Is diet advice on your menu of treatments?

We invited three experts – dental nurse and oral health educator **Fiona Ellwood**, senior lecturer in dental public health **Maria Morgan** and nutritional therapist **Ros Barresi** – to share their thoughts on how best to help Britain make healthy nutritional choices and improve their dental health

Sugars are the most important dietary factor contributing to dental caries. Different foods carry different dental health risks, with those containing non-milk, extrinsic sugars potentially the most damaging. In the UK, sugared soft drinks and confectionery contribute approximately 50% to total intake of non-milk extrinsic sugars. Dental patients should, therefore, be encouraged to reduce the frequency of intake of sugary foods. The intake of acidic foods and drinks contributes to dental erosion and consumption of such foods should also be limited. General advice is that dietary guidance to dental patients should be positive and personalised (if possible) and in line with current dietary recommendations for general health. Here, our panel of experts offer their views…

Is the role of a nutritionist and increasingly important one?

FE: The role of the nutritionist has always been an important one – the input they can have in the dental health arena is key. This is evident in many educational resources we make use of from Public Health England i.e. The Eatwell Guide, 2016, The Smile4life initiative, Lancashire Children and Young People Trust, 2013 and the Delivering Better Oral Health toolkit, 2017 (Lancashire County Council, 2017, PHE, 2016, 2017).

MM: The role of nutritionists has always been important. They work to advise the public, generally from a population perspective (whilst dietitians tailor diets for individuals). Nutritionists work with the food industry in the development of new products; they also can work with food technologists to reformulate foods for special diets e.g. type 2 diabetes or respond to health changes lobbied for by government and pressure groups, such as Action on Sugar.

RB: It is important in the way we are facing the world of food and diet now. There are so many food choices to be made today that it can seem overwhelming. In education and awareness of healthy eating, it has an important role. I feel it is all down to education and this doesn't have to be implemented by a nutritionist. Reading articles can also be a positive way to learn, but a nutritionist can steer someone in the right direction.

Are people generally aware of what is healthy and what is not when it comes to food?

FE: It really depends on who you are talking to, what their priorities are in life, their level of understanding, their attitude towards health in general and their socioeconomic situation and, of course, the diversity in our communities (Cragg et al , 2013; Peckham & Hann 2010).

MM: It depends on who we mean by 'people'. Do you mean the lay public in general, or those working in the food industry or health professionals like members of the dental team or nutritionists and dietitians? A piece of work we conducted in Cardiff University looked at the nutritional knowledge of those training as nutritionists compared with those training as members of the dental team. We found that dental professionals knew a lot about nutrition in relation to the mouth, but less about the rest of the body, whilst those training in wider nutrition focused on the rest of the body neglecting the mouth (**http://www.nature.com/bdj/journal/v210/n1/abs/sj.bdj.2010.1184.html**)

Those working in public health, across a wide range of disciplines, need to work together to ensure a concerted effort and consistent messages, otherwise the lay public will only get more confused and use this confusion as a way of opting out of the healthier options. Think of the confusion we have had around fruit juices, smoothies, dried fruit – linked to the five-a-day message and their role in caries development. This is why Action on Sugar is so important and policy statements from organisations like the British Association for the Study of Community Dentistry.

RB: Yes and no. There are many people I meet every day who have the knowledge about healthy eating and there are many who do not know much. The latter saddens me terribly. It is all about having 'the conversation'. Talking to people can light that spark and get others to research in their own way. Public Health England recently announced they will advise food companies on sugar levels in products, which is a start.

Do people often ignore the health implications?

FE: Those who do know what is healthy often make choices to eat well, but often have unhealthy treats. Others eat well, but not always healthily; many are ill-informed about good and bad foods and all too often wider determinants of health (Green et al, 2015) influence food choices and peer pressure in some age groups.

MM: There is a wide range of factors that affect people's food choice:

- Biological determinants such as hunger, appetite and taste
- Economic determinants such as cost, income, availability
- Physical determinants such as access, education, skills (e.g. cooking) and time
- Social determinants such as culture, family, peers and meal patterns
- Psychological determinants such as mood, stress and guilt
- Attitudes, beliefs and knowledge about food.

Health is just one of the reasons in a long list that might contribute to what we are eating. My personal view is that being able to afford, plan and prepare meals, which are quick and healthy, after a long day at work is perceived as a difficult task. So, is it any wonder that there has been a rise in sales for ready-prepared meals? These meals do tend to be high in fat or salt or sugar. This is a myth we need to dispel because, with a little bit of planning, you can have quick, healthy and tasty meals that are not too difficult to prepare. Unfortunately, all the telly programmes on food seem to focus on grander meal preparation and high sugar and fat baking. We ought to lobby TV producers to do more real-life food prep!

RB: Yes, I guess some do. It is about convenience and life gets so busy that we don't often have time to eat properly. There is a myth about junk food being cheaper than healthy food. The fact is that healthy food has to be prepared. So there is culture of avoiding what is good for us. I think some people ignore the health implications or they fail to take them seriously. It is too hard to make those decisions at times because it requires massive change. People can be entrenched in their views.

