- Use insulin type and regimens such as:
  - isophane (NPH) insulin at bedtime
  - rapid-acting analogue with the evening meal
  - long-acting insulin analogue (insulin glargine)
  - insulin pump (see 'Insulin therapy and hypoglycaemia' page 8). **D**

**Late post-prandial hypoglycaemia**

- Advise appropriate snacks or rapid-acting insulin analogues. **D**

**Early cognitive decline**

- Consider hypoglycaemic brain damage. **D**

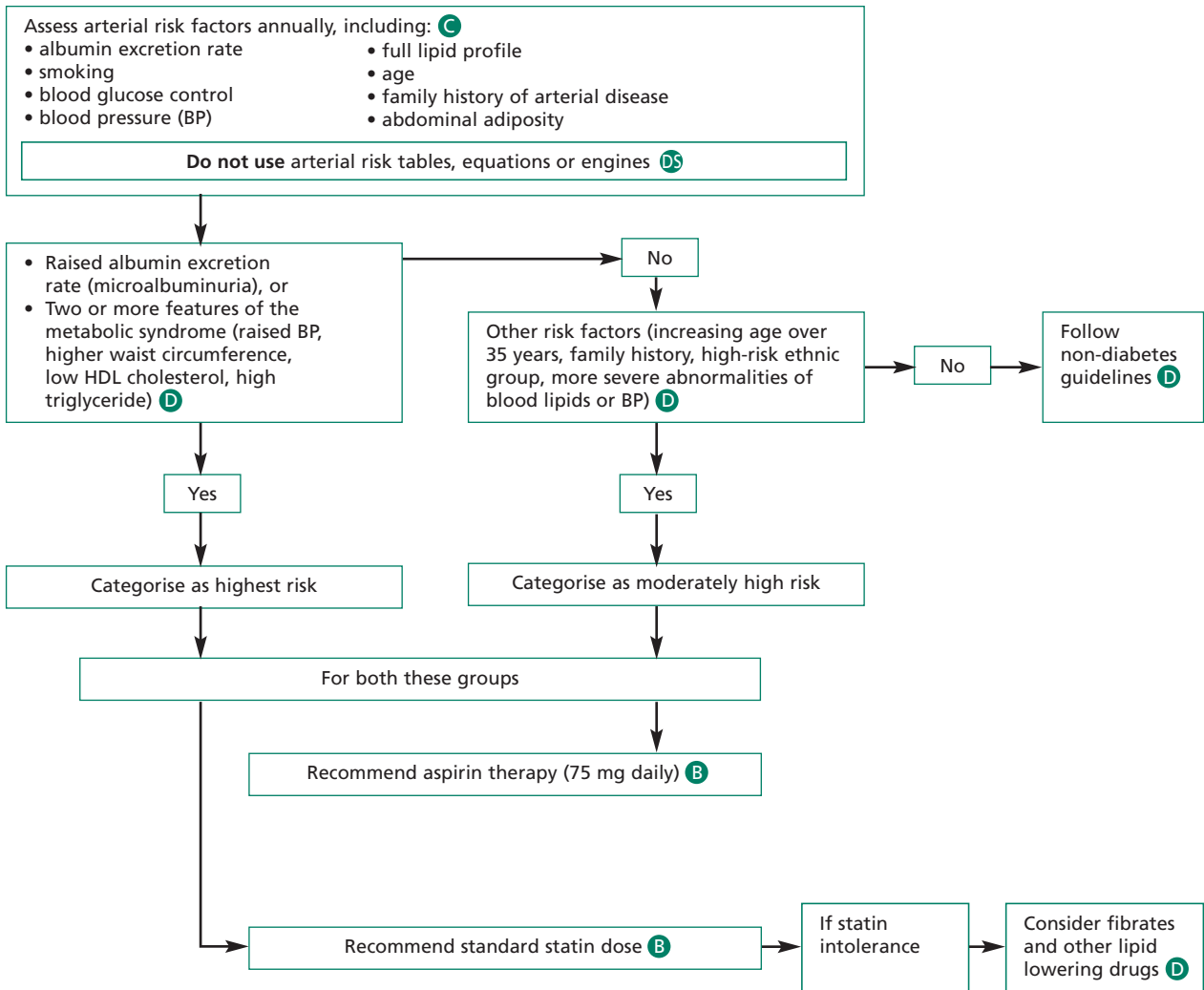
## Management of arterial risk

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**General management**

- Manage blood glucose, blood pressure and smoking – see pages 7, 11 and 6, respectively.
- Recommend fibrates for people with hypertriglyceridaemia. **D**
- Monitor responses to therapy by assessment of lipid profile. If the response is unsatisfactory, consider concordance with therapy, drug choice and need for combination therapy. **D**
- **Manage intensively** if previous myocardial infarction (MI) or stroke, according to non-diabetes recommendations (for insulin see 'Hospital admission and acute arterial events' page 14). **D**

## Lipid and anti-thrombotic management



## Blood pressure control

- Intervene if: **D**
  - above 135/85 mmHg, or
  - above 130/80 mmHg with abnormal albumin excretion rate (see 'Diabetes kidney damage' page 12) or another feature of the metabolic syndrome (see flow chart above). **D**
- Discuss:
  - needs
  - intervention levels
  - likely gains of therapy
  - negative aspects of therapy. **D**
- Use: a low-dose thiazide as first line unless raised albumin excretion rate (see 'Diabetes kidney damage' page 12). **D**
- Anticipate need for multiple therapy. **D**
- Advise on appropriate lifestyle changes. **D**

