



Type 2 diabetes – a question of diet

Pauline Dunne looks at whether intermittent fasting and 'low-carb diets' are good options for people with Type 2

The advice for diet and diabetes has changed in recent years. No longer is a sugar-free diet advocated; instead the advice is to keep the amount of added sugar in our diets modest, in line with general healthy eating recommendations. Recent evidence suggests that approaches such as adhering to a 'low-carbohydrate diet' or 'intermittent fasting' can also help in managing blood glucose levels. To do this, it is important we understand what is involved and how to ensure our nutritional intake remains balanced.

This article aims to help you:

- Understand what is meant by the word 'carbohydrate'
- Learn about intermittent fasting and what a low-carbohydrate diet involves
- Know who to talk to about adjusting your current carbohydrate intake.

Type 2 diabetes is a condition where there is too much glucose (sugar) in the blood. Glucose is our main energy source and comes from carbohydrates. Glucose is essential for us to function well, but diabetes complications can occur if blood glucose levels remain too high over a long period of time.

Your glucose levels can vary for lots of reasons, including:

- Insulin resistance / insulin sensitivity
- Amount and type of carbohydrate in

food and drinks consumed

- Body weight
- Medication(s)
- Physical activity.

Carbohydrate is the umbrella term for all foods or drinks which break down into glucose, giving us energy for our daily tasks and acting as the primary fuel source for our brain. Sugary carbohydrates include sugar, treacle, molasses, honey, syrups, jam, sweets, confectionary and regular (non-diet) fizzy drinks. Starchy carbohydrates (breads, grains, rice, potato, yam, pasta, cereals and oats), naturally occurring sugars (eg. those found in dairy foods, fruits and some vegetables) and fibre (pulses, legumes) are essential for energy in the body and contain many other health benefits such as vitamins and minerals.

Having diabetes means being more aware of all carbohydrate sources, as it is the amount of carbohydrate rather than the type that impacts on your blood glucose level more.

A healthy balanced diet contains foods from each main food group to supply our body with the required nourishment – that's proteins, fats and carbohydrates. Higher fibre carbohydrates (wholegrains, fruit, vegetables, pulses and legumes) help to protect against heart disease and some cancers as well as preventing constipation. These foods also release glucose more slowly, helping to balance blood glucose levels while keeping hunger at bay. Getting the balance right is key to keeping blood glucose levels within target range.

Two dietary approaches that have gained recent attention with supporting



Did you know?

If you treat your diabetes with insulin or diabetes medications which increase the risk of hypos (low blood glucose), please be aware that reducing your carbohydrate intake, and changes to your body weight, may mean your insulin and diabetes medication could require a review/adjustment.

people in managing Type 2 diabetes are intermittent fasting and a low-carbohydrate diet.



Intermittent fasting involves eating over a specified number of hours within a 24-hour period. The premise is that if eating occurs over fewer hours in the day, fewer calories will be consumed overall. Many health benefits are associated with intermittent fasting, namely weight loss, better blood glucose levels, increased insulin sensitivity, reduced blood pressure and reduced LDL-cholesterol, offering potential to reduce risk of conditions like heart disease and Type 2 diabetes.

Some people are unsuited to this approach, ie. anyone with a history of an eating disorder, those with medical considerations, women during pregnancy, sportspeople or those for whom it would be incompatible with family/work commitments.

Within the 24-hour day, a person might follow what is known as a '16:8' approach, ie. fasting for 16 hours and consuming meals and snacks within the other eight hours. A person might fast from 7pm until 11am the next day,





Example of intermittent fasting diet

meaning they consume their meals/snacks between 11am and 7pm (see graphic above). This approach involves being organised with meal preparation and requires a high level of personal responsibility to adhere to the fast time. However, for many people intermittent fasting aligns well with their lifestyle, family commitments and work practices, and should be considered a suitable option to support the prevention and management of Type 2 diabetes.

A low(er)-carbohydrate approach

A quick online search will show that low-carbohydrate diets come in many variations, and what is classed as 'low' varies – even among scientific studies! For this article, we are taking low-carbohydrate to equate to less than or equal to 130g of carbohydrate per day or 26% energy of a 2,000 calorie-per-day intake.

Low-carbohydrate diets have been shown to help with weight loss and to induce and maintain remission of Type 2 diabetes for some individuals. Happily, when it comes to both preventing and managing Type 2 diabetes, 'low carb' does not need to mean 'no carb'.

Sources of carbohydrate include our breads, potatoes, pasta, rice, cereals, oats, grains, flour, yam, chapati, naan, milk and yoghurts, fruits and many vegetables. By looking at how much carbohydrate we are eating, and how often, we can then make changes by including lower-carbohydrate choices. It is important to include protein and fats at meals, and you might notice some lower carbohydrate recipes seem higher in fat. No need for alarm – these

macronutrients help to stabilise blood glucose and increase satiety (feeling of fullness). Evidence suggests that diets rich in monounsaturated fatty acids (MUFAs), ie. fats from nuts and olive oil and limited saturated fats from meat, poultry, and dairy products, are effective for improving blood glucose levels and heart disease risk in people with Type 2 diabetes.

Achieving a nutritionally balanced diet can be a challenge when reducing carbohydrate intake and so using a reputable support platform for guidance or seeking advice from a dietitian is advised. Some resources are freely available but some will incur a fee. What is important to know before investing is whether they are developed by a trusted source and if they are kept up to date. Some ideas:

- Diabetes UK low carb diet and 7-day meal plan
- Carbs & Cals website, app, and books
- NHS-approved Low Carb Program.

If you feel intermittent fasting or a low-carbohydrate may suit you, talk to your diabetes care team before making any significant changes to your meal patterns so that any necessary medication adjustments can be made. The approach that suits you is the one that is sustainable in the long-term. Remember – even small changes make a big difference!

For more information about healthy eating, portion sizes and carbohydrate awareness, see www2.hse.ie/wellbeing/how-to-eat-well.html

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Remember – physical activity matters too!

Research shows that the more steps we take in a day, or the more we can move about, the better! In 2020, the World Health Organization (WHO) updated its physical activity advice for adults, suggesting that we should aim for between 150-300 minutes of moderate intensity activity or 75-150 minutes of vigorous intensity aerobic physical activity per week, and that there should be a focus both on regular muscle strengthening activity and on reducing sedentary behaviours. Diabetes risk declines with increased levels of overall physical activity. While the optimum number of daily steps is still unknown, it has been shown that a beneficial effect is observed for people with diabetes when their daily step count increases. And overall health improves by increasing our daily steps by 1,000. Let's get stepping!

Table: Low-carb alternatives

Regular option	Low-carb alternative
Large bowl of porridge/cereal	1/3 cup of oats or 1 cup of cereal with 125ml milk or breakfast omelette
Scone, croissant, pastry	Apple, 10 almonds or natural yoghurt and seeds
Chicken salad roll	Chicken salad sandwich on wholegrain bread or chicken salad with lettuce wraps
Pizza	Homemade pizza with wrap or cauliflower for base
Spaghetti bolognese	1 cup of cooked pasta and bolognese sauce
Snacks of biscuits, bar, bun, cake, toast, etc.	Portion of fruit or oat cake and peanut butter