What impact is this having an overall health/dental health in your experience?

FE: Poor oral health often means good quality foods are difficult to eat; those with nutritional value are often over cooked in order that they can be eaten, with a knock-on effect to general health issues. Equally, poor diet can cause dental disease, as we have seen through the sugar campaign and the frequency and amount of sugar as well as the type and consistency of sugars (NMEs) in diets (Nobel, 2013). If dental caries is present or there are missing teeth, eating can become difficult. If patients are then given a removable or fixed prosthesis to close a space and give back functionality, this can also influence diet choices.

MM: As a nation, we are eating far too much sugar. Current estimates of UK sugar intakes from the National Diet and Nutrition Survey programme (NDNS) show that average intakes are three times higher than the new 5% maximum recommended level in school-aged children and teenagers (14.7% to 15.6% of energy intake) and around twice the maximum recommended level in adults (12.1% of energy intake). Consuming too much sugar in food and drink is bad for people's health, increasing the risk of obesity, which is associated with greater risk of developing type 2 diabetes, hypertension, coronary artery disease and cancer. It is also a risk factor for tooth decay. (PHE's Sugar reduction the evidence for Action (**https://www.gov.uk/government/publications/sugar-reduction-from-evidence-into-action**)

RB: I can't talk about serious health implications as I am not a health care professional but, generally, working with different groups of people, I see tiredness and sluggishness in individuals sometimes as problematic. Also weight gain is something that can be visible and more and more people are being diagnosed with type 2 diabetes. But the implications on mental health are also an issue. A good healthy diet

Fiona Ellwood writes from an educational perspective, having studied education at both undergraduate and Master's Level and, more recently, reading public health. Fiona is also a PhD student looking closer again at educational issues. She is the patron of the Society of British Dental Nurses that has a central focus of education, learning, development and training.

Maria Morgan is a senior lecturer in dental public health at Cardiff University. She originally trained as a home economics teacher in the 1980s. Following her postgraduate studies, she moved into public health and then dental public health in the mid-1990s. She believes her background in food and nutrition has 'come in very handy' in her current role.

Ros Barresi is a nutritional therapist. She says her role is 'purely educational' and aimed at raising awareness of the benefits of wholefoods and the damage that an abundance of processed foods in a diet can cause. She explains: 'I generally try to educate people by giving good food advice, recipes and use of food diaries. I use it with my other therapies and try to encourage a sense of wellbeing.'

can help depression and anxiety. The dental implications, however, are becoming more apparent, with, for example, tooth extraction more prevalent in under 5s now than ever before. We need to deal with this in a more holistic and joined-up way rather than sectioned off into health care areas.

Do you think food labelling is misleading?

FE: In many cases, it has become easier but this is still reliant on the patient as the consumer making better choices. The labels are colour coded and broken down into 'Energy, Fat, Saturates, Sugars and salt' (PHE, 2016). Patients often report confusion and continue to buy foods that they enjoy or that fit with their socioeconomic position. As oral health educators, we must not assume all patients can read or that English is their first language and that general health issues play a large part of what they choose to eat, too. Of course, if patients have a healthy mouth, some believe these choices do not matter and carry on regardless.

MM: I think product labelling and product marketing can be misleading. For example, marketing a yoghurt as zero fat, which is packed full of sugar, is a misdirection that should not be allowed to persist. It is easy to make mistakes as consumers. When families shop for food, it is hard to see the label for one product in the context of the whole weekly menu. I agree with the BASCD sugar statement, which recommends:

- The use of front-of-pack health warnings on food and drinks high in sugar
- Putting spoons of sugar on the front of pack labels to indicate the amount of sugar in the product
- Restaurants and other food outlets displaying the amount of sugar in their products, both on menus and on display labels. (**http://www.bascd.org/about-us/bascd-statement-on-free-sugars**)

RB: It can be a little confusing for some people. If a product has lots of ingredients, we know it is probably not good for us – the fewer the ingredients the better. Also, what is listed in the first part of the label means there is more of that ingredient than the latter ingredients on the label. Labels are better than before but they are still confusing. At least the quantities of sugar are clear, once you get into reading labels. So for teeth and health, this is a good sign. However, we need to get up to speed on labels and this starts with educating the youngsters.

Do you believe that working in interdisciplinary teams is the way forward?

FE: We should be working as interdisciplinary teams that put the patient at the centre of our outcomes and if we work by the mantra of 'making every contact count' (Nelson et al, 2013), then the messages should be consistent across the professional groups. Working together can only enhance professional development.

MM: We should work together and across disciplines. This coordinated action needs to start with education at school, colleges, universities and workplaces. I mentioned earlier about the article that highlighted the nutritional knowledge of trainee dentists and trainee nutritionists. Those training in dentistry need an appreciation of nutrition for the rest of the body and those training in nutrition also need to have an appreciation for how food affects the mouth. I have been involved in the validation of a public-health nutrition course in Cardiff, and, because of my expertise, was able to ensure that oral health issues were included in the course.