# Late microvascular complications: surveillance and management

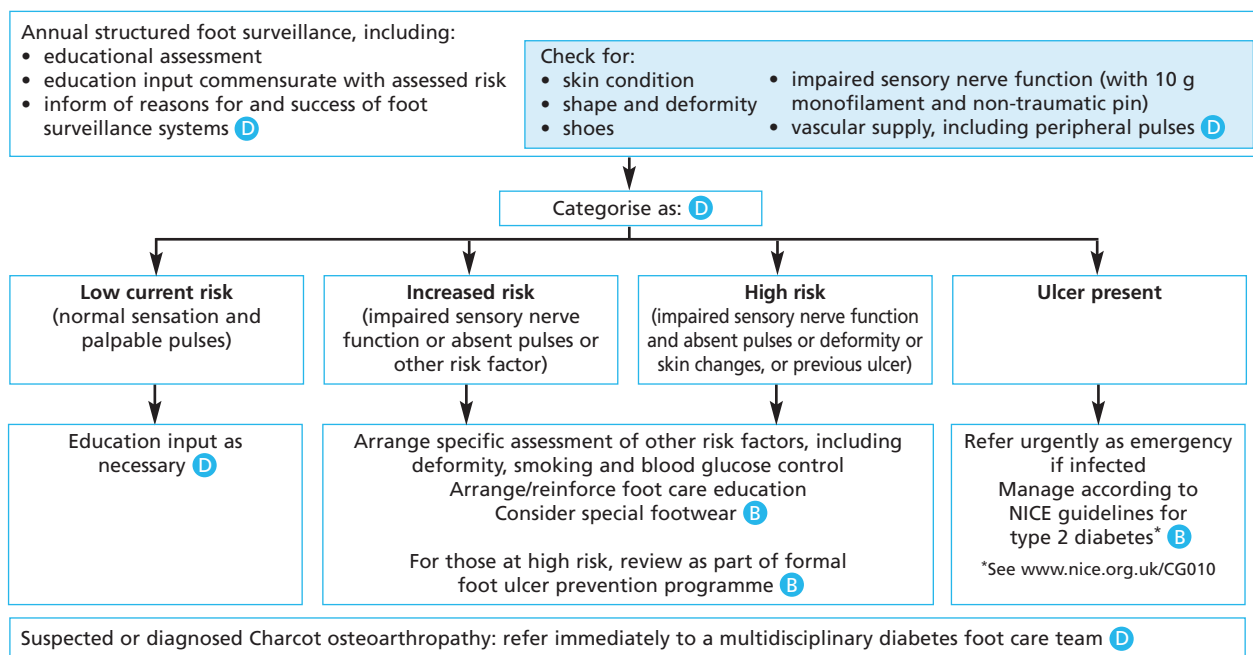
## Diabetes eye damage

- Assess yearly, or more frequently if indicated, by visual acuity and digital photography after mydriasis with tropicamide. **D**
- If sudden loss of vision, rubeosis iridis, pre-retinal or vitreous haemorrhage, or retinal detachment are detected, refer for emergency review. **D**
- If new vessel formation, refer for rapid review. **D**
- If pre-proliferative retinopathy, significant maculopathy, or unexplained change in visual acuity, refer for review. **D**

## Diabetes kidney damage

- Annually:
  - assess albumin:creatinine ratio by first-pass morning urine and measure serum creatinine concurrently. **D**
- If abnormal surveillance result (> 2.5 mg/mmol for men, > 3.5 mg/mmol for women) confirm result at subsequent clinic visits. **DS**
- Suspect other renal disease if:
  - particularly high blood pressure
  - sudden proteinuria
  - significant haematuria
  - systemic ill health
  - no progressive retinopathy. **DS**
- Discuss the significance of the findings. **D**
- In all people with confirmed kidney damage (including those with microalbuminuria alone), start ACE inhibitors and titrate to full dose. **A**
- If ACE inhibitors are not tolerated, use angiotensin 2 receptor antagonists. **B**
- Maintain blood pressure below 130/80 mmHg. **A**
- Advise those with kidney damage on the advantages of not following a high-protein diet. **B**
- Refer to local agreements between diabetes and kidney specialist teams. **D**

## Foot problems



## Other diabetes nerve damage

### Erectile dysfunction

- Ask men with type 1 diabetes annually whether erectile dysfunction is an issue. **D**
- Offer a trial of a PDE5 inhibitor drug if appropriate. **A**
- If PDE5 inhibitors are not successful, discuss referral to a service offering other medical and surgical management. **D**

