



## Type 2 diabetes: 5000 patients to test feasibility of “remission service”

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The NHS is to pilot a low calorie diet programme that can put type 2 diabetes into remission as the first treatment option for patients with a new diagnosis of the disease.

The approach will involve GPs prescribing a liquid diet of just over 800 kilocalories a day for three months, then a period of follow-up support, NHS England’s chief executive, Simon Stevens, announced on 30 November. It will first be offered to 5000 patients before being rolled out nationally.

The announcement followed a series of recent studies that have overturned the widely held view that type 2 diabetes is incurable and must be managed with medication. Most recently, the DiRECT trial, funded by Diabetes UK, showed that low calorie diets can put the disease into remission and that this can be achieved as part of routine care in general practice.<sup>1</sup>

Data published in *Cell Metabolism* in August showed that cells in the pancreas that produce insulin can be “rebooted” once remission has been achieved.<sup>2</sup> “This is an important observation which had not been noted previously, as it was assumed that  $\beta$  cell function, once lost, probably could not be recovered,” said Shareen Forbes, reader in diabetes and endocrinology at the University of Edinburgh.

A further study published in the *Journal of Human Nutrition* last week<sup>3</sup> has “countered the widespread assumption that rapid initial early weight loss is quickly regained on reverting to a food based diet,” said Mike Lean, Glasgow University’s chair of human nutrition and lead author of DiRECT. The study, of 277 morbidly obese people who were put on a low calorie diet for three months and followed up after a year, showed that rapid, early weight loss with a low calorie diet led to better long term weight loss than did slower weight loss over a longer period “Programme retention was exceptionally high with a low calorie diet, at 89%. Motivation is high when weight loss is rapid,” said Lean.

He said that the pilot study was needed “to assess how quickly the NHS can adapt to provide a ‘diabetes remission service’ as routine, and how and when to signpost remission for people with diabetes.”

He told *The BMJ*, “Every person who develops type 2 diabetes, and those identified as at high risk, should be told what a devastating disease it is and be offered the chance of remission, supported by this evidence based programme.”

Treatment, he said, was “not just a diet but a carefully researched structured programme, based on CBT [cognitive behavioural therapy] and other behavioural change models aimed at long term maintenance of substantial weight loss. We already know it can be delivered by ordinary dietitians and practice nurses in routine NHS practice and that the one-off cost is less than the average annual cost of treating type 2 diabetes with drugs.”

Other experts have acknowledged that recent trials have shown major errors in the medical approach to weight loss and type 2 diabetes.

Susan Jebb, professor of diet and population health at the University of Oxford, said, “We used to believe these treatments [low calorie diets] were only suitable for highly selected, highly motivated people supervised in specialist clinics.

“However, these recent trials show that unselected people in primary care lose an average of over 10 kg at one year, and nearly half of everyone with newly diagnosed diabetes will be in remission after one year following treatment with a very low calorie diet plus behavioural support. Crucially, these results were achieved either with the support of GPs and nurses in primary care or by referring patients to a provider in the community.”

- 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* 2018;391:541-51. 10.1016/S0140-6736(17)33102-1 29221645
- 2 Taylor R, Al-Mrabeh A, Zhyzhneuskaya S, et al . Remission of human type 2 diabetes requires decrease in liver and pancreas fat content but is dependent upon capacity for  $\beta$  cell recovery. *Cell Metab* 2018;28:547-556.e3. 10.1016/j.cmet.2018.07.003 30078554
- 3 McCombie L, Brosnahan N, Ross H, Bell-Higgs A, Govan L, Lean MEJ. Filling the intervention gap: service evaluation of an intensive nonsurgical weight management programme for severe and complex obesity. *J Hum Nutr Diet* 2018. 10.1111/jhn.12611.

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