BDJ Team
SEPTEMBER 2015

WHAT'S THE #SugarRush?

BDA
British Dental Association

September 2015

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Highlights

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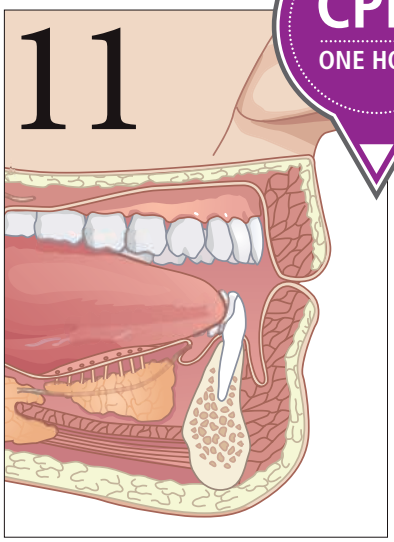

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DENTAL HYGIENISTS AND THERAPISTS CAN HELP EXCEED PROFESSIONAL CONFIDENCE IN NHS DENTISTRY

A recent survey of dental professionals has found that confidence in future NHS dentistry plans is worryingly low with almost half of respondents having major concerns regarding treatment and prevention balance.[1]

The survey, which considered the opinions of 80 dental professionals, provided interesting insight into the thoughts and feelings of the profession in regards to NHS dentistry practice changes and tracked their levels of confidence.

Concerns were also raised about remuneration under new targets, career prospects and the ability to work within frameworks. But most of those surveyed remained confident that patients would continue to be happy at the service they received.

The British Society of Dental Hygiene & Therapy (BSDHT) believes that these perceptions can be altered through correct utilisation of the entire dental team and that as a whole they can exceed all expectations.

Michaela ONeill, President of the BSDHT said: 'It is worrying that almost half of those surveyed felt that through NHS dentistry they will be unable to strike a balance between treatment and prevention, especially when the key role of dental hygienists and therapists is that of providing preventative measures to stop further treatment down the line.

'By referring patients to dental hygienists and the dually qualified for preventative treatment at an early stage then other members of the dental team are freed to work towards other aspects within the framework and providing effective services for patients.

'The profession is striving to do the best for patients, sometimes under seemingly difficult conditions, and to do that effective preventative treatments must be delivered; this is where dental hygienists and therapists evidently can play an integral role.

'Close working relationships within the whole dental team and correct utilisation will enable the whole dentistry profession to exceed expectations when it comes to NHS dentistry.'

1. Practice Plan, NHS Confidence Monitor - https://www.practiceplan.co.uk/

CALL FOR DENTISTS TO INCREASE THEIR FOCUS ON TOOTH EROSION

The European Federation of Conservative Dentistry (EFCD) has called for the dental community to increase its focus on erosive tooth wear and declared it a challenge requiring co-operation with other healthcare professionals, according to a recently published consensus report.

The Federation further concluded that effective management includes screening for early signs of tooth erosion and evaluating all aetiological factors, including eating and drinking habits, nutritional supplements, reflux, vomiting and medications.

Speaking about this consensus, Professor Andrew Eder, a Specialist in Restorative Dentistry and Prosthodontics, and Clinical Director of the London Tooth Wear Centre, commented: 'With people living longer, we need to work with our patients now to ensure their oral health does not let them down and one area that urgently needs our attention is that of erosive tooth wear.

'The Adult Dental Health Survey teaches us that more than three-quarters of dentate adults show some tooth wear in their anterior teeth, while the increase in moderate tooth wear in 16 to 34 year olds is of clinical relevance as it is suggestive of rapid tooth wear.'

CALL FOR HEALTH SUMMIT AS POSTCODE LOTTERY OF KIDS' TOOTH DECAY IS REVEALED

A new report has revealed that children's tooth decay is a postcard lottery, dental therapists are calling for a health summit to address the crisis.

The report – by the charity, the National Children's Bureau – shows a huge gap in levels of oral health as well as obesity, injury and early childhood development for under-fives across the country.

It confirms that the health and development of children under five is closely linked to the affluence of the area they grow up in, with those living in deprived areas far more likely to suffer poor health.

Comparing the 30 most deprived local authorities with the 30 best-off, it illustrates that, while only 18.4% of children living in the 30 richest areas suffer from tooth decay, this rises substantially to 31.6% of four to five-year-olds in the 30 most deprived.