**Gastroparesis:** consider the diagnosis of gastroparesis if erratic blood glucose control or unexplained bloating or vomiting; if diagnosed, a trial of prokinetic drugs is indicated (metoclopramide or domperidone, with cisapride\* as third line if necessary). **D**

**Nocturnal diarrhoea:** consider autonomic neuropathy as a cause in people with diabetes. **D**

**Orthostatic hypotension:** beware of increased risk when using blood pressure lowering drugs in people who may have sympathetic autonomic neuropathy. **D**

**Bladder emptying problems:** consider the possibility of autonomic neuropathy affecting the bladder. **D**

**Anaesthesia and autonomic neuropathy:** anaesthetists should be aware of the possibility of parasympathetic autonomic neuropathy affecting the heart in people with diabetes who are listed for procedures under general anaesthetic having other neuropathy. **D**

### Painful diabetic neuropathy

**Step 1:** simple analgesics (paracetamol, aspirin) and local measures (bed cradles); do not continue if ineffective. **D**

**Step 2:** a low- to medium-dose tricyclic drug<sup>†</sup>, timed to symptoms, with explanation that they are a trial of therapy. **A**

**Step 3:** a trial of gabapentin, working up to maximum tolerated dose or at least 1800 mg per day. **A**

**Then:**

- If gabapentin fails, carbamazepine<sup>‡</sup> and phenytoin<sup>§</sup> are alternative choices. **D**
- If continued chronic pain consider:
  - opiate analgesia
  - referral to pain management service. **D**
- After 6 months, if treatment has been successful, consider trials of reduced dosage and cessation of therapy. **D**
- If treatment is unsuccessful explain:
  - reasons for the problem
  - likelihood of remission in the medium term
  - the role of improved blood glucose control. **D**

Be alert to the psychological consequences of chronic painful neuropathy. **D**

\* Cisapride is not currently licensed in the UK.

