

Type 2 diabetes remission-Where are we?

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DiABETES UK
KNOW DIABETES. FIGHT DIABETES.

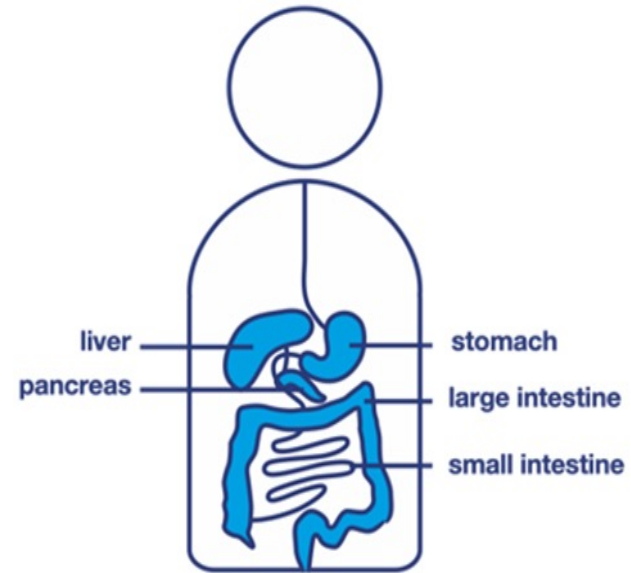
This session aims to:

- Provide an overview of type 2 diabetes and its management
- Reflect on some of the determinants of weight gain and obesity
- Define type 2 diabetes remission
- Understand the evidence base of remission
- Understand some of the key safety considerations if an adult living with type 2 diabetes wants to consider remission
- Describe the benefits of remission
- Describe current referral pathways

What is diabetes?


- Diabetes is a **serious** condition where your blood glucose (also known as sugar) level is **too high** because your pancreas doesn't make any, or enough of, a hormone called **insulin**. Or the insulin it makes doesn't work properly.
- There are two main types of diabetes-type 1 and type 2

If left untreated, high blood glucose levels can cause serious health problems.



Type 2 diabetes

Insufficient production of insulin and insulin produced not working effectively



High blood glucose levels



Damage to blood vessels and nerves

Management of type 2 diabetes

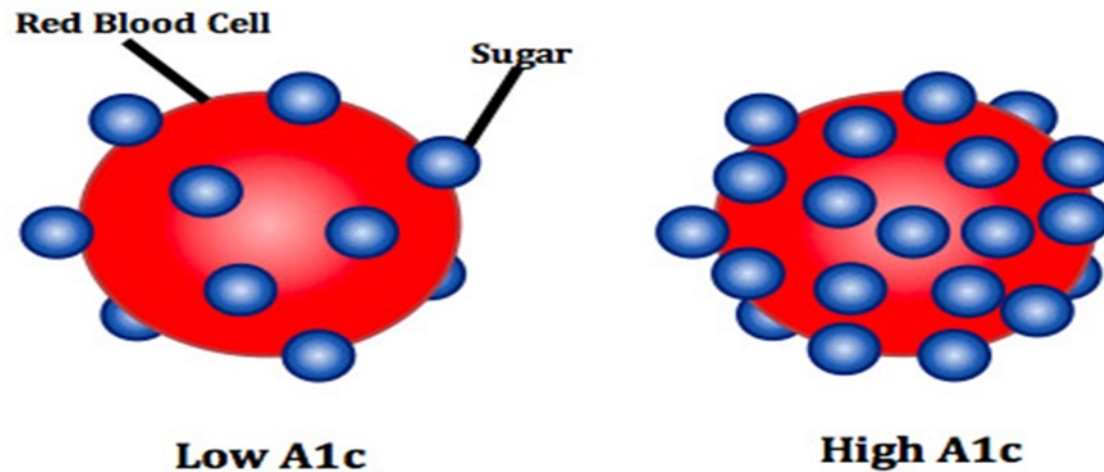
Objectives

- Management of HbA1c
- Management of blood pressure
- Management of blood lipids

Interventions

- Behavioural change interventions (e.g. diet, physical activity)
- Medications
- Bariatric surgery

HbA1c is your average blood glucose (sugar) levels for the last two to three months.



