





Breakfast bars, yoghurts and cook-in sauces come under the scrutiny of Cardiff-based **Dr Ruth Fairchild** and **Maria Morgan**

t is apparent that dental team members can forget the wider approach to diet, focusing on the head and forgetting the rest of the body. On the other hand dietitians and nutritionists can often ignore

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M Z MORGAN BSc (Hons), PGCE, MPH, MPhil, FFPH. Applied Clinical Research and Public Health, College of Biomedical and Life Sciences, Cardiff University, School of Dentistry, Heath Park, Cardiff CF14 4XY the impact of diet on oral health.¹ This is problematic when all health professionals need to make every contact count (MECC), and thus give consistent messages to their patients. Remember that the head is part of the rest of the body – everything you eat and drink starts in the mouth, and then affects your oral **and** general health as it progresses through the body!

Public health is the science and art of preventing disease, promoting health and improving the quality of life through the organised efforts of society, thus dental public health is the same concept but focuses primarily on oral health. The "science and art" relates to the fact that public health draws on the skills and expertise of a wide range of disciplines, from the arts and the sciences, to deliver its goals.² This

further emphasises that members of the dental team need to work closely with partners such as dietitians and health workers and vice versa, to tackle the wider determinants of health.³

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Sugar intakes, obesity and dental caries are inextricably linked. Consuming excess free sugar in food and drink is detrimental, increasing the risk of obesity, which is associated with greater risks of developing type 2 diabetes, hypertension, coronary artery disease and various cancers.⁴ It is believed that 1 in 20 cancers in the UK is linked to being overweight, and this is associated with 13 types of cancer, including breast, kidney, liver, colorectal and pancreatic cancer.⁵ Obesity is also a well-established risk factor for tooth decay.⁴

The UK presently suffers from unacceptably high levels of both tooth decay and obesity.

Approximately one third of children aged 5 and 12 years⁶ and a third of dentate adults in the UK⁷ have experience of dental caries. In addition, obesity in the UK has increased by 92% since the 1990s. The UK is the most obese country in Western Europe with 26.9% of the UK population classified as obese in 2015⁸. Excess calorie consumption can occur from eating too much of any food. However, the availability and low cost of high sugar, high calorie foods and beverages is giving particular case for concern.^{9,10}

In this article, we draw on the knowledge of both oral health and nutrition, to provide practical and realistic tips for the dental team, when advising patients to improve health and help Make Every Contact Count(MECC). By focusing on two of the main sugar contributors in the UK diet, breakfast bars and yoghurts, plus a hidden and often unexpected source, readymade cook-in sauces.

Present day sugar recommendations:

Recent recommendations for carbohydrates¹⁰ and the 2016 updated Eatwell Guide¹¹ both advised significant reductions in free sugar intakes for the UK population. The carbohydrate recommendations halved from no more than 10% to 5% of total energy intake; the maximum daily amount differs depending on age. In addition, the Eatwell Guide relocated high fat sugar salt (HFSS) foods outside of the plate confirming the need to eat these less often

Figure 1: UK National diet recommendations

A-6 years

Maximum daily amounts

Figure 1: UK National diet recommendations

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For 19 years

From

11 years

From

12 years

Cubes max

From

13 years

Cubes max

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13 years

Cubes max

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13 years

Cubes max

From

14 years

Cubes max

From

15 years

Cubes max

From

16 sugar

Cubes max

From

17 years

Cubes max

From

18 years

From

19 years

Cubes max

Source: NHS Change4Life, 2018 and Public Health England, 2016. https://www.nhs.uk/change4life

and in smaller portions (Figure 1).11

Bearing in mind the **maximum** allowance for children aged 11+ and adults of all ages is 30g per day free sugars (or 7 sugar cubes) eating a badly chosen portion from any of these food product categories could provide this maximum in one hit (Tables 1-3). However, better choices are available reducing the sugar impact on your daily intake.

Other tips for patients:

If your patients reveal a love of take away food start with an easy recipe first. This homemade sweet and sour sauce costs just 21p per portion,

includes only 6.6g sugar (including that derived from 50g of fruit and vegetables) and is ready in seconds. Make double, using a whole small tin of pineapple and freeze the spare for next time.

Internet search low sugar "Sweet and Sour" recipe UK and there is usually a good recipe (substitute for instance "tomato pasta sauce" etc. for other recipes). Some of our favourite sites are the NHS live-well and BBC good food sites:

- https://www.nhs.uk/live-well/eat-well/ how-does-sugar-in-our-diet-affect-ourhealth/?tabname=recipes-and-tips
- https://www.bbcgoodfood.com/recipes/ collection/low-sugar

Table 1: Sweet n sour sauces: hidden sugar*						
Product	g of sugar per portion	Tsp (4g) per portion	Price per portion (p)			
Takeaway sweet n sour sauce	31		180			
Sharwood's	19.6		45			
Uncle Bens	18.2		43			
Uncle Ben's extra Pineapple	15.5		43			
Sainsbury's basics	13.1		14			
Sainsbury's extra pineapple	12.1		16			
Sainsbury's lighter	11.8		16			
Homemade**	6.6		21			
Uncle Bens no added sugar	2.2		43			

