Diabetes UK nutrition guidelines: reinforcing the foundations of diabetes care

Diet has remained the foundation of diabetes care for more than a century. Yet many people with, or at risk of, diabetes still do not eat a healthy diet.

Mark Greener examines whether new guidance from Diabetes UK will make a difference.

Diet has remained the foundation of diabetes care for more than a century. Before insulin, clinicians replaced dietary carbohydrate with protein and fats, and used levels of glucose and ketones in patients’ urine to monitor metabolic control. Even in the first few years after insulin’s launch, the diet for a person with diabetes typically included, at most, 70g of carbohydrate a day – about three slices of modern bread. Today, people with diabetes can eat, essentially, a normal healthy diet as part of ‘an integrated package of education and clinical care’.

Yet many people with, or at risk of, diabetes still do not eat a healthy diet. So, in March 2018, Diabetes UK published the latest version of its Evidence-based nutrition guidelines for the prevention and management of diabetes. The guidelines focus on food, rather than individual nutrients, and note that there is no ‘one-size-fits-all prescriptive approach’. While food choices can help people with diabetes achieve their therapeutic goals as well as improving health and quality of life, the diet still needs to be ‘acceptable and enjoyable’. Nevertheless, several important issues remain unresolved, not least the best way to implement the evidence base into routine practice.

The need for new guidance

Diabetes UK published the last version of the nutrition guidelines in 2011 and began working on the new document in 2016. In the meantime, the evidence evolved. ‘Diabetes UK issues position statements on specific aspects of nutrition when evidence becomes stronger or such topics become controversial,’ says Douglas Twenefour, a diettian and Deputy Head of Clinical Care at Diabetes UK. Since the 2011 guidelines, for example, Diabetes UK issued position statements covering low-carbohydrate diets, saturated fats and ‘diabetic’ foods.

‘The 2018 guidelines are a more systematic review of the existing evidence that, after considerable discussion and consultation, offer recommendations to help health care professionals [HCPs] support people with diabetes and to help those at risk of type 2 diabetes (T2D) make dietary changes to improve their health,’ adds Mr Twenefour, who co-chaired the guidelines committee. The guidelines also address dietary interventions in several groups facing particular issues including older people, those living in institutions, and patients with coeliac disease, cystic fibrosis-related diabetes and HIV.

Focus on food and a healthy diet

‘The research increasingly leads us away from a focus on proportions of macronutrients and it was important to reflect this in the revision of the guidelines,’ says Paul McArdle, Lead Clinical Dietitian and Deputy Head of Nutrition at Birmingham Community Nutrition. ‘The new recommendations have been specifically worded to emphasise a food-based approach, as well as being written to be accessible to all HCPs and people with diabetes.’

Mr Twenefour adds that the evidence base has strengthened since 2011. ‘The 2018 guidelines contain 560 references,’ he says. ‘Not only has the volume of references increased, but the quality has also improved dramatically. For example, we have included 160 systematic reviews and meta-analyses in the latest version, compared to only 46 in the 2011 guidelines.’

For instance, the 2018 guidelines reflect the growing evidence confirming that a healthy diet can aid T2D remission and prevention. ‘A range of dietary approaches that can be effective in managing diabetes. So, finding an approach that works for each individual is key,’ says Mr McArdle, a member of the committee that developed the 2018 guidelines. For example, individualised dietary approaches should prioritise eating more foods that support good health such as wholegrains, fruit and vegetables, fish, nuts and legumes (pulses), and less red and processed meat, refined carbohydrates and sugars-sweetened beverages.

‘In addition, HCPs should support overweight or obese people to lose weight, which can help manage blood glucose levels, reduce cardiovascular risk and potentially help put T2D into remission,’ Mr Twenefour says. ‘Modest weight loss remains one of the most important outcomes in T2D,’ agrees Mr McArdle.

Weight management

Against this background, the guidelines suggest aiming for weight loss of at least 5%, where appropriate, in patients at high risk of T2D. Weight losses of 5–7% reduce the risk of developing T2D by 50% and improve HbA1c, blood lipid profiles, blood pressure and insulin sensitivity. Losses of 10% might reduce T2D risk by 80%. In addition, the guidelines suggest that losing about 15kg ‘as soon as possible after diagnosis’ can result in T2D entering remission. The guidelines suggest that people who want to lose weight to reduce their risk of T2D should restrict energy intake, eat less total and saturated fat, and increase their fibre intake and exercise. Further studies, however, need to identify the most effective dietary intervention to promote weight loss.

Commercial diabetic foods, sugars and other sweeteners

The 2018 guidance also reflects the growing consensus about sweeteners in people with diabetes. For instance, people with diabetes should be able to meet their nutritional needs from everyday foods.
So, HCPs should advise people with diabetes to avoid foods labelled ‘diabetic’ or ‘suitable for diabetics’. These labels could mislead consumers by implying a health benefit and are often as energy dense and contain as much saturated fat as standard foods.2

People with diabetes should follow the advice given to the general population over the age of two years that free sugars – those added to foods and drinks, as well as natural sugars in honey, syrups, fruit juice and so on – should provide no more than 5% of their total dietary energy. So, many people with diabetes should reduce their intake of free sugars, drinks sweetened with sugar, added fructose and polyols (sugar alcohols such as isomalt, sorbitol and xylitol). Health care professionals can, however, recommend artificial sweeteners as an alternative, the guidelines suggest.2

A broad approach

The dietary guidelines form part of a multifaceted approach to diabetes care that encompasses pharmaceutical treatments and public health initiatives, including the sugar tax and regulations to limit salt and calorie intake. ‘Not everyone with T2D is overweight, and many people are only diagnosed when they have had diabetes for many years,’ Mr Twenefour points out. ‘So, lifestyle changes alone may not be as effective or as clinically prudent as prescribing drugs.’

