



## RESEARCH NEWS

## GP based weight loss programme can reverse type 2 diabetes

Zosia Kmiotowicz

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Nearly half the people with type 2 diabetes who lost weight as part of a trial in primary care did not have the disease a year later, prompting calls for widespread use of weight management programmes as a routine part of care.

Previous research by the current study team from Glasgow and Newcastle confirmed the “twin cycle hypothesis”—that type 2 diabetes is caused by excess fat within the liver and pancreas—and established that the disease can go into remission by consuming a very low calorie diet. But it has not been known whether this type of intensive weight management works in routine primary care.

The Diabetes Remission Clinical Trial (DiRECT),<sup>1</sup> published in the *Lancet*, included 298 adults aged 20 to 65 years from 49 primary care practices across Scotland and Tyneside who had been diagnosed with type 2 diabetes between July 2014 and August 2016. Practices were randomly assigned to provide either the Counterweight-plus weight management programme delivered by practice dietitians or nurses (149 individuals) or best practice care under current guidelines (control; 149 individuals).

The weight management programme began with a low calorie diet (825-853 calories a day) for three to five months, followed by stepped food reintroduction (two to eight weeks), and ongoing support for weight loss maintenance, which included cognitive behavioural therapy and strategies to increase physical activity. Antidiabetic and blood pressure lowering drugs were all stopped at the start of the programme.

Almost a quarter (24%, 36 out of 149) of the weight management group achieved weight loss of 15 kg or more at 12 months and nearly half (46%, 68 out of 149) achieved diabetes remission. No one in the control group lost that amount of weight and only six people went into remission.

On average, participants in the weight management group shed 10 kg of body weight compared with 1 kg in the control group.

The results showed that remission was closely linked with the degree of weight loss and occurred in around nine out of 10 people who lost 15 kg or more, and nearly three quarters (47 out of 64) of those who lost 10 kg or more.

The researchers also noted an improvement in average triglyceride (blood lipid) concentrations in the weight management group, and almost half remained off all antihypertensive drugs with no rise in blood pressure. People in this group also reported substantially improved quality of life at 12 months, compared with a slight decrease reported in the control group.

Overall, one person experienced serious adverse events, possibly related to the treatment (biliary colic and abdominal pain) but continued in the study. Some participants experienced constipation, headache, and dizziness.

The authors noted that most participants were white and British and that the findings may not apply to other ethnic and racial groups such as south Asians.

Roy Taylor from the University of Newcastle, who co-led the study, said: “Our findings suggest that the very large weight losses targeted by bariatric surgery are not essential to reverse the underlying processes which cause type 2 diabetes. The weight loss goals provided by this programme are achievable for many people. The big challenge is long term avoidance of weight re-gain. Follow-up of DiRECT will continue for four years and reveal whether weight loss and remission is achievable in the long-term.”

1 Lean MEJ, Leslie WS, Barnes AC, et al. Primary care led weight management for remission of type 2 diabetes (DiRECT): an open label, cluster randomised trial. *Lancet* 2017. doi: 10.1016/S0140-6736(17)33102-1.

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