Study	Number in Intervention	Remission at year 1	Remission at year 2	Defining remission
Look Ahead 2012	1852	11.5%	10%	HbA1c below 48mmol/mol (6.5%), off medications for at least 1year
DiRECT Study 2018	149	46%	35.6%	HbA1c below 48mmol/mol (6.5%), off medications for at least 2months
Real World Data, 2021 (150 practices in Southern England)	56120	11.7%		HbA1c below 48mmol/mol (6.5%), in the absence of bariatric surgery, and off medications for at least 6months

TYPE 2 DIABETES REMISSION



You're in **remission** when your long-term blood sugar levels remain **below 48mmol/mol** or **6.5%** for 3 months or more, without diabetes medication.

You're in the **diabetes range** when your blood sugar levels are **above 48mmol/mol** or **6.5%**.

www.diabetes.org.uk/remission

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New international definition – from Diabetes UK, ADA, and the EASD.

- Type 2 diabetes remission is defined as a return of HbA1c to <48 mmol/mol (6.5%) and persisting for at least 3 months in the absence of glucose lowering medication.

How do people get into remission?

Lifestyle trials*	Number in the Intervention	Remission at year 1	Remission at year 2
Look Ahead 2012 ¹	1852	11.5%	10%
Mediterranean diet Study 2014 ²	108	15%	10.5%
DiRECT Study 2018 ³	149	46%	35.6%
Continuous Care Intervention 2019 ⁴	262	25%	17.6%
DIADEM-I study 2020 ⁵	70	61%	Not recorded

1. Gregg et al. JAMA. 2012;308(13): 2489 – 2496

2. Esposito et al. Diabetes Care. 2014;37: 1824 – 1830

3. Lean et al. Lancet. 2018;391(10120): 541 – 551

4. Athinarayanan et al. Front Endocrinol. 2019;10:348

5. Taheri et al. Lancet. 2020;8(6): 477 – 488

Who goes into type 2 diabetes remission?

Learnings from DiRECT

Type 2 diabetes remission occurs in:

- 11% of people who achieve 8% weight loss
- 73% of people with weight loss of greater than 10kg
- 86% of those with weight loss of 15kg or more

Remission more likely in:

- newly diagnosed
- those with lower HbA1c*
- younger age*

Type 2 diabetes remission in the real world

– NDA data 2021 (N=2,297,700)

Remission was more likely in:

- shorter duration of diabetes
- no diabetes medication
- female sex
- lower baseline weight
- lower HbA1c
- lower socioeconomic deprivation

Type 2 diabetes medications and remission

- Metformin may improve cardiovascular and cancer risk
- GLP-1 agonists help with weight management, and improves renal and cardiovascular outcomes
- SGLT2 inhibitors help with weight management, and improves renal and cardiovascular outcomes

All glucose lowering medications need to be stopped for at least 3 months before confirming remission.

The prospect of 'remission'



- Many people do not know what 'remission' means, often using terms like 'cured' and 'reversed' instead.
- Awareness of remission means people can actively choose and make an informed decision.
- It's important to ask people about whether/how they understand what remission means.

BENEFITS OF REMISSION



- Being free from diabetes symptoms
- Having a reduced risk of diabetes complications
- No longer needing to take diabetes complications
- Improved emotional well being
- Improved mobility, quality of sleep and energy
- Improvement of overall health and quality of life

UNDERSTANDING DETERMINANTS OF HEALTH AND BEHAVIOUR CHANGE



- Some studies suggest that genetics contribute 40-70% to obesity.
- Significant health inequalities that lead to the development of overweight and obesity.
- Societal and work influences can impact and influence stress levels and emotional responses to food.
- A person's health, other health conditions and medications can cause weight gain and mobility problems.
- Body image and eating norms; socio-cultural networks and structures, all influence food choices.

DIETS FOR TYPE 2 DIABETES REMISSION



Low-calorie

This is a diet where you eat around 800-1200 calories a day.