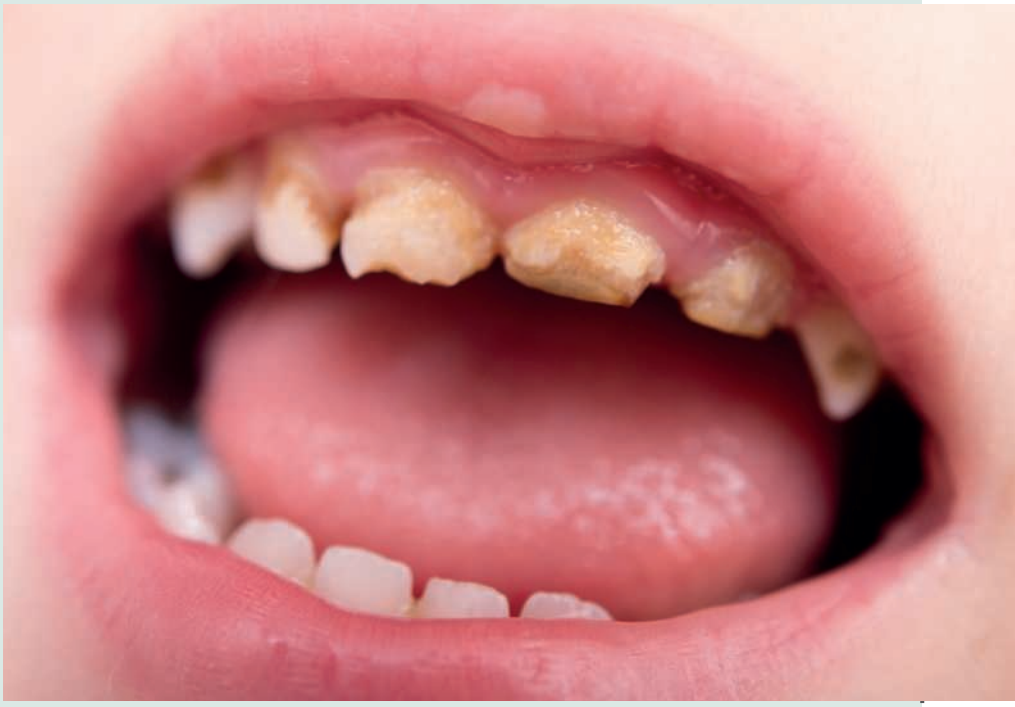
Now, in light of this report, which analysed data from Public Health England, dental therapists are calling for an across-the-board health summit to tackle this issue as a matter of urgency.

Fiona Sandom, president of the British Association of Dental Therapists (BADT), said: 'There has been much activity of late with many interested parties lobbying for more to be done to fight this health crisis within dentistry – the British Dental Association (BDA), the British Society of Paediatric Dentistry (BSPD) and the BADT are all behind various campaigns to turn the tide of children's tooth decay figures, especially in poorer areas of the country.

'Elsewhere, the pressure groups, Action on Sugar, and, more recently, Jamie Oliver, are also campaigning vociferously, with the British Medical Association approaching it from a different angle by demanding a 20% tax on sugary drinks to fight the obesity epidemic.

'Jimmy Steele addressed the problem in his BDA Anniversary Lecture in July when he said that, although there has been a profound reduction in the prevalence of tooth decay, major inequalities still exist across the UK and suggested that prevention has to be the way forward, acknowledging that 'inequality appears to be getting more pronounced, but we will not be able to treat away the difference.

'The Marmot Review into health inequalities in England, published back in 2010, highlighted the social gradient of such health inequalities, which are largely preventable. Five years on, we now need some joined-up thinking to address the associated health issues – including tooth decay – for which our children and the NHS are paying a heavy price.'



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However, the data show that poor early health is not always inevitable for children growing up in deprived areas.

Several areas with high levels of deprivation buck the trend and achieve better than expected results, suggesting that more work is needed to understand how local strategies and programmes can make a difference.

Children in three local authority areas – Hartlepool, South Tyneside and Islington – have lower rates of tooth decay, despite high levels of deprivation.

Secretary of the BADT, Melonie Prebble, added: 'Dealing with inequality is complex and we are aware this issue is not new. I believe we need to rethink how best to deliver preventive services and seek new ways to engage families, with an education programme that starts with parents prior to a child's birth and beyond. We need to bridge the gap and ensure the health and development of the first five years of a child's life is improved.

'Unfortunately, the UK still provides a lot of reactionary health services and it would be interesting to know what Islington and the two other areas provide to identify how this may be applied to other areas of deprivation.'

She added: 'A multidisciplinary health summit – that involves knowledge sharing and an open discussion on best practice – needs to happen sooner rather than later.'

At a regional level, if under-fives in the North West enjoyed the same health and development as those in the South East, over 15,000 cases of ill health could be prevented. This included:

- 43% fewer five-year-olds with tooth decay – equivalent to over 11,000 children per year
- 19% fewer obese four to five-year-olds – equivalent to over 1,600 children a year.

The statistics also included the revelation that a five-year old in Leicester is five times more likely to have tooth decay than one in West Sussex.

Poor Beginnings: health inequalities among young children across England is published as responsibility for public health services aimed at under-fives is transferred from central government to local authorities in October.

The report calls on the government to set out a renewed strategy to improve the health and development of children and families in the early years.

For more, visit www.ncb.org.uk/poorbeginnings.

SUGAR-FREE CONFUSION NOT SWEET FOR TEETH

Sugar may be one of the hottest topics in the news, but a new survey has shown a desperate need for better sugar education as Britons think chocolate, sweets and fruit juice contain no sugar.

A survey of more than 2,000[1] people carried out by Denplan revealed one in five people (21%) don't believe chocolate contains sugar, with the same amount (22%) thinking biscuits are sugar-free too. Drinks are not immune from sugar ignorance either, with almost half (47%) of respondents believing that neither wine or beer contain sugar. Perhaps more worryingly, over a third (38%) of people asked did not know that fruit juice contained sugar, despite warnings from Action on Sugar that many juices contain at least six teaspoons of sugar - more than cola.[2]

Other food and drinks which respondents believed were free of sugar included:

20%	30%	40%	58%	20%	26%	28%
Sweets	Hot chocolate	Fruit	Spirits	Fizzy drinks	Sports drinks	Energy drinks

The new results also showed the public's desire for more clarity on labelling of products, as 54% admitted that they wanted to reduce their sugar consumption, but just one in five respondents could decipher whether a product contains sugar by reading ingredient labels. 80% said they don't always check the list of ingredients before buying or eating food, and over a third of respondents (38%) said they didn't know the difference between 'sugar-free' and 'no added sugar'.

