

Type 2 diabetes in children and young people

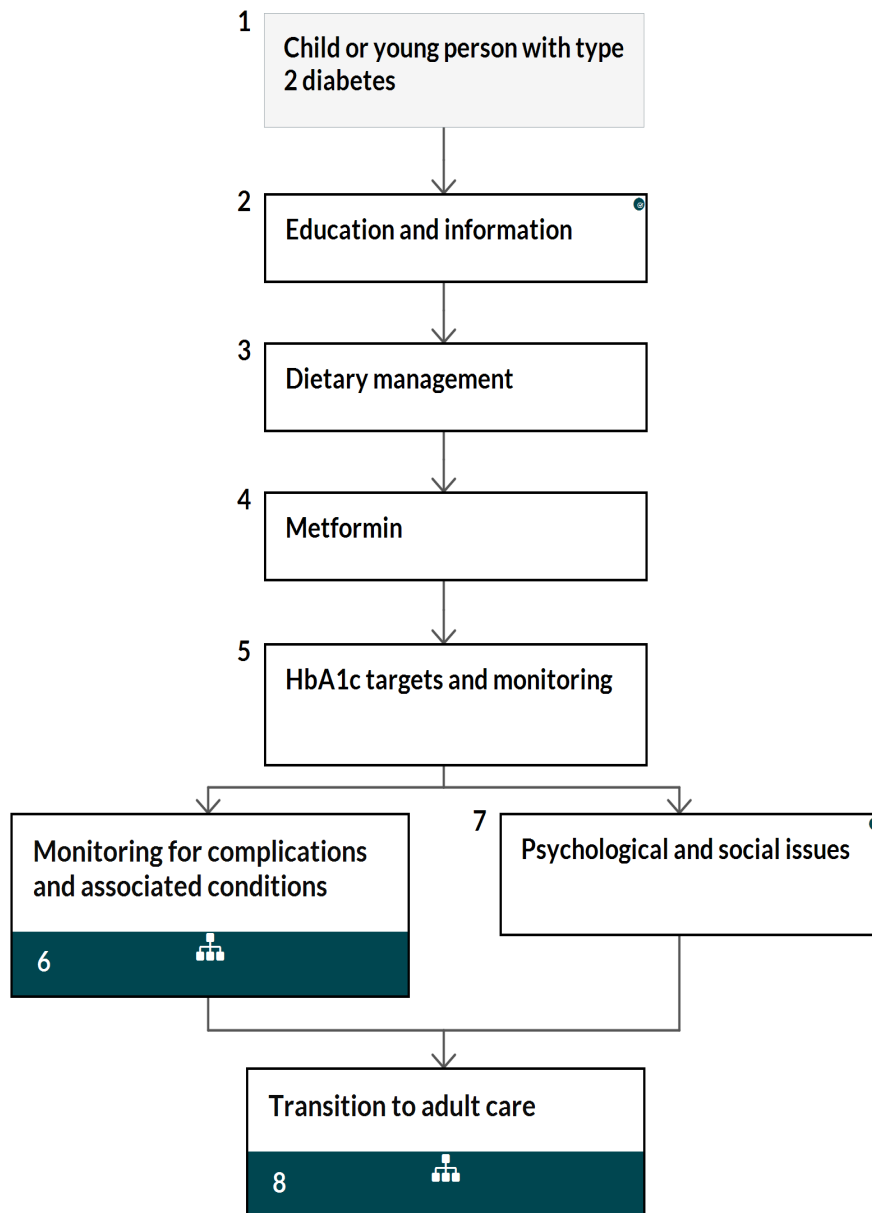
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

<http://pathways.nice.org.uk/pathways/diabetes-in-children-and-young-people>

NICE Pathway last updated: 25 August 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Child or young person with type 2 diabetes

No additional information

2 Education and information

Offer children and young people with type 2 diabetes and their families or carers a continuing programme of education from diagnosis. Include the following core topics:

- HbA1c monitoring and targets
- how diet, physical activity, body weight and intercurrent illness effect blood glucose levels
- how metformin can help and possible adverse effects
- the complications of type 2 diabetes and how to prevent them.

Tailor the education programme to each child or young person with type 2 diabetes and their families or carers, taking account of issues such as:

- personal preferences
- emotional wellbeing
- age and maturity
- cultural considerations
- existing knowledge
- current and future social circumstances
- life goals.

Explain to children and young people with type 2 diabetes and their families or carers that, like people without diabetes, they should have:

- regular dental examinations (see [the NICE Pathway on oral and dental health](#))
- an eye examination by an optician every 2 years.

Encourage children and young people with type 2 diabetes and their families or carers to discuss any concerns and raise any questions they have with their diabetes team.

Give children and young people with type 2 diabetes and their families or carers information about diabetes support groups and organisations, and the potential benefits of membership. Give this information after diagnosis and regularly afterwards.

Explain to children and young people with type 2 diabetes and their families or carers how to find out about possible government disability benefits.

Take particular care when communicating with children and young people with type 2 diabetes if they or their families or carers have physical and sensory disabilities, or difficulties speaking or reading English.

NICE has written [information for the public on type 2 diabetes in children and young people](#).