Low-carb

Eating a low-carb diet means cutting down on the amount of carbohydrate foods (carbs) to 130g or less.



Low-fat diet

A low-fat diet is one where you restrict the amount of fat you eat.



Intermittent fasting

Fasting diets are also known as intermittent fasting and time-restricted eating. You'll only eat during a specific time.



Meal replacement plan

Also known as Soups and Shakes, you replace some or all food with low-calorie meal replacements.



Mediterranean diet

A Mediterranean diet is largely based on plant foods. You'll eat a lot of fresh and natural foods.

- Low-calorie
- Low-carbohydrate
- Low-fat
- Intermittent fasting
- Meal replacement plan
- Mediterranean

NHS PATH TO REMISSION PROGRAMME

Intervention delivered – Total Diet Replacement (TDR)



- Step 1: Replace all food with soups and shakes (800 – 900kcal per day)
- Step 2: After 12 weeks reintroduce healthy meals of around 1200 calories a day
- Step 3: Weight Maintenance
- Throughout the 12 month programme support from GP for medication management

REFERRAL PATHWAYS

NHS remission services

- In some areas of the UK, there are type 2 diabetes remission programmes available through the NHS
- You need to meet certain criteria to be accepted onto the programme.
- In May 2024, NHS England announced that the programme is now available in all areas of England.

CRITERIA FOR REFERRAL

Includes:

- Aged 18 to 65 years
- Type 2 diabetes diagnosed within the last 6 years
- BMI of 27kg/m² or higher if white, or 25kg/m² if from an ethnic minority group
- Have had an HbA1c measurement taken within the last 12 months and the results were:
- HbA1c of 43-87 mmol/mol, if on diabetes medication
- HbA1c of 48-87 mmol/mol, if not on diabetes medication
- Attended a monitoring and diabetes review when this was last offered, including retinal screening, and committed to continue attending annual reviews, even if type 2 diabetes put into remission.

CRITERIA FOR REFERRAL

Exclusion criteria includes:

- Eating disorders
- Pregnancy or breastfeeding
- Active substance use disorder
- Recent heart attack or stroke
- Active cancer
- Known proliferative retinopathy that has not been treated

Safety considerations



- May not be clinically appropriate for a person to come off diabetes medications to put their type 2 diabetes into remission
- BP medication may need to be adjusted
- Reducing carbs and body weight requires adjustment of insulin and some diabetes medication including stopping some diabetes medication on first day of a TDR
- Increased monitoring of blood pressure and blood glucose necessary

BARIATRIC SURGERY



- Strong evidence bariatric surgery can put type 2 diabetes into remission long-term.
- One study found that almost a third (30.4%) of people who had surgery were in remission after 15 years (Ko and Kim, Journal Obes Metab Syndr, 2022).
- The results partly due to weight loss, but also impact on gut hormones.
- There is detailed NICE guidance concerning criteria.

Pharmacological interventions

Weight loss medication



- We're still learning about the role weight loss medications can play in supporting people with type 2 diabetes to lose weight and go into remission.
- Medications include Wegovy, Saxenda, Mounjaro and Orlistat

EXERCISE



- There's no evidence that exercise alone can lower blood sugar levels enough to put type 2 diabetes into remission.
- Evidence tells us exercise helps people maintain their weight loss, which is important for staying in remission.

Lessons from the New DAWN programme



- It's important to start from a place of asking not telling people about remission.
- The person looking to put type 2 diabetes into remission is expert in their own diabetes
- Putting type 2 diabetes into remission can require a lot of work and knowing this can be demotivating for many.
- It's important to be honest and upfront with people when they ask questions about what's involved.
- Avoid emphasising the work involved, instead focus on the smaller steps needed right now.

Maintaining remission



- keeping to a healthy weight and being active is important
- we don't know enough to say confidently that remission leads to a reduction of diabetes complications. That is why people need regular health checks at least once a year, including retinal screening

TYPE 2 DIABETES REMISSION FOR PEOPLE OF A HEALTHY WEIGHT

ReTUNE study



- People diagnosed with type 2 diabetes within last five years with a BMI at or just above the healthy range
- Followed a low-calorie meal replacement diet (800 kcal per day), made up of formula meal replacements and non-starchy vegetables for 2-4 weeks. This was followed by a 4-6-week weight loss maintenance period. People repeated this cycle of weight loss and maintenance up to three times until 10 and 15% of original body weight lost.