^{*}Nutrimen dietary analysis programme (Dark Green Media, Wales) used for all sugar contents www.nutrimen.co.uk

^{**}Recipe available from: https://www.slimmingworld.co.uk/recipes/sweet-and-sour-sauce.aspx Note also the sugars above are totals of the sugars naturally occurring in the fruit and vegetables and that added by the manufacturer

Table 2: Total sugar content of yogurts*						
Product	g of sugar per portion	Tsp (4g) per portion	Price per portion (p)			
Asda split pot (150g)	24		35			
Muller corner (150g)	23.4		68			
Muller corner strawberry shortcake (135g)	23.1		68			
Nestle strawberry with mini smarties (120g)	22.6		37.5			
Onken fat free (150g)	20		47			
Koko non-dairy (125g)	15.5		60			
Activia (125g)	13.6		38			
Asda Low fat (112g)	13.5		22			
Muller light (175g)	12.4		68			
Alpro (150g)	12.3		100			
Homemade** 1 pot natural yoghurt, 28g strawberries and 1 tsp reduced sugar jam	11g (6.2 y, 1.7 s, 3 j)		60			
Frubes (70g)	9.4		25			
Homemade** 1 pot natural yoghurt, 28g strawberries	8g (6.2 y, 1.7 s)		60			

^{*}Nutrimen dietary analysis programme (Dark Green Media, Wales) used for all sugar contents www.nutrimen.co.uk

Yogurts

People become acclimatised to a high sugar diet; ¹² don't be afraid to start where your patient is at. Switching from a commercial high sugar yoghurt to a natural yoghurt with fresh fruit may be too sudden a change, so wean them off with a half natural yoghurt half fruited commercial variety, then switch to the homemade, fresh fruit and low sugar jam, before finally switching again to the lowest sugar option. Natural yoghurt contains no sugar other than lactose naturally present in the milk, which means the added sugar only comes from the fruit (or other sweetening agents) you add. You are in control.

Cereal bars

Eating on the go especially if hungry always leads to poor food choices, a little bit of planning goes a long way in sugar reduction; nutrient density and gives you a better portion size which will keep you full for longer. However, you need to bear in mind the added sugar content of the huge range of breakfast cereals available

to a UK consumer. Shredded wheat, Weetabix, Cornflakes, Rice Crispies and Shreddies are lower sugar choices, whilst the majority of breakfast cereals marketed specifically to children contain over 30% sugar.¹³

Portion size is also important when calculating sugar intakes. The manufacturer's recommended portion may not be that

Figure 2: Cereal portion as advised on back of pack nutrition label



Reproduced from Khehra R, Fairchild R M, Morgan M Z, *Br Dent J*, 2018, **225:** 164–169, with permission from Springer Nature. displayed on the packet, or the amount you require to fill you up. This can have significant consequences when a portion recommended by the manufacturer on the nutrition label (Figure 2) provides 170kcals and 11g free sugars whilst the portion depicted on the pack (Figure 3) provides 510kcals and 34g free sugars.¹³ Do you need to use a smaller bowl?

Figure 3: Cereal portion image as depicted on cereal packet



Reproduced from Khehra R, Fairchild R M, Morgan M Z, *Br Dent J*, 2018, **225:** 164-169, with permission from Springer Nature.

^{**}Recipe available from: https://www.slimmingworld.co.uk/recipes/sweet-and-sour-sauce.aspx Note also the sugars above are totals of the sugars naturally occurring in the fruit and vegetables and that added by the manufacturer

Table 3: Cereal bars...make time for breakfast....it makes sense from a sugar perspective and saves money!

Product	g of sugar per portion	Tsp (4g) per portion	Price per portion (p)
Nakd berry delight (35g)	16.6		62
Belvita berry breakfast & yoghurt crunch (2 biscuit 51g)	13		56
Tesco strawberry fruity bake (37g)	12.91		
Go ahead strawberry yoghurt bar (2 slices, 36g)	12.6		40
Special K red berries cereal with semi skimmed milk (30g)	11		35
Alpen strawberry with yoghurt bar (29g)	10		40
Tesco wheat biscuits (2 biscuits, 40g), 28g strawberries with 125ml skimmed milk	9.34		40
Bounce red berry breakfast bar (45g)	8		100
Special K juicy red berry bars (27g)	7.6		45
Pulsin strawberry fruity oat bar (25g)	7.4		50

Nutrimen dietary analysis programme (Dark Green Media, Wales) used for all sugar contents www.nutrimen.co.uk

Conclusion

It doesn't have to be expensive to eat healthily and home cooked can be lower in sugar and calories as long as you control portion size. Is it time you take back control of what you eat? Help your patients (and yourself) make small, achievable changes that can be embedded into everyday lives. This can be achieved whether you are a MasterChef or not!

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