Smoking and substance misuse

Encourage children and young people with type 2 diabetes not to start smoking. Explain the general health problems smoking causes, in particular the risks of vascular complications.

For more guidance on preventing smoking, see also [the NICE Pathway on preventing uptake of smoking in children and young people](#).

Offer smoking cessation programmes to children and young people with type 2 diabetes who smoke. See also [the NICE Pathways on stop smoking interventions and services](#), [smoking: tobacco harm-reduction approaches](#) and [smoking cessation in secondary care](#).

Explain to children and young people with type 2 diabetes and their families or carers about the general dangers of substance misuse and the possible effects on blood glucose levels.

For further information, see [the NICE Pathway on drug misuse prevention](#).

Immunisation

Explain to children and young people with type 2 diabetes and their families or carers that the [Public Health England Green Book](#) recommends they have:

- annual immunisation against influenza
- immunisation against pneumococcal infection, if they are taking insulin or oral hypoglycaemic medicines

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

2. Education and information

3 Dietary management

At each contact with a child or young person with type 2 diabetes who is overweight or obese, advise them and their families or carers about the benefits of exercise and weight loss, and provide support towards achieving this. See also [the NICE Pathway on obesity](#).

Offer children and young people with type 2 diabetes dietetic support to help optimise body weight and blood glucose levels.

At each contact with a child or young person with type 2 diabetes, explain to them and their families or carers how healthy eating can help to:

- reduce hyperglycaemia
- reduce cardiovascular risk
- promote weight loss.

Provide dietary advice to children and young people with type 2 diabetes and their families or carers in a sensitive manner. Take into account the difficulties that many people have with losing weight, and how healthy eating can also help with blood glucose levels and avoiding complications.

Take into account social and cultural considerations when providing dietary advice to children and young people with type 2 diabetes.

Encourage children and young people with type 2 diabetes to eat at least 5 portions of fruit and vegetables each day.

At each clinic visit for children and young people with type 2 diabetes:

- measure height and weight and plot on an appropriate growth chart
- calculate BMI.

Check for normal growth or significant changes in weight, because these may reflect changes in blood glucose levels.

Provide arrangements for weighing children and young people with type 2 diabetes that respect their privacy.

4 Metformin

Offer standard-release metformin from diagnosis to children and young people with type 2 diabetes.

5 HbA1c targets and monitoring

Measure HbA1c using methods that have been calibrated according to International Federation of Clinical Chemistry (IFCC) standardisation.

Explain to children and young people with type 2 diabetes and their families or carers that an HbA1c target level of 48 mmol/mol (6.5%) or lower will minimise their risk of long term complications.

Explain to children and young people with type 2 diabetes who have an HbA1c level above 48 mmol/mol (6.5%) that any reduction in HbA1c level reduces their risk of long term complications.

Explain the benefits of safely achieving and maintaining the lowest attainable HbA1c to children and young people with type 2 diabetes and their families or carers.

Agree an individualised lowest achievable HbA1c target with each child or young person with type 2 diabetes and their families or carers. Take into account factors such as their daily activities, individual life goals, complications and comorbidities.

Measure HbA1c levels every 3 months in children and young people with type 2 diabetes.

Support children and young people with type 2 diabetes and their families or carers to safely achieve and maintain their individual agreed HbA1c target level.

6 Monitoring for complications and associated conditions

[See Diabetes in children and young people / Monitoring for complications and associated conditions in children and young people with type 2 diabetes](#)

7 Psychological and social issues

Be aware that children and young people with type 2 diabetes have a greater risk of emotional and behavioural difficulties.

Offer children and young people with type 2 diabetes and their families or carers emotional support after diagnosis, and tailor this to their emotional, social, cultural and age dependent needs.

Be aware that children and young people with type 2 diabetes have an increased risk of psychological conditions (for example anxiety, depression, behavioural and conduct disorders) and complex social factors (for example family conflict), and these can affect their wellbeing and diabetes management.

Be aware that a lack of adequate psychosocial support for children and young people with type 2 diabetes has a negative effect on various outcomes (including blood glucose management) and can also reduce their self esteem.

Offer children and young people with type 2 diabetes and their families or carers timely and ongoing access to mental health professionals with an understanding of diabetes. This is because they may experience psychological problems (such as anxiety, depression, behavioural and conduct disorders and family conflict) or psychosocial difficulties that can impact on the management of diabetes and wellbeing.

See [the NICE Pathways on depression in children and young people](#) and [antisocial behaviour and conduct disorders in children and young people](#) for guidance on managing these conditions.

Diabetes teams should have access to mental health professionals to support them in psychological assessment and providing psychosocial support.

Offer assessment for anxiety and depression to children and young people with type 2 diabetes who have persistent difficulty with blood glucose management.

Refer children and young people with type 2 diabetes and suspected anxiety or depression promptly to child mental health professionals.

Ensure that children and young people with type 2 diabetes and their families or carers have timely and ongoing access to mental health services when needed.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

6. Access to mental health professionals with an understanding of type 1 or type 2 diabetes

8 Transition to adult care

[See Diabetes in children and young people / Diabetes in children and young people overview / Transition to adult care](#)

Sources

Diabetes (type 1 and type 2) in children and young people: diagnosis and management (2015 updated 2020) NICE guideline NG18

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the

recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.