Henry Clover, Deputy Chief Dental Officer at Denplan said: 'With sugar 'hidden' in so many unexpected foods and drinks, managing our daily sugar consumption can be a challenge.'

1. A Onepoll survey of 2,000 participants conducted in May 2015
2. http://www.bbc.co.uk/news/health-29986012

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Photograph: ©Channel 4

Jamie Oliver in his latest documentary, Jamie's Sugar Rush.

Jamie's Sugar Rush – what do we think?

It shocked the nation into action, with his petition reaching 100,000 signatures within 48 hours of the documentary airing, but what did we as a profession make of it? After all, the *British Dental Journal* has been banging on about sugar for 100 years, so what impact could a 60 minute show by a TV chef possibly have? We ask five healthcare professionals for their opinion.

Shaun Howe RDH

– Storm in a teacup

It's in the news, wherever you look sugar is in the news. The problem is that it is not news is it? Collectively, the profession of dentistry has known for some significant time that frequent sugar consumption is a factor in caries and our medic colleagues have known that too much sugar will cause weight gain. We were fed a lie in the 1970s that too much fat (regardless of the source) was bad for us and in the 80s and 90s people sought low fat products because of this. Remove fat from processed food and then you have to replace the taste and that is invariably done with sugar.

Why do we need Jamie Oliver and his recent television programme 'Sugar Rush' to highlight a message that we all knew and have been passing on to patients for some time? I am angry that it has taken a TV chef to bring this to the nation's attention; the Scientific

Advisory Committee on Nutrition made some startling revelations in its recently published *'SACN Carbohydrates and Health Report'* and it appears it took a group of experts to state:

- High levels of sugar consumption are associated with a greater risk of tooth decay
- The higher the proportion of sugar in the diet, the greater the risk of high energy intake
- Drinking high-sugar beverages results in weight gain and increases in BMI in teenagers and children
- Consuming too many high-sugar beverages increases the risk of developing type 2 diabetes.

Really? It took a group of high end academics to come up with the first conclusion; Miller first described the relationship between sugar and caries in the 1890s and whilst this model has evolved and we now know there are numerous factors the basic message was the same over 100 years ago. Despite being angry at it requiring Jamie Oliver to highlight this issue, I admire his tenacity and enthusiasm for anything he becomes involved in yet the cynic in me wonders whether it is a storm in a teacup and that in 6 months' time we will have forgotten about the hype. There are many powerful multi-national companies that will continue to produce sugar laden food and the masses will continue to buy it.

Sugar is not a poison nor is it bad for us in small amounts yet it is being made out to be so. We need sugars to function but perhaps the storm on social media may prove to be a force for good. It is always interesting to watch the profession's reaction on various forums following an event like Sugar Rush and it has at least galvanised the profession and got patients talking. Like I said earlier, I am cynical and now I am sitting eagerly awaiting Jamie's new book which will undoubtedly be titled along the lines of 'Jamie's Low Sugar tasty meals' which will use expensive ingredients and may well be beyond the reach of those that really do need to stop buying the four pack of chocolate bars for one because they are cheaper than four apples. Pukka.

Dominique Tillen

– Harnessing the power of communities to reduce tooth decay in children

Following numerous TV programme covering the appalling scenarios for young children's dental health I welcome Jamie's sugary drinks tax initiative which is taking positive action to prevent tooth decay.

Similar to his reaction during the television programme, I could not fail to be moved by the sight of little Mario having his milk teeth removed, but what saddened me more, was when the surgeon said that there were another five cases like Mario in the same operating theatre that day.

> ***'THE CYNIC IN ME WONDERS WHETHER IT IS A STORM IN A TEACUP AND THAT IN 6 MONTHS' TIME WE WILL HAVE FORGOTTEN ABOUT THE HYPE.'***

Statistics from Royal College of Surgeons (Jan 2015) report '*The State of Children's Oral Health in England*' show that the peak age of having a tooth removed for decay is five years old. Tooth decay doesn't happen overnight, it is the result of poor oral hygiene and frequent exposure of teeth to sugars during the first five years of life. Indeed the report states that 30% of children under five have tooth decay.

While dental health professionals have been provided with an evidenced based 'dental tool kit' and there have been calls for young children to visit the dentist at an earlier age, a wider based community initiative is lacking. I suggest that greater focus is needed where oral care of babies, toddlers and young children takes place, in the community and in the home.

A community approach could include:

- Positive attitude change toward primary teeth - a 'Milk teeth do matter' campaign
- Promotion of 'Early Years Toothcare' routine, specifically for under-fives which takes into account care of toothless gums, teething and the first set of teeth
- Introduction of oral hygiene practices at an earlier age in order to establish good habits e.g. teaching young children how to floss
- In line with Jamie, action to reduce snacks targeted at this young age group and snacking between meals
- Serious consideration of Xylitol as cheap and wide reaching public health measure. Our only disappointment in the current Sugar Tax debate, is that the natural and the 'good sugar guy' – Xylitol, whose tooth-friendly properties have been well-documented and used by our Scandinavian neighbours for many years has not been mentioned. Hailed as the 'biggest advance against cavities since fluoride' by the BDHF, few people in the UK are aware of the potential benefits of Xylitol.

