

Journal club: Type 2 diabetes – reframing the first stage of care

My registrar and I recently searched the NICE NG28 guidelines on type 2 diabetes, last updated in June 2022. There was only one mention of remission (in the Rationale and impact section, under safety considerations for SGLT2 inhibitors) and this was to inform readers that:

“[Whilst people] may wish to try a ketogenic diet to reverse or reduce the severity of their diabetes or induce remission [...] the committee agreed, based on their experience, that there may be an increased risk of DKA associated with SGLT2 inhibitors and such diets. It is important to tell people about these risks and to advise them to discuss any planned change to a very low carbohydrate or ketogenic diet with their healthcare professional first.” (NICE, 2022).

An update to the NICE guidance is urgently needed as, considering recent evidence, the first stage of type 2 diabetes management should surely be an attempt to achieve remission, or at least a substantial improvement in glycaemic control, via a low-carbohydrate diet. My simple advice to patients is: “halve the carbs, please”.

The opportunity to achieve remission particularly applies to those people with type 2 diabetes who are within 6 years of diagnosis and are not on insulin (Lean et al, 2018). The landmark study in this regard, DIRECT (Diabetes Remission Clinical Trial), showed a remission rate of 86% at 1 year in those who lost 15 kg or more in weight, started with a BMI greater than 27 kg/m² and were not on insulin.

Can this work in standard general practice? I would argue no, in most cases. But there is an

extraordinary paper from [Unwin et al](#) (2023). The findings showed that, among 186 patients at their practice who followed a low-carbohydrate diet, type 2 diabetes remission was achieved in 51%. The remission rate varied from 77% in those who had a duration of diabetes less than 1 year to only 20% in those with a duration greater than 15 years. There were also significant reductions in LDL cholesterol, triglycerides and systolic blood pressure.

Similarly, in their observational study, [Kim et al](#) (2024) analysed data on 114 874 people with new-onset type 2 diabetes in South Korea, among whom 2429 (2.1%) achieved remission within 2 years. Weight loss of greater than 5% more than doubled the likelihood of achieving remission (odds ratio, 2.56; 95% CI, 2.35–2.79) compared with those whose weight remained stable. So it is clear that weight loss, aided and abetted by carbohydrate reduction, can lead to remission of type 2 diabetes.

I have, perhaps, put the cart before the horse. Let’s move on to the actual prevention of type 2 diabetes. We all want to do our bit for the planet, and many people are now consuming less food with a higher carbon footprint, such as red meat. Many are adopting a vegetarian diet; data from 2021 suggests that 13–15% of German, Swiss, and UK citizens have adopted a meat-free diet (Statista, 2021). However, not all plant-based diets are equal in terms of reducing the risk of type 2 diabetes. [Thompson et al](#) (2024) demonstrate that a healthy plant-based diet (based on fruits, legumes, nuts, tea, coffee, vegetables, vegetable oils and whole grains) resulted in a 24% lower risk of type 2 diabetes, mediated by reduced BMI, ALT levels and even C-reactive protein levels. However,



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an unhealthy plant-based diet (characterised by high intake of fruit juice, potatoes, refined grains, sugary drinks, sweets and desserts) was associated with a 37% increase in the risk of type 2 diabetes. This was mediated by a higher BMI.

If diabetes cannot be persuaded to go into remission, then good glycaemic control from the time of diagnosis is critical. [Cheng et al](#) (2023) showed that a higher cumulative HbA_{1c} was associated with a 32% increase in the primary cardiovascular outcome and a 33% increase in mortality over an average follow-up of 4.7 years.

Another steer in the direction of striving towards a better HbA_{1c} was a *post hoc* analysis from the Look AHEAD study ([Bancks et al](#), 2024). This revealed that intensive lifestyle intervention was associated with a 32% reduction in cardiovascular disease in those in the lowest quintile of HbA_{1c} at baseline, but a 27% higher risk in those with the highest quintile of HbA_{1c}.

To conclude: an effective type 2 diabetes prevention strategy is a plant-based diet – but a healthy one. Hopefully, the majority of patients newly diagnosed with type 2 diabetes will be suitable for remission. This can be via the NHS Type 2 Diabetes Path to Remission Programme, which is based on the DiRECT study protocol, which showed an impressive type 2 diabetes remission rate of 86% in the first year among those who achieved 15 kg of weight loss. And if

the person has “permanent” type 2 diabetes, as opposed to “potentially remissible” type 2 diabetes, then glycaemic control should be excellent from the outset. ■

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