In addition, macroeconomic factors such as national and global policy on food manufacturing, advertising and promotions affect food choices and consumption. ‘Population-level dietary changes can have a significant impact on people with diabetes and the rest of the population. Evidence from studies of population dietary interventions informed the guidelines,’ Mr McArdle adds. ‘Policy-makers and other key influencers can use the guidelines to help target their messages appropriately, particularly around diabetes prevention.’

However, patients still need to take responsibility for their health. ‘Population-level policies must be matched with an understanding of what people can do for themselves. The guidelines help HCPs have that conversation about how people with diabetes, and those at risk of T2D, can make changes about their diet to improve their health,’ Mr Twenefour says.

‘Individual people with diabetes are often concerned about their diet,’ remarks Mr McArdle. ‘Indeed, diet is the source of many unanswered questions from people with diabetes and features heavily in the “Top 10” research priorities for T2D recently published by the James Lind Alliance and Diabetes UK.3 Addressing patient concerns and improving their quality of life through supportive dietary changes are likely to have very positive outcomes for individuals.’

From page to practice

Nevertheless, several issues remain – not least how to implement the guidance in busy practices and clinics, and the extent to which some of the evidence from studies applies to routine care. ‘Strong and consistent evidence supports nutrition interventions in diabetes,’ says Mr McArdle. ‘However, most of the research studies employed dietitians to deliver those interventions. Diabetes UK previously recommended four full-time dietitians for diabetes per 250 000 population. Many areas don’t have this number of dietitians dedicated to diabetes.’

This under-provision raises questions about how well dietitian-delivered evidence from trials applies to other HCPs’ clinical practice. In addition, most randomised controlled trials examining prevention focus on short-term outcomes, such as weight loss, rather than T2D incidence. Indeed, real-world studies suggest that the mean weight loss is about 2% rather than the 5–7% reported in randomised controlled trials.2 In addition, the guidelines highlight that scaling up, selecting the most appropriate intervention and showing that the approach is ‘clinically meaningful’ and cost-effective is ‘challenging’.

Moreover, delivering the professional education needed to realise the guidelines’ full potential could be difficult, given the competing demands on HCPs’ time. The guidelines recommend that a dietitian should guide ‘ongoing nutritional advice … to all people with diabetes’ as well as those at high risk of T2D. The under-provision of dietitians means that delivering the recommendations in the guidelines depends on upskilling other HCPs. ‘Other HCPs receive surprisingly little nutrition education as part of their basic training,’ Mr McArdle says. ‘So, post-registration training and support from dietitians is vital and needs to be increased. Nevertheless, there are resources and competencies available to support all HCPs to give basic evidence-based nutrition advice.’

‘Dietitians can train other HCPs to provide first-line advice,’ Mr Twenefour remarks. ‘It’s important to deliver consistent key messages. Having a dietitian as part of the diabetes team ensures that the other members are briefed on these key messages. There should also be a clear pathway for team members to understand when to make a referral to a dietitian.’

Nevertheless, Mr Twenefour adds that future studies need to assess ways to support adherence to a particular diet in the long term and the optimum self-management interventions by evaluating specific models of behaviour change. ‘Improvements in glycaemic control achieved through nutrition interventions often far exceed what would be considered successful with pharmacological treatments,’ Mr McArdle says. ‘But changing behaviour can be difficult, not least because of the food-based and obesogenic environment we all live in.’

‘Dietitians are highly skilled in behaviour change and many have additional training or qualifications in this area,’ Mr McArdle comments. ‘All HCPs working with patients to generate lifestyle or behaviour changes require excellent communication skills, to build rapport and to develop trust with their patients. Motivational interviewing and other strategies can help individual patients successfully maintain changes. In addition, the guidelines emphasise individualisation. People are more likely to sustain changes that they have chosen to make. So, finding the right approach for each person is essential.’
In some cases, the right approach means focusing on nutrition and weight while avoiding the risk that discussions about diet will predispose to eating disorders, which are already common among people with diabetes. A study from Canada, for example, found that 32.4% of 71 women with type 1 diabetes (T1D) had an eating disorder at a mean age of 23.7 years. Another 8.5% had a subthreshold eating disorder. The study, which followed 126 girls from a mean age of 11.8 years, found that the average time from the onset of eating disorder to remission was 4.3 years. However, 53% relapsed within six years of remission.4

'The development of eating disorders is highly complex and multifactorial,' Mr McArdle explains. 'However, some groups of people with diabetes, particularly young women with T1D, show an increased prevalence of eating disorders. The guidelines specifically address eating disorders and emphasise the value of appropriate screening for, and early referral to, specialist eating disorders services with signposts to useful resources.'

Several other issues remain outstanding. For example, the guidelines stress that HCPs should help people with T1D identify and estimate their carbohydrate consumption and match this to their insulin doses. But studies need to assess other options. 'There is some evidence around counting fats and proteins, but the evidence hasn’t progressed as much as in other areas of dietary interventions for diabetes,’ Mr Twenefour says. 'There is also a need for further studies assessing the role of weight loss in glycaemic management of T1D and there is very little research into the way that diet can modulate the gut microbiome.' Future versions of the guidelines will address these issues as the evidence emerges.

Diabetes is essentially a metabolic disease. So, despite some remarkable pharmacological advances, diet is likely to remain the foundation of management. ‘Effective use of pharmacological treatments and surgical options is important. But it’s equally important that discussions about diet in particular and lifestyle generally should be an integral part of managing diabetes,’ Mr Twenefour concludes. ‘Diabetes UK wants an objective discussion about, and access to, all these options. This will allow HCPs to better individualise treatment. After all, no two people with diabetes are exactly the same.’

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References

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