

Children and Young Adults Diabetes

Type 2 diabetes e-learning

Presented by:

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e-learning module

elfh Managing Type 2 Diabetes in Children and Young People





For paediatric diabetes teams

Aims

- To help improve staff awareness of how children and young people (CYP) living with diabetes should be best cared for and help them keep up to date with the latest guidance.
- To help improve the care children and young people with type 2 diabetes receive, which should in turn help improve their longer-term health.

Who is it for?

- Those working in specialist paediatric and young adult diabetes services including doctors/ consultants/ nurses/ dietitians/ psychology staff and youth workers.
- Secondary audiences: Staff prescribing diabetes medication and staff working in local GP practices that may see young people with type 2 diabetes.

How to access it: Via NHS Learning Hub

Editorial group

- Dr Fulya Mehta (National clinical lead for children and young adults diabetes, NHS England and Consultant Paediatrician, Alder Hey Children's Hospital)
- Dr Dita Aswani, Consultant Paediatrician specialising in Diabetes and Weight Management, Sheffield Children's NHS Foundation Trust)
- Dr Pooja Sachdev (Consultant in Paediatric Diabetes and Endocrinology, Nottingham Children's Hospital)
- Verity Hawkes (Senior Project Manager, NHS England)
- Amy Newman (Project Manager, NHS England)
- Shannon Ball (Person living with Type 2 diabetes)



Six 30 min sessions authored by key experts

	Session Title	Author(s)
1	Diagnosis and initial management of Type 2 diabetes	<ul style="list-style-type: none">• Dr Evelien Gevers, Consultant Paediatric Endocrinologist, Royal London Hospital• Dr Dita Aswani, Consultant Paediatrician specialising in Diabetes and Weight Management, Sheffield Children's NHS Foundation Trust
2	Glycaemic targets, glucose monitoring and self-management education.	<ul style="list-style-type: none">• Dr Mars Skae, Consultant Paediatric Endocrinologist, Royal Manchester Children's Hospital
3	General lifestyle, weight management and psychological interventions	<ul style="list-style-type: none">• Kate Brennan, Children's Specialist Dietician in Complications of Excess Weight, St James' University Hospital• Claire Semple, Consultant Clinical Psychologist specialising in long term conditions, University Hospitals Bristol and Weston Foundation Trust
4	Pharmaceutical interventions	<ul style="list-style-type: none">• Dr Chizo Agwu, Consultant Paediatrician in Diabetes and Endocrinology, Sandwell and West Birmingham NHS Trust
5	Complications and co-morbidities	<ul style="list-style-type: none">• Prof Timothy Barrett, Honorary Consultant in Paediatric Endocrinology and Diabetes, Birmingham Women's and Children's Foundation Trust
6	Type 2 diabetes: Young Adult Care (18yrs +)	<ul style="list-style-type: none">• Dr Fainia Kavvoura, Consultant in Diabetes, Endocrinology and Bariatric Medicine, Royal Berkshire NHS Foundation Trust

Education at diagnosis

Successful education can be subdivided at diagnosis into 6 key elements. It is really important that the young person is able to understand why they need to self-manage their condition and that they are supported to help them do this.

Select the next and back arrows to find out more.



My glucose levels are not at the right level to keep me healthy. But I don't know what that means.

Glycaemic goals

Young people and their families and carers will need to understand their own glycaemic status and how this relates to recommended targets.

Select the pin icons to find out more.

HbA1c as indicator of diabetes control



2 of 6: Status and targets

Understanding what normal glycaemic status and glycaemic targets are.



Helping staff identify and diagnose type 2 diabetes

There are certain indicators that are more likely to be present in different types of diabetes. It is important to recognise which elements are indicative of each type.

Select the arrow for an overview of the differences. Note: these differences are not differentiating or diagnostic in themselves, but may help point towards one diagnosis over another.

Type 2	Type 1	MODY
Acanthosis nigricans	Not associated with Acanthosis nigricans	Not associated with Acanthosis nigricans
Obesity or overweight	Recent weight loss	Not associated with weight loss
Slow onset of symptoms	Short duration and rapid onset of symptoms	Variable presence of symptoms
Less likely to present with ketosis or in DKA	More likely to present with ketosis or in DKA	Much less likely to present with ketosis or in DKA
Family history of type 2 diabetes	Family history less common	First degree relative with diabetes



Side by side comparison of the 3 types of diabetes

Video content included throughout

Confidence in talking about weight

The way in which we communicate has a profound effect on other people. Language is a powerful tool. Words have great potential to help, or to harm. As clinicians, we know the value of good communication in our day-to-day practice.