Change is initiated from the community. The early 2000s saw a revolution in food available for babies and young children led by entrepreneurial parents Paul Lindley (Ella's Kitchen) and Susie Willis (Plum Baby) both dissatisfied with what was available and concerned about obesity. Both have helped raise awareness and improve the quality of foods available.

Likewise Brush-Baby was founded because I was dissatisfied with what was on offer for my young child's oral care and horrified at the appalling statistics. We have all seen the horror programmes on TV, now we need a positive community based initiative and wide reaching messages to prevent tooth decay in our children. Well done Jamie!

Claire Stevens, BDS

– An opportunity to engage and change

The broadcast of Jamie's Sugar Rush was always going to be an interesting one. With the Naked Chef turned public health campaigner declaring war on sugar, the spotlight was only going to shine brighter.

As Sugar Rush opened we jumped straight into graphic scenes of 6-year-old Mario having teeth 'yanked' out (Jamie's words, not mine). You certainly couldn't get a more hard-hitting opening and despite similar scenes having been shown in 'The Dentists' and 'Junk Food Kids', Jamie will have reached a new audience with Sugar Rush and I am sure they were equally appalled.

There were also thought provoking scenes with Consultant Dietician, Lucy Jones, demonstrating the sugar content in a 'healthy' breakfast and pre-prepared sauces. Even

Jamie who one would assume was fairly savvy on these matters seemed surprised. I do wonder if the general public might have been left feeling confused, perhaps overwhelmed, because it quickly became clear just how easy it would be to exceed the daily recommended levels of sugar intake.

If I were to critique the programme, I felt it could have been a little more balanced. A tax on sugary drinks alone is not the answer to improving oral health, but there was no mention of key preventive messages recommended by paediatric dentists, nor mention of fluoride nor discussion of the fact that it is not just what we eat but also when and how often we eat that will determine caries risk.

Sadly, there was no mention of incentivising healthy choices. Instead Jamie charged on to introduce a tax on sugary drinks in his own restaurants. The food and drinks industry are fighting back hard, their backs perhaps raised as a result of the failure to acknowledge the work already ongoing in product reformation. A discussion of the challenges in changing the nation's palate or curbing the consumer demand for sugar-laden products was nowhere to be seen.

The Jamie Oliver effect is certainly not to be underestimated. At 5pm, prior to the first broadcast, Jamie's petition to introduce a Sugar Tax had around 2000 signatories, by 1pm the following day, the half-way mark of 50,000 supporters was exceeded and now the count stands over the 100,000 needed for the matter to be discussed by parliament. But do the British public really know what they have signed up to? The response was not all positive. After the school dinners campaign, some will see his involvement as intrusive, and his suggestions have been described as 'nanny state'.

That said, I do welcome Jamie Oliver's involvement and the broadcast of Sugar Rush. I am delighted that the very real impact on oral health was highlighted. My only hope is that Jamie uses his influence wisely, by consulting widely with those working in the field and engaging with industry and government. He has the passion to drive this agenda. I only hope he is appropriately advised to ensure he can bring everyone with him.


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'IF I WERE TO CRITIQUE THE PROGRAMME, I FELT IT COULD HAVE BEEN A LITTLE MORE BALANCED.'

Dr Judith Husband

– It could provide the spark, but social change takes time

Sugar, we all love it and we all know the terrible impact it can have on oral health when misused, especially for children.

Some of us are jaded after decades of extracting teeth, witnessing the ever increasing power of big business and the normalisation in our society of very high sugar concentrations in food and drink. The use of advertising and purposeful misuse of the media, together with confusing labelling leads to what can often feel like a battle that can't be won.

Sugar tax is once again a hot topic, for some an ideological issue and perceived infringement of free choice. This is a strong argument, very popular with the sugar industry and food manufacturers.

Free choice requires a level of knowledge, understanding and the ability to opt for an alternative. With 'hidden' sugar in our food, nutritional information is represented in a variety of forms often requiring a magnifying glass and doctorate to decipher, or available only online for some restaurant purchases. It takes dedication and significant effort to be fully informed.

The choices we are currently making are also far from free in economic terms. We know the real financial cost of treating dental decay in our own practices, and other health teams know the associated costs of type-2 diabetes and obesity. The majority of which is funded by the public through taxation and provided by an increasingly overstretched and underfunded NHS.

We are already paying for the profits of food manufacturers and poor choices by individuals.

Social change takes time. Its movement is not linear but can be halted or dramatically sped up by using legislation. Some of us remember a time when children climbed around merrily in the back seat of cars, waving or pulling faces through the rear window. My favourite spot was to hang between the front seats peering forward - a perfect position to go hurtling through the windscreen in a crash.

Legislation changed, seat belts initially had to be worn, then child seats were introduced. It's now illegal to have a child unrestrained in a car and more importantly socially unacceptable. Lives have been saved and serious life-changing injuries avoided. This is where legislation is powerful; it hastens behavioural change, remodelling what is considered normal within our society and that is key to the sugar debate.

