

Latest news: Key messages on weight loss and diabetes remission

In the second part of our coverage of this year's Diabetes UK Professional Conference, held in Liverpool from 26th to 28th April, we concentrate on the key weight loss and diabetes remission messages delivered by experts in the field.

Banting Memorial Lecture Type 2 management: "weighing" up the options

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- There are individual differences in a person's subcutaneous fat capacity. Once this is exceeded, fat is deposited around the internal organs (visceral or ectopic fat), and this can result in type 2 diabetes.
- Men tend to develop type 2 diabetes at a lower BMI than women, likely because of lower subcutaneous fat capacity and increased storage in other tissues, increasing insulin resistance.
 - ▶ They also tend to develop diabetes 15 years earlier than women.
- For similar reasons, Black, Asian and minority ethnic individuals also develop type 2 diabetes at lower BMI and earlier than those of white European ethnicity.
- However, white people who develop type 2 diabetes earlier tend to lose more years of life due to greater adiposity:
 - ▶ This is because adiposity is a major cause of heart failure, non-alcoholic steatohepatitis, end-stage renal disease, etc., even in people without type 2 diabetes.
- Therefore, weight loss should be considered its own goal, independent of its effects on HbA_{1c} and, potentially, diabetes remission.
 - ▶ In addition to diabetes outcomes, patient-reported outcomes (e.g.

functional mobility, pain, body image and quality of life) are increasingly being used to confirm benefits of weight loss.

Translating research into practice: The NHS Type 2 Diabetes Path to Remission programme

Jonathan Valabhji

National Clinical Director for Diabetes and Obesity, NHS England

- As of December 2022, there have been 7554 referrals to the (newly renamed) *NHS Type 2 Diabetes Path to Remission* programme.
 - ▶ The highest referral rates have been in the most deprived areas, and there are higher rates among minority ethnic groups. This highlights the benefits of GP referral versus self-referral: underserved communities are being served.
- Of eligible referrals, 75% have attended for an initial assessment and 68% have started on the meal-replacement diet.
 - ▶ Uptake has been highest in the youngest age groups, which is encouraging as they have the greatest potential benefit.
 - ▶ However, uptake was lowest in the most deprived areas (direct inverse relationship between deprivation and uptake).
- Retention rates have been encouraging: 90% at 3 months (start of weight maintenance phase) and 55% at 1 year.
 - ▶ Retention rates were lowest in

younger ages and deprived areas, and were reduced in those with BMI ≥ 45 kg/m². No differences by sex, ethnicity or diabetes duration.

- Weight change outcomes: -12.2% at 3 months; -12.0% at 6 months; -9.8% at 1 year.
- Weight loss findings, therefore, reflect those of the original DiRECT randomised controlled trial at 1 year.
- Remission data are yet to be published.

5-year follow-up weight, remission and clinical outcomes from the DiRECT intervention

Mike Lean, Roy Taylor

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- In the original DiRECT study, 46% of participants in the intervention group achieved remission at 1 year, and 36% at 2 years.
- Thereafter, the study has been extended: 95 of the original intervention group (48 in remission at extension start) received continued weight maintenance support over years 3–5.
 - ▶ Reviewed every 3 months in primary care; those who regained >2 kg offered an additional package of support (available once per year), consisting of a 4-week meal-replacement diet plus food reintroduction support.
- Control group: 82 participants from original control group, who did not receive 3-monthly reviews or

supplemental support over the study extension period.

- Weight loss in the intervention group ($n=85$ with outcomes data) was attenuated after 2 years but stabilised at a substantial 6.1 kg in year 5.
- Positive metabolic effects persisted in the study group: decreased triglycerides, decreased insulin levels, decreased liver fat.
- Interestingly, the control group also achieved weight loss of 4.6 kg over the same interval.
- At 5 years, in the intervention vs control groups:
 - Remission rates: 13% vs 5%.

➤ Off all diabetes medications: 40% vs 13% (greater weight loss correlated with decreases in HbA_{1c}).

➤ Quality of life (EQ-5D score) almost 10% higher in intervention group (same as at 1 year).

- Of the 48 participants who were in remission at the start of the extension period, 11 (23%) were still in remission, with an average weight loss of 8.9 kg, at 5 years.

- 54% fewer serious adverse events in the intervention group:

➤ Sudden death, stroke and TIA all lower. However, there were more cardiovascular events in

the intervention group (possibly associated with discontinuation of statins, which is not advised).

➤ Gallstones, DKA and bacterial infections all lower.

➤ No new cases of weight-associated cancers in intervention group, versus eight in controls – further evaluation needed as numbers are small.

- Further research is needed to improve weight loss maintenance outcomes and optimise cost efficiency. ■

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