

Conference over coffee: The importance of weight loss

In the *Conference over coffee* series, we deliver brief, key messages on topics relevant to primary care presented at national and international conferences. This time we focus on weight loss and type 2 diabetes remission, discussed at the 2023 Diabetes UK Professional Conference, held on 26–28 April in Liverpool.

Banting Memorial Lecture – Type 2 management: “weighing” up the options Naveed Sattar

Professor of Cardiovascular and Metabolic Health, University of Glasgow

- 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. 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

Clinical Senior Research Fellow, University of Glasgow; Professor of Medicine and Metabolism, University of Newcastle

- 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.