† Tricyclic antidepressants are not currently licensed in the UK for the treatment of painful neuropathy associated with type 1 diabetes.

‡ Carbamazepine is not currently licensed in the UK for the treatment of painful neuropathy associated with type 1 diabetes.

§ Phenytoin is currently licensed in the UK for the treatment of neuropathic pain under specialist supervision.

## Special situations

### Diabetic ketoacidosis (DKA)

- Professionals managing DKA should be adequately trained including regular updating, and be familiar with all aspects of its management that are associated with mortality and morbidity. Management of DKA should be in line with local clinical governance. **D**
- Use:
  - isotonic saline as primary fluid not given too rapidly **D**
  - intravenous insulin **A**
  - when plasma glucose concentration has fallen to 10–15 mmol/litre: glucose-containing fluids (not more than 2 litres in 24 hours) with higher rates of insulin infusion than used in other situations (for example, 6 U/hour monitored for effect) **D**
  - early potassium replacement with frequent monitoring. **D**

For patients whose consciousness level is impaired, consider insertion of a nasogastric tube, urinary catheterisation to monitor urine production, and heparinisation. **D**

- Generally avoid use of bicarbonate and general phosphate replacement. **A**
- Monitor continuously and review frequently. **D**

### Hospital admission and acute arterial events

#### For hospital and institutional care

- Maintain continued input from a trained multidisciplinary team with expertise in diabetes. **B**
- Use the personal expertise of the individual with type 1 diabetes: integrate that expertise into ward-based blood glucose monitoring and insulin delivery through the nursing care plan and use it as a major determinant of food choice. **D**
- Use an approved protocol for in-patient procedures and surgical operations – usually using quality-assured blood glucose testing driving adjustment of intravenous insulin delivery. **D**

#### Threatened or actual MI or stroke

- For all people with diabetes suffering threatened or actual MI or stroke, use optimised insulin therapy according to local protocol. **D**

### Associated medical conditions

- If low body mass index or unexplained weight loss, assess diagnostic markers for coeliac disease. **DS**
- Be alert to the possibility of development of Addison's disease, pernicious anaemia, thyroid disorders, and other autoimmune disease. **D**

### Psychological problems

- Be alert to the development/presence of depression and/or anxiety, especially if there are difficulties with diabetes self-management. **B**
- Use appropriate basic management skills for non-severe psychological disorders (including counselling techniques and appropriate drug therapy). **D**
- Refer promptly if psychological difficulties continue to interfere with diabetes self-management. **D**

### Eating disorders

- Be alert to bulimia nervosa, anorexia nervosa and insulin dose manipulation in people with:
  - over-concern with body shape and weight
  - low body mass index
  - poor overall blood glucose control. **C**
- Refer early, and perhaps urgently, to local eating disorder services if appropriate. **D**
- Provide quality team input into counselling over lifestyle issues and nutritional behaviour from the time of diagnosis (see 'Dietary management' page 6). **D**

## Implementation

Local health communities should review their existing practice for type 1 diabetes against this guideline. The review should consider the resources required to implement the recommendations set out in Section 1 of the NICE guideline, the people and processes involved and the timeline over which full implementation is envisaged. It is in the interests of adults with type 1 diabetes that the implementation timeline is as rapid as possible.

Relevant local clinical guidelines, care pathways and protocols should be reviewed in the light of this guidance and revised accordingly.

This guideline should be used in conjunction with the National Service Framework for Diabetes (available from [www.doh.gov.uk/nsf/diabetes/index.htm](http://www.doh.gov.uk/nsf/diabetes/index.htm)).

