

Food, fat and feet

The last few years have seen significant, even seismic, shifts in our understanding of what constitutes a healthy diet for those with diabetes, and change continues. Nutrition studies are challenging to undertake and results often difficult to interpret or compare with other literature because of methodological differences. Not only can they seem contradictory, but experts helping us interpret those results may be conflicted and consciously, or subconsciously, bias the evidence to support their viewpoint.

Although the literature supporting harm from *trans*-fats seems clear, confusion remains even among experts about other types of fat. Foods contain a combination of saturated, polyunsaturated and monounsaturated fats, and the way that they interact in the body is influenced not only by the types of fat present (e.g. palmitic acid or oleic acid) but also by the food matrix within which they are contained and the foods eaten alongside them. This complexity supports an approach of looking at the evidence concerning food types and eating patterns, rather than at single nutrients that are never consumed alone. Recent guidelines, such as those from Diabetes UK (Twenefour and Dyson, 2018) and the American Diabetes Association (Evert et al, 2019), share the evidence about the effects of eating patterns, such as the Mediterranean diet, rather than of isolated nutrients. In his recent review, Dariush Mozaffarian, from Tufts University in Boston, supports this approach, and shares that when considering full-fat dairy (and not other types of high-fat foods) he has failed to find evidence of any association with increased risk of weight gain, cardiovascular disease or type 2 diabetes (Mozaffarian, 2019).

One could be forgiven for being sceptical, considering this paper summarises a review of evidence presented at a conference funded by a leading yoghurt producer. However, it is a view shared by many high-profile experts and supported by an increasing body of literature.

Mozaffarian summarises his overview of the evidence as follows: there is no evidence that whole-fat dairy foods cause weight gain; overall dairy consumption increases lean body mass and reduces body fat; yogurt consumption and probiotics reduce weight gain; daily fermented dairy consumption, including cheese, is likely to lower cardiovascular disease risk; and yogurt, cheese and dairy fat may protect against type 2 diabetes. He concludes, “Based on the current science, dairy consumption is part of a healthy diet...” and offers the advice that “the choice between low-fat compared with whole-fat dairy should be left to personal preference, pending further research.”

Interestingly, the World Health Organization (2018) draft guidance on saturated fatty acid and *trans*-fatty acid intake for adults and children chooses to discuss fatty acids in isolation, rather than in relation to foods, for which it has been challenged by a group of international experts writing in the *BMJ* (Astrup et al, 2019). This group called for a food-based translation of the recommendations for saturated fat intake to “avoid unnecessary reduction or exclusion of foods that are key sources of important nutrients”.

If this is the final verdict on dairy, it is difficult to quantify the potential harm we may collectively have caused by encouraging low-fat dairy intake (and hence potentially a higher intake of carbohydrate), as well as depriving people of potential health benefits and the beneficial indulgence of eating full-fat dairy. We only have to look in supermarkets to get a feel for how successful our efforts have been and to consider what a difficult task turning this around could be. Talking to people who have had an acute coronary event, often decades ago, it appears that the only piece of advice many remember is to “eat a low-fat diet”, however they choose to interpret that. Encouraging even small amounts of full-fat dairy in preference to sugar-laden, low-fat options is usually met with disbelief and challenge by my patients.



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“We have a responsibility to upskill our colleagues and to educate them on the urgency of seeking appropriate advice for any foot lesion in someone with diabetes.”

My grateful thanks to Zoë Harcombe, whose newsletters not only help highlight relevant nutrition papers making media headlines or published silently in the scientific literature, but whose statistical analyses are helping me hone my critical skills.

In short consultations in primary care it is challenging, but not impossible, to support people who want to make dietary changes. For the majority of us with limited access to dietitians, we need to find the right information and then make time to share it. In this issue of *Diabetes & Primary Care*, Jane Diggle shares her expertise on exactly what we need to know, in the second part of [There is no such thing as a diet for type 2 diabetes... or is there?](#) Armed with this knowledge, and Professor Tom Yates’ practical guide, [How to recommend physical activity to people with diabetes safely](#), one page of which is designed to be used as a patient handout, we will have no excuse for not sharing “very brief” lifestyle advice with everyone who may benefit from it.

Foot care

It is always useful to have my clinical practice put under the microscope by having a medical student share consultations. In a recent diabetes clinic, the performance of a foot examination and the rationale behind it came under scrutiny. The student’s scepticism regarding whether risk assessing feet really contributes to ulcer and amputation reduction encouraged us to consult “Dr Google” between patients to explore the evidence base. By the end of the clinic, she was satisfied with my technique, and that it was a worthwhile examination that could make an impact and “save limbs and lives”.