The income generated from a few pennies on a sugar laden drink are not inconsiderable, and would be a useful addition to the woeful funding for public health and prevention strategies in our communities. The real benefit would be the recognition that sugar is a substance to be used, and enjoyed, sparingly.

A sugar tax could provide the spark, coupled to improved education, prevention programmes and additional legislative change in the future. We have to kick start the dramatic shift in attitudes and behaviour needed to prevent the current tidal wave of sugar related disease and disability that we face today.

Alexis Poole, (ANutr)

– A small step to tackling a big issue

Obesity levels in the United Kingdom have reached epidemic proportions and, therefore, I believe this documentary is just what the doctor ordered.

Sugar has come under a lot of scrutiny of late and for good reason. This year the Scientific Advisory Committee on Nutrition (SACN) released new recommendations for sugar following a review of the current evidence base. Free-sugar intakes are now recommended to be below 5% of total energy intakes.[1] This equates to less than 7 teaspoons (30g) of sugar per day for individuals above 11 years. 'Free-sugars' are classified as sugars added to food or naturally present in honey, syrup and unsweetened fruit juices, however this excludes lactose in milk and milk products and sugars in fruit and vegetables. The evidence that prompted this lower sugar intake requirement found that free-sugar consumption contributes to higher energy intakes, weight gain in children, tooth decay and type-2 diabetes (T2D).[1]

Jamie's documentary emphasised the urgency for dietary change to support the new recommendations. We live in an obesogenic environment, surrounded by high sugar, fat and salt foods, making weight gain exceptionally easy. Self-regulation and responsibility within the food industry have not been effective at reducing obesity levels and this is exactly why governmental regulation is required. I passionately support the introduction of a sugar tax. The action proposed against sugar is not to eliminate it completely from the diet. Sugars are carbohydrates, an essential macronutrient, and a vital component of foods such as fruit, vegetables and dairy products, contributing to a balanced diet. The issue is that sugars are being consumed at levels well over what is physiologically required.

One culprit that received attention in Thursday's documentary was the consumption of sugar-sweetened beverages (SBB). Intake of SBBs, which has increased in parallel with the rising prevalence of obesity, is significantly associated with a higher incidence of T2D.[2] What was once considered an adult onset disease is now present in children and adolescents, contributing to the enormous economic strain on the NHS. This is not to say sugar or SBB are the sole contributors, for the aetiology of obesity and T2D is complex, however, there is certainly evidence for an association and opportunity for intervention.

So will this tax make a difference? Surely 20p per litre is not enough to prevent purchase and consumption of sugar sweetened beverages? With promising results in Mexico, I have every reason to remain optimistic. Moreover, I personally feel as though the greatest benefit accrued from such a tax will be the money that is generated, and its potential impact. According to Mr. Oliver the tax could raise £1 billion yearly, which he would like to fund nutrition education in schools and obesity prevention strategies for the NHS. School based education programmes, aimed at reducing SSB consumption, have already proven effective.[3] Funding aimed at supporting these programmes could ensure they are implemented in the near future.

This is a small step towards tackling an enormous health issue, nevertheless, it has raised its public profile and begun to generate the need for governmental action. Great work Jamie!

'THE INCOME GENERATED FROM A FEW PENNIES ON A SUGAR LADEN DRINK ARE NOT INCONSIDERATE, AND WOULD BE A USEFUL ADDITION TO THE WOEFUL FUNDING FOR PUBLIC HEALTH AND PREVENTION STRATEGIES IN OUR COMMUNITIES.'

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1. Public Health England. SACN carbohydrates and health report. Available at: https://www.gov.uk/government/publications/sacn-carbohydrates-and-health-report (Accessed September 2015).
2. Imamura F *et al.* Consumption of sugar sweetened beverages, artificially sweetened beverages, and fruit juice and incidence of type 2 diabetes: systematic review, meta-analysis, and estimation of population attributable fraction. *BMJ* 2015; **351**: 3576.
3. Avery A, Bostock L, McCullough F. A systematic review investigating interventions that can help reduce consumption of sugar-sweetened beverages in children leading to changes in body fatness. *J Hum Nutr Diet* 2015; **28**: 52-64.

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CPD: ONE HOUR

Saliva

A review of its role in maintaining oral health and preventing dental disease

by **Michael Dodds,** Senior Principal Technology Scientist at the Wrigley Company, with support from **Simon Roland**, **Michael Edgar** and **Martin Thornhill**.

Saliva plays a significant role in maintaining oral health, helping to build and maintain the health of soft and hard tissues. When saliva flow is reduced, oral health problems such as dental caries and oral infections can develop.