WEB CONTENT

Dedicated site

- 20 pages of information with new animation video
- Evidence based, culturally sensitive and realistic
- ‘How to go into remission’ section with options for losing weight to move towards remission
 - How the method works for weight loss
 - If it works for putting type 2 diabetes into remission
 - Where people can get more support from
- 6 new stories from people with experience of type 2 remission
- Information on what support is available through the health services across the UK
- Type 2 diabetes remission for people of a healthy weight.

TYPE 2 REMISSION

Type 2 diabetes remission is when your blood sugar levels return to a safe, non-diabetes level long-term, without the need for glucose-lowering medication. It stops diabetes in its tracks and boosts your chances of a healthy future.

We don't call it 'reversing type 2 diabetes' like some people because remission isn't a cure for **type 2 diabetes**. But when you're in it, the symptoms of your diabetes are on pause, so is any new damage it can do to you. People in remission say it's life changing.



What is type 2 remission?

Can you reverse type 2 diabetes and how does remission work?



How to go into type 2 remission

Explore the different ways you can try going into remission safely.



Support for type 2 remission

Find out what remission support is available from us and the NHS.



Remission and emotional health

Looking after your mind, as well as your body, when you're trying for remission, or in it.



Reversing other types of diabetes

Can you reverse type 1 diabetes, gestational diabetes or prediabetes?



Find out more about type 2 diabetes

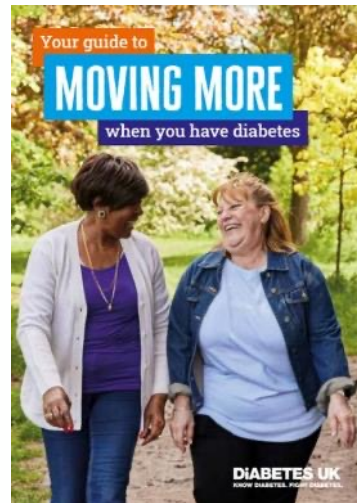
Everything you need to know about type 2, from what causes it, to treatments and medicines.

order free* resources from our shop

Browse our online shop to order resources for yourselves and to give to your patient at their next appointment.

shop.diabetes.org.uk/collections/information-for-your-patients

*Fees for postage & packaging may apply.



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CPD ONLINE LEARNING

A series of free online courses for healthcare professionals

- Building confidence, skills and knowledge to support people living with or at risk of diabetes.
- Evidence-based and peer-reviewed.
- The Royal College of Nursing (RCN) accredited. You'll receive a certificate of completion for your Continuing Personal Development.
- Takes 90 minutes in total to complete but can be done at own pace.
- Over 16,000 registered learners!



**DIABETES
TECHNOLOGY**



**UNDERSTANDING
DIABETES**



**TYPE 2 DIABETES
REMISSION**



**EMOTIONAL
WELLBEING**

<https://cpd.diabetes.org.uk/>

Type 2 diabetes CPD remission Module


- This RCN accredited module aims to equip you with the knowledge, skills and confidence, to enable you to have conversations about diabetes remission with people living with type 2 diabetes.
- Peer reviewed and evidenced based.
- It's free and takes 90 minutes to complete.
- Over 2000 learners have now completed the module.

DIABETES REMISSION

🕒 90 min

This module aims to equip you with the knowledge, skills and confidence, to enable you to have conversations about diabetes remission with people living with type 2 diabetes.

This module is currently in Beta testing. We are actively seeking your feedback to help us improve this module and our e-learning platform. Please do get in touch with any suggestions by emailing healthcare@diabetes.org.uk



<https://cpd.diabetes.org.uk/>

SNITA



It's important to talk about remission; to give hope to people who are working towards it or have perhaps come out of remission and feel they can't do it again. Many people have experienced similar challenges and are now back in remission.

THANK YOU