Don't expect to address all elements in one discussion

Fear of causing offence

Fear of causing offence is a common factor preventing healthcare professionals from discussing weight with young people and families.

'Language Matters' is a guidance document which can help healthcare professions in having open, sensitive conversations about weight and may be helpful in giving you confidence in talking to a young person and their families about their weight [\[11\]](#).

Mental wellbeing

Please watch this video of Shannon where she talks about the mental burden of living with type 2 diabetes.

Studies have shown that children and young people with type 2 diabetes are at a higher risk of disordered eating and depressive symptoms.

All children and young people with diabetes should be offered wellbeing screening at least a once a year.



Shannon Ball
Type 2 diabetes patient

Latest medications

Type 2 diabetes: pharmaceutical interventions



Select the chapters below to start.



Introduction



Metformin and insulin



Glucagon-like peptide-1 receptor agonists



Sodium-glucose co-transporter-2 inhibitors



Treatment initiation and escalation



Summary and resources

Complications and co-morbidities



Type 2 diabetes comorbidities are typically associated with excess weight and related complications. The following associated conditions should be screened for at diagnosis.

Select the pin icons to find out more.

Oral health

Hypertension

Hyperlipidaemia

Vitamin D deficiency

Retinopathy screening

Obstructive sleep apnoea

Microalbuminuria

Non-alcoholic fatty liver disease

Polycystic ovary syndrome

Dyslipidaemia

Screening interval

- At diagnosis ideally after glycaemic control has been achieved (within 3 months) and annually screening thereafter.

Screening measure

- Fasting lipids LDL-C <2.6mmol/L
HDL-C >0.6mmol/L
Triglycerides <1.7mmol/L.

Actions

Nephropathy

Retinopathy

Liver complications

This relates to non-alcoholic fatty liver disease (NAFLD), Metabolic dysfunction-associated steatotic liver disease (MASLD) or non-alcoholic steatohepatitis (NASH).

Screening interval

- At diagnosis and then 12 monthly.

Screening measure

- Liver function tests 12 monthly.
- Liver ultrasound scan at diagnosis and then every 3 years if normal [3].

Designing services

Given the significant burden of EOT2D, special considerations for young people up to the age of 25 years old should be made when designing services, allowing for flexibility to meet the individual's needs for accessing care.

Select the images to find out more.



Life changes

It is important to remember that the transition from paediatric to adult care coincides with a transition in several other aspects of life:

- moving to higher education and often to another location to pursue this
- starting a full-time job
- moving out of the family home
- cohabiting and planning a family
- pursuing financial independence
- experimenting with alcohol and recreational drugs

Planning a pregnancy

Preconception and pregnancy

In this chapter, we will discuss pregnancy preparation and preconception care, including informal contraception and the need for careful glycaemic management.



1 of 3: Planning

The key is, highlighting the importance of planning for pregnancy, focusing on 3 main themes:

- starting and prescribing high dose folic acid (5mg) at least 3 months before conception
- stopping medications which are contraindicated (statins, ACE-I, GLP1 RA, SGLT2-i)
- ensuring optimal glycaemic management with HbA1c <48 mmol/mol [16], if possible

Recent audit data suggest that having a lower HbA1c is associated with better outcomes [7].



More support and treatment options

As the young person enters adulthood, more support and treatment options might be available, albeit not necessarily age-adjusted.

Select the next and back arrows to find out more.



3 of 6: Type 2 diabetes path to remission programme

The NHS type 2 diabetes path to remission programme is available to all eligible individuals (>18 years old) in England via referral from primary care. This 12 month programme is a nationally commissioned low calorie, total diet replacement (TDR) treatment for people who are living with type 2 diabetes and obesity or overweight.

How to access it

Verity Hawkes

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General user account

General users can access resources made available by contributors to all users.

Required information

- Email address
- Country
- Current role

Additional information needed

- Qualifying work email address (e.g. NHS email address)
- Current role
- Professional registration number (if applicable)
- Grade / Band
- Start date
- Primary specialty (if applicable)
- Country
- Place of work details

After registering you will receive an email that includes your username and a link to create a password.

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