Composition and production

Saliva is an exocrine solution consisting of 99% water. The remaining 1% consists of a variety of electrolytes and proteins.[1] These components combined are responsible for the various functions attributed to saliva.[1]

Saliva is formed primarily (approximately 90%) from the secretions of the three paired major salivary glands, the submandibular (around 65%), parotid (around 20%) and sublingual (around 5-7%).[1] These glands are controlled by the autonomic nervous system, while minor glands (labial, lingual, buccal and palatine), distributed around the oral cavity, produce the remaining saliva (<10%).[1]

At rest, without exogenous or pharmacological stimulation, there is a small, continuous salivary flow, an unstimulated secretion, present in the form of a film that covers, moisturises, and lubricates the oral tissues.[1] This flow of saliva at rest is in the region of 0.4–0.5mL/minute in healthy subjects.[1]

Stimulated saliva is produced in response to a mechanical, gustatory, olfactory, or pharmacological stimulus, contributing to around 40-50% of daily salivary production.[2] The Salivary Flow (SF) index is a parameter allowing stimulated and unstimulated saliva flow to be classified as normal, low or very low (hyposalivation). In adults, normal total stimulated SF ranges 1–3 mL/minute, low ranges 0.7 –1.0 mL/minute, while hyposalivation is characterised by a stimulated SF <0.7mL/minute.[1]

Key functions

The two major functions of saliva are:

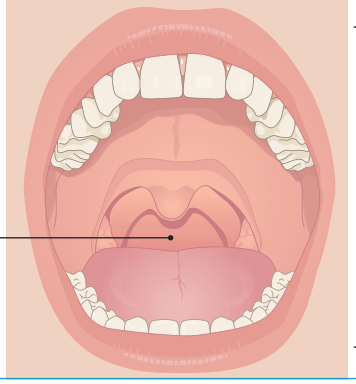
1. Protection of the oral and peri-oral tissues

- Lubrication
- Dilution of sugars after food and drink intake
- Antimicrobial and cleansing activity, degrading some bacterial cell walls and inhibiting growth
- Buffering (neutralising) acid production and controlling plaque pH with bicarbonate
- Remineralisation of enamel with calcium and phosphates
- Tissue repair

Figure 1: Factors affecting the development of dental caries

Inside the mouth

- Bacterial composition of the biofilm
- Plaque pH
- Salivary flow rate (stimulated and unstimulated)
- Buffering effect of saliva
- Food retention
- Inorganic compounds (Ca^{2+} and PO_4^{3-})



Outside the mouth

General health

- Medical history
- Hormones
- Age
- Genetic heritage
- Medical treatment

Environment

- Frequency of eating
- Diet
- Oral hygiene
- Fluoride

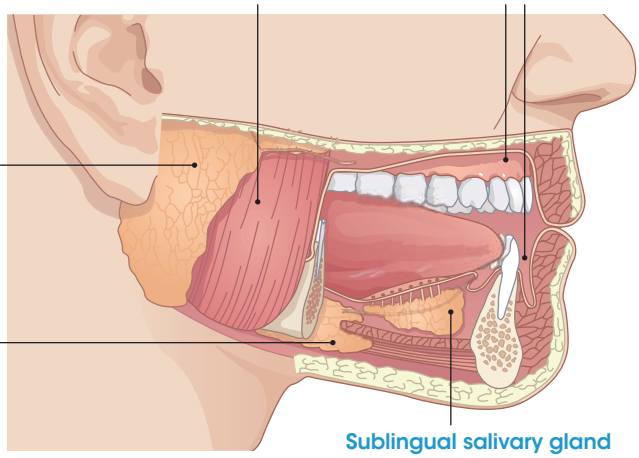
Figure 2: Salivary glands and saliva function

Parotid salivary gland

- Serous, watery secretions
- **High inorganic content (calcium, bicarbonate)**
- Responsible for 20% of unstimulated salivary flow

This proportion rises to 50-60% for stimulated salivary flow

Minor salivary glands in lips and oral mucosa (especially buccal) are collectively responsible for 8-10% of unstimulated salivary flow



Submandibular salivary gland

- Mixture of serous and mucous secretions
- Responsible for 65% of unstimulated salivary flow

Sublingual salivary gland

- Mucous secretions (more viscous)
- Responsible for 5-7% of unstimulated salivary flow

2. Facilitating eating and speech

- Food preparation, enhancing chewing, the clearing of food residues and swallowing
- Digestion, food breakdown with enzymes
- Enhancing taste
- Enabling speech by lubricating the moving oral tissues

In addition, saliva is used in diagnostic testing

- Bacterial, yeast, and viral counts indicating caries activity and altered immune responses, as well as many diagnostic tests for oral and systemic diseases
- Hormonal balance to identify steroids and sex hormones

'STIMULATED SALIVA IS PRODUCED IN RESPONSE TO A MECHANICAL, GUSTATORY, OLFACTORY, OR PHARMACOLOGICAL STIMULUS, CONTRIBUTING TO AROUND 40-50% OF DAILY SALIVARY PRODUCTION'

Saliva and dental caries

In addition to moderating microbial factors and encouraging preventive dietary behaviours, a core goal in caries prevention is promoting the natural protective mechanisms of saliva.[3]

The pH of dental plaque is a key factor in the balance between acid demineralisation of the teeth and the remineralisation of the initial caries lesion. Plaque pH falls each time acid accumulates in the plaque due to bacterial acid production following the consumption of fermentable carbohydrates – mainly sugars – in foods and drinks. Conversely, plaque pH rises when the acids are washed away or neutralised by saliva, which contains the important buffer, bicarbonate.[1]

In healthy teeth, the loss of minerals is balanced by the reparative mechanisms of saliva. This equilibrium can be depicted chemically by the equation overleaf – see Figure 3 opposite.[4]

When the saliva pH or the plaque pH is below a 'critical value' of about 5.5, the saliva or plaque becomes unsaturated with respect to tooth mineral.[5] As a result, tooth enamel can begin to dissolve. However, when the pH is above this value, the saliva and plaque are supersaturated with respect to tooth mineral. The calcium and phosphate ions in saliva then start to repair any damaged mineral crystals in the enamel – the process of remineralisation.[1]