## Further information

### Distribution

This quick reference guide to the Institute's guideline on type 1 diabetes contains the key priorities for implementation, summaries of the guidance, and notes on implementation. The distribution list for this quick reference guide is available from [www.nice.org.uk/CG015adultsdistributionlist](http://www.nice.org.uk/CG015adultsdistributionlist)

### NICE guideline

The NICE guideline, *Type 1 diabetes: diagnosis and management of type 1 diabetes in children, young people and adults*, is available from the NICE website ([www.nice.org.uk/CG015NICEguideline](http://www.nice.org.uk/CG015NICEguideline)).

The NICE guideline contains the following sections: Key priorities for implementation; 1 Guidance; 2 Notes on the scope of the guidance; 3 Implementation in the NHS; 4 Research recommendations; 5 Full guideline; 6 Related NICE guidance; 7 Review date. It also gives details of the grading scheme for the evidence and recommendations, the Guideline Development Groups, the Guideline Review Panels and technical detail on the criteria for audit.

### Ordering information

Copies of this quick reference guide can be obtained from the NICE website at [www.nice.org.uk/CG015adultsquickrefguide](http://www.nice.org.uk/CG015adultsquickrefguide) or from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N0558. Information for the public (guidance on the management of type 1 diabetes in adults) is also available from the NICE website or from the NHS Response Line (quote reference number N0559 for the English version and N0624 for the version in English and Welsh).

The quick reference guide for the management of type 1 diabetes in children and young people is available from the NICE website ([www.nice.org.uk/CG015childrenquickrefguide](http://www.nice.org.uk/CG015childrenquickrefguide)) or from the NHS Response Line (quote reference number N0622). Information for the public can be obtained by quoting reference number N0623 for a version in English and N0560 for a version in English and Welsh.

N0558 1P 80k July 04 (OAK)

A quick reference guide for the diagnosis and management of type 1 diabetes in children and young people is available from the website ([www.nice.org.uk/CG015childrenquickrefguide](http://www.nice.org.uk/CG015childrenquickrefguide)) or from the NHS Response Line (see below for ordering information).

### Full guideline

The full guideline includes the evidence on which the recommendations are based, in addition to the information in the NICE guideline. It is published by the National Collaborating Centre for Chronic Conditions. It is available from [www.rcplondon.ac.uk/pubs/books/dia/index.asp](http://www.rcplondon.ac.uk/pubs/books/dia/index.asp), [www.nice.org.uk/CG015adultsfullguideline](http://www.nice.org.uk/CG015adultsfullguideline) and on the website of the National Electronic Library for Health ([www.nelh.nhs.uk](http://www.nelh.nhs.uk)).

### Information for the public

NICE has produced a version of this guidance for adults with type 1 diabetes, their families and carers, and the public. The information is available, in English and Welsh, from the NICE website ([www.nice.org.uk/CG015adultspublicinfo](http://www.nice.org.uk/CG015adultspublicinfo)). A version of the guidance for the families and carers of children with type 1 diabetes, young people with type 1 diabetes, and the public is also available from the NICE website ([www.nice.org.uk/CG015childrenpublicinfo](http://www.nice.org.uk/CG015childrenpublicinfo)). Printed versions are also available – see below for ordering information.

### Related guidance

NICE has issued technology appraisal guidance on the use of long-acting insulin analogues for the treatment of diabetes, the use of continuous subcutaneous insulin infusion for diabetes, and the use of patient education models in diabetes. NICE has also issued a series of guidelines on the management of type 2 diabetes. For information about NICE guidance on diabetes that has been issued or is in development, see [www.nice.org.uk](http://www.nice.org.uk)

### Review date

The process of reviewing the evidence is expected to begin 4 years after the date of issue of this guideline. Reviewing may begin earlier than 4 years if significant evidence that affects the guideline recommendations is identified sooner. The updated guideline will be available within 2 years of the start of the review process.

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