Conscious that I would shortly be having the same discussion with a group of experienced Japanese doctors, I was encouraged to reflect further on the recent literature. So, what did I learn and, more importantly, what do I now do differently? The biggest change is that I share my findings in more detail with the person I have examined and link individualised foot-care advice. I am more aware that if the person is to take action, they need to understand not just “what” they need to do, but “why” this has

benefit for them. We need to take time to check that people can see their feet and, if they can’t (perhaps owing to stiff hips and knees), help them find solutions, such as using a mirror on the floor. The help of family or friends may be needed so that we can teach simple assessments, such as the Ipswich touch test. If people have visual problems or no way of examining their feet, then that must be incorporated into our risk assessment and more frequent monitoring in the surgery must be arranged.

Our job is to use foot-examination opportunities to identify those who are at high risk of developing diabetic foot ulcers and to ensure they are referred promptly to the correct level of care if, and exactly when, needed. Although we may have a high index of suspicion if we see someone with a red, swollen, insensate foot that this could be a Charcot foot, or a high degree of confidence in the correct management of a diabetic foot ulcer, the consultation is just as likely to be with a colleague. Therefore we have a responsibility to upskill our colleagues and to educate them on the urgency of seeking appropriate advice for any foot lesion in someone with diabetes.

I have become more vigilant and hands-on with my examinations, checking between toes for infection and soft corns, and taking more care to rest and replace our monofilaments (guidance says we should buy only those of good quality, rest each one for 24 hours after 10 uses and retire it after 1000 uses or 6 months – how many of us can say, hand on heart, that we know how long we have been using our current monofilament?). I inspect people’s shoes inside and out, and ask myself “are these shoes right for these feet?” If I decide that they are not, I offer guidance and advice on what would be more suitable and why, which I am not sure I have always done.

The most recent National Diabetes Foot Care Audit reminds us that 1.6% of those with any severity of ulcer will require a major amputation within 6 months of expert assessment (NHS Digital, 2019). This contrasts with a progression rate of 0.05% in one Japanese study (Iwase et al, 2018) and generally very low rates in that country. There, insurance

schemes fund expert nurses to undertake foot assessments and provide 6 hours per month of supported education and foot care under the supervision of diabetologists for those with high-risk feet.

In this issue

Chronic kidney disease continues to be an area of uncertainty for many of us, so we asked colleagues to identify unanswered questions. Dr Robert Lewis, a consultant nephrologist who will be well known to many of our readers for his excellent presentations at nationwide conferences, kindly agreed to answer them. As we had so many questions, and many of us read the journal on our phones in spare minutes during busy days, we have split the Q and A into two short articles, with [part 1](#) in this issue.

Although we are aware of the detrimental impact that severe mental health problems can cause in relation to diabetes, knowing where to start if we want to take action in our practice can be challenging. [Peter Bagshaw](#) offers thought-provoking comment on this topic and Clare Whicher guides us on [How to manage hyperglycaemia in people with severe mental illness](#).

Many people with diabetes face difficulties trying to achieve good glycaemic control if they have injection site problems. In the third “How to” article in this issue, Jane Diggle, steering group member of Injection Technique Matters, helps us understand [How to support best practice injection technique](#), and take steps to reduce lipohypertrophy and help people improve control. In our [“At a glance” factsheet](#), Professor

Mike Kirby summarises what has changed in the updated NICE guideline on hypertension. Sinead McDonagh and Christopher Clark update us on [Inter-arm differences in blood pressure](#), helping us understand what these differences mean and what action we should take as a result.

Finally, you can read the biographies of the [candidates](#) standing for the available positions on the PCDS Committee. Voting will take place the National Conference next month.

I am excited to be travelling to Japan this month to teach and to learn more about how diabetes is managed in a country with a rapidly increasing prevalence of both diabetes and pre-diabetes, with an estimated 10 million people already diagnosed out of a population of 126 million. I hope to bring back not just memories, but some Japanese efficiencies to implement in my practice. ■

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Evert AB, Dennison M, Gardner CD et al (2019) Nutrition therapy for adults with diabetes or prediabetes: A consensus report. *Diabetes Care* **42**: 731–54

Iwase M, Fujii H, Nakamura U et al (2018) Incidence of diabetic foot ulcer in Japanese patients with type 2 diabetes mellitus: The Fukuoka diabetes registry. *Diabetes Res Clin Pract* **137**: 183–9

Mozaffarian D (2019) Dairy foods, obesity, and metabolic health: the role of the food matrix compared with single nutrients. *Adv Nutr* **10**: 917S–23S

NHS Digital (2019) *National Diabetes Foot Care Audit, 2014–2018*. NHS Digital, Leeds. Available at: <https://bit.ly/2qcoNaN> (accessed 15.10.19)

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World Health Organization (2018) *Draft guidelines on saturated fatty acid and trans-fatty acid intake for adults and children*. WHO, Geneva, Switzerland. Available at: <https://bit.ly/2Gc8woT> (accessed 09.10.19)

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