Thus, acidic conditions contribute to bringing phosphate and hydroxyl ions below saturation levels, allowing the solid hydroxyapatite crystals of the tooth mineral to dissolve. If above saturation levels, the chemical reaction will move towards remineralisation and any damaged crystals will be repaired by the acquisition of ions from the solution.[1]

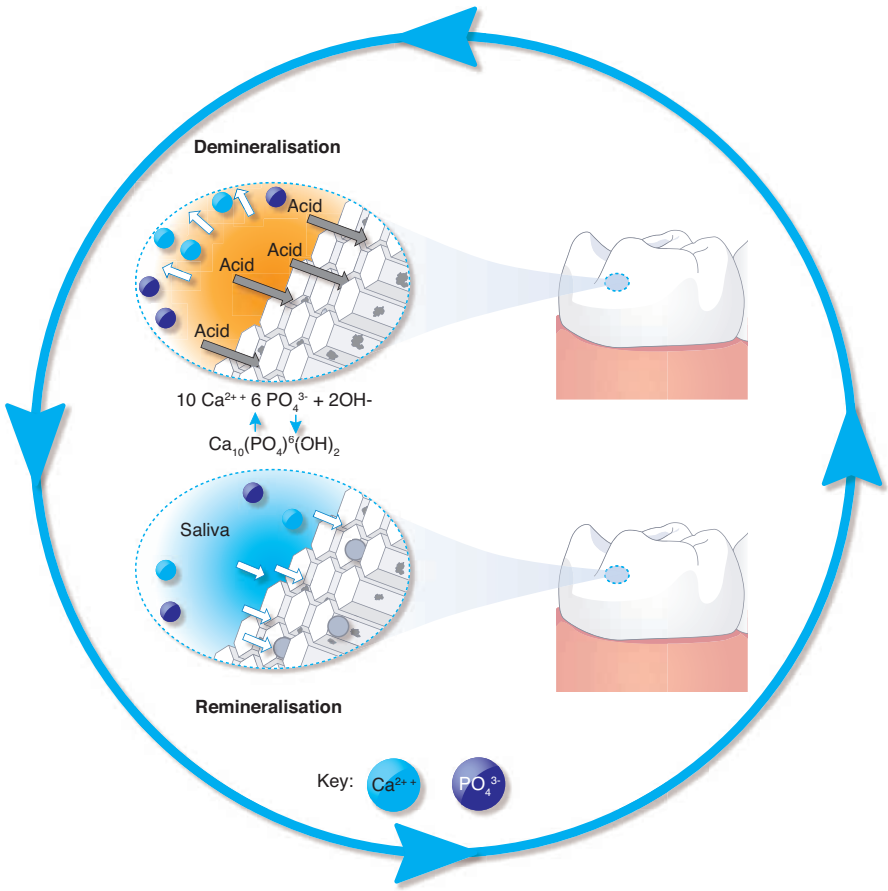
Stimulation of saliva flow results in an increase in the washing out of acids (and sugars), and also an increase in the amount and concentration of bicarbonate buffer and of remineralising ions.[1]

Salivary gland disorders

The importance of the salivary glands – and saliva – tends to go unnoticed until the glands malfunction. The consequences are severe and impact greatly on quality of life. Symptoms may start with a constant thirst, difficulty in speaking, eating, tasting and swallowing foods and progress to tooth decay and oral infections.[6] The most common salivary gland disorder is xerostomia, which is the subjective feeling of dryness throughout the mouth.

Clinical studies have shown that chewing sugar-free gum stimulates the salivary glands to produce a strong flow of saliva (a 10-12 fold increase over unstimulated saliva).[7] The effect of stimulation is to increase the concentration of bicarbonate in the saliva entering the mouth. This bicarbonate raises the pH of the saliva and greatly increases its buffering power: the saliva is, therefore, much more effective in neutralising and buffering food acids and acids arising in plaque from the fermentation of carbohydrate.[1]

Figure 3: The process of tooth remineralisation



'IN THE PAST, IT WAS COMMONLY BELIEVED THAT DRY MOUTH AND DECLINING SALIVARY FUNCTION WERE PURELY A NATURAL CONSEQUENCE OF AGEING'

Xerostomia

Studies conducted on outpatients and in the general population show that xerostomia affects about 1 in 4 people.[8] Salivary flow rate patterns demonstrate both daily and seasonal variation, with peaks in mid-afternoon and higher flow rates in the winter than in the summer. During sleep, saliva flow rate is minimal.[9] People who complain of dry mouth do not necessarily have a very low flow rate; conversely, those with a low unstimulated flow rate do not always complain of dry mouth. It is therefore of greater significance to establish Whether or not the flow rate has changed adversely in a particular individual.[10]

Reduced salivary flow is due to hypofunction of the salivary glands. This may be reversible, due to anxiety, acute infection, dehydration or the effects of some drugs. There are also some permanent causes of xerostomia such as congenital abnormalities, Sjögren's syndrome, HIV/AIDS and the result of head and neck irradiation. However, xerostomia is most commonly associated with the use of xerogenic drugs. More than 400 medicines induce salivary gland hypofunction, including tricyclic antidepressants, antihistamines, certain antihypertensives and drugs with sympathomimetic actions (e.g. some bronchodilators).[11]