RB: We should go back to basics and bring all this to the national curriculum. We need to have someone in all dental surgeries – oral health educators, for example – giving education about food. This would be a bonus. Teeth are for life.

Should food skills and oral health education become a key part of the national curriculum?

FE: In one sense yes, but much of this goes back to whose responsibility it is, whether we believe that paternalism is an acceptable

approach and where individual rights and social justice sits (Green et al, 2015). There are many challenges with taking a wider position, including addressing inequalities and reducing unintended harm (Peckham amd Hann, 2010). If I didn't have a broader understanding, I would say yes straight away, looking at the 'least harm and most benefit' scenario. From an educational perspective, this embeds core skills and we would hope that the nutritional messages that they would learn would stay with them. Where better to capture a wider audience and perhaps some of the hard to reach groups?

MM: My answer to this question might be a little biased, having trained as a home economics teacher. Practical food education, with an understanding of management of resources (notably money and time) and health, needs to be core to school education. Food education can be imaginatively integrated into the curriculum and linked to a wide range of subjects including science, history, geography and so on. I am aware of some initiatives that are linked to the wider community, such as inter-generational food classes.

RB: Yes, it should be part of the national curriculum. Children are like sponges and this approach fits well alongside wellbeing, sex and relationship education and nutrition. Just an hour per week would help them learn so much as well as what is appropriate. Recipes can be taught with no sugar in schools. Also, cooking clubs can be arranged for local people who want them. Supper clubs are a way also to educate people by sharing recipes and ideas, as well as talking and having 'the conversation'.

Is nutrition a government responsibility?

FE: That is a million dollar question. Government has a responsibility to ensure people have the right to a good life (Baggott, 2011), but how they distribute that responsibility is challenging. There has to be buy-in from many stakeholders and individuals if there is to be a difference made. Addressing the social determinants of health is key to this and the government can influence this. Healthy choices should be the easier choices. (WHO, 1986).

MM: Nutrition has been and remains a government responsibility. Trading standards and environmental health evolved to ensure that food for sale was what it was purported to be and was safe. During World War Two, the UK national government was involved in the rationing of food to ensure that what little we had went round the population so that people were nourished. Today, besides having trading standards and environmental health departments run by local government, we have national food and nutrition guidance associated with what type of food is sold in schools, food regulations for hospitals, care homes and so on. (**https://www.gov.uk/school-meals-healthy-eating-standards**), (**http://www.hospitalcaterers.org/media/1158/wales-food-fluid.pdf**), (**https://www.food.gov.uk/sites/default/files/multimedia/pdfs/olderresident.pdf**). The UK government has recently introduced a sugar-sweetened beverage levy because of real concerns about the amounts of sweetened soft drinks that children and adults drinks, which contribute to higher calorie intakes and dental caries.(**https://www.gov.uk/government/news/soft-drinks-industry-levy-12-things-you-should-know**), (**http://www.nature.com/bdj/journal/v220/n12/full/sj.bdj.2016.449.html**)

RB: It is everybody's responsibility. We all have the ability to learn new things and we all need to be able to be healthier. Food companies are also in need to improve their products. And, instead of using cheaper alternatives to sugar, then make their products better for everyone.

How best to reach those who need education most?

FE: We need to work with those who are most likely to see these individuals, their family groups and carers. Much of the oral health work focuses on play groups, pre-schools, schools, public services and hospital teams – the people who are likely to see them the most. Let's not forget advertising and marketing. As a starting point, we could encourage the famous to advertise healthy eating and drinking and not sports drinks. The SUSTAIN and the Children's Food Campaign already do this. Of course, we work across all age groups and our oral health messages must be adapted.

MM: I agree. For example in Wales, the Designed to Smile initiative works with nurseries and schools in deprived areas to get fluoride into contact with teeth via a supervised tooth brushing and topical fluoride application programme. Designed to Smile leads work very closely with nurseries, schools, HVs, midwives, and those driving 'whole school' approaches to school and nutrition, to try to tackle these issues. (**http://www.designedtosmile.co.uk/home.html**). Commissioning Better Oral Health (an evidence informed toolkit for local authorities) refers to food initiatives and policies many times and provides three case study examples (**https://www.gov.uk/government/publications/improving-oral-health-an-evidence-informed-toolkit-for-local-authorities**)

- Case study 1. The role of local planning on the food environment
- Case study 3. Healthier eating school policies and schemes in primary schools
- Case study 8. Implementing a healthy baby feeding policy.

It is crucial that dental policy documents like this should think food, and that food policies should remember the mouth. Also, we need to think about what are the priorities for those with poorer diets – we want to avoid 'victim blaming'. We need to ask people what they want. If it is about eating on a budget, then start with that. If we can do this, then we might stand a chance of changing things.

RB: A start would be including nutritional information within the national curriculum. Doctors' surgeries and public services are also a way to identify and implement positive ways to eat well and improve the education of the public. Supermarkets could also get involved to get people talking. I don't have the answers but the conversation needs to happen in order for us to really get things moving.