In the past, it was commonly believed that dry mouth and declining salivary function were purely a natural consequence of aging. While it is true that salivary gland dysfunctions are more prevalent in older populations, studies suggest that salivary gland dysfunction is due to a combination of ageing per se and the higher incidence of chronic illnesses and the greater use of drugs by the ageing population – both of which can impact the production of saliva.[12]

1. de Almeida PD, Grégio AM, Machado MA, et al. Saliva composition and functions: a comprehensive review' *J Contemp Dent Pract* 2008: 72–80.
2. Dawes C and Watanabe S. The effect of taste adaptation on salivary flow rate and salivary sugar clearance, *J Dent Res* 1987: 740.
3. Featherstone JD. Dental caries: a dynamic disease process, *Aust Dent J* 2008: 286–291.
4. Li X, Wang J, Joiner A, Chang J. The remineralisation of enamel: a review of the literature, *J Dent* 2014: 12–20.
5. Hicks J, Garcia-Godoy F, Flaitz C. Biological factors in dental caries enamel structure and the caries process in the dynamic process of demineralisation and remineralisation (part 2) *J Clin Pediatr Dent* 2004: 119–124.
6. Ship JA. Diagnosing, managing and preventing salivary gland disorders. *Oral Diseases* 2002; **8**, 77-89.
7. Dawes C, Macpherson LM. Effects of nine different chewing gums and lozenges on salivary flow rate and pH. Caries Res. 1992: 176-182
8. Billings RJ. Studies on the prevalence of xerostomia: preliminary results. Caries Res. 1989: 124(abstract 124).
9. Whelton H. The anatomy and physiology of salivary glands. In: Edgar M, Dawes C, O'Mullane D, eds. Saliva and oral health. 4th edition. Bicester: Stephen Hancocks Ltd, 2012.
10. Dawes C. Factors influencing Salivary flow rate and composition. In: Edgar M, Dawes C, O'Mullane D, eds. Saliva and oral health. 4th edition. Bicester: Stephen Hancocks Ltd, 2012: 37–55.
11. Sreebny LM, Schwartz SS. A reference guide to drugs and dry mouth. Gerodontology. 1986: 75–99.
12. Atkinson JC, Fox PC. Salivary gland dysfunction. Clin Geriatr Med. 1992: 499–511.

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The three types of employment status

Sarah Buxton* is a dental specialist employment solicitor who acts for dental practice owners, practitioners and managers up and down the country. Here, Sarah tells *BDJ Team* readers everything they need to know about employment status.

There are three types of employment status: employee, worker and self-employed. The three are often not in practice used correctly and the difference is not always known.

Employee status

An employee is an individual who has entered into or works (or worked) under the terms of a contract of employment. The contract can be expressly agreed (in writing or orally) or implied by the nature of the relationship. Within a dental practice these tend to be the practice manager, dental nurses, or cleaner. To have employee status:

- An individual must be obliged to do the work personally (rather than being able to send a substitute/locum)
- The employer needs to be obliged to provide the work and the employee is obliged to accept the work
- The employer needs to have some control over the way the employee carries out work.

Worker status

Worker status is sometimes seen as a 'half-way house' between employee and self-employed status. Workers are entitled to fewer statutory rights than employees, but do have some key legal rights, including:

- Protection from discrimination
- Protection against unlawful deduction from wages
- Entitlement to the national minimum wage.

'AN EMPLOYER MUST TAKE OUT EMPLOYER'S LIABILITY INSURANCE TO COVER THE RISK OF EMPLOYEES INJURING THEMSELVES AT WORK'

Self-employed status

The self-employed enjoy no statutory employment rights (although they may be protected by discrimination law). Self-employed persons within a dental practice generally include the dental associates, and more often than not, the hygienists and therapists. To be truly self-employed the Courts and HMRC will consider a number of factors:

WRITTEN AGREEMENT – Without a written agreement in place, it is likely that an Employment Tribunal will decide that an individual is an employee. For the individual, the plus side to being an employee means that they can benefit from various protections contained in the employment legislation such as the right not to be unfairly dismissed. This means that if an individual has worked at the same practice for more than two years and they are served notice to terminate their services, they may have a claim for unfair dismissal for which you can currently be awarded up to £74,200 in compensation. This course of action is not open to self-employed staff.

CONTROL – A self-employed person should be able to determine when and how they work, this includes the days, hours, and holiday entitlements.

MUTUAL OBLIGATIONS – A self-employed individual shouldn't be obliged to accept the work which is offered and the dental practice should not be under any obligation to offer work on a regular basis.

PERSONAL SERVICE – There should be no obligation for the services to be carried out personally and there should always be the right to appoint a locum.

EXCLUSIVITY – Associates and hygienists/therapists should have flexibility as to where they can work and should be able to work at more than one practice.

PAY AND BENEFITS – With regards to payment, the most concerning factor which is often used in practice is when hygienists/therapists are paid an hourly rate and can often be paid, even when they are not attending any patients. Most self-employed individuals should be paid a percentage of the work they do and hence the payment can be variable. Further, they should not be participating in benefit schemes and should not be paid overtime.

INTEGRATION – A self-employed individual should not be integrated into the dental practice. They should not perform similar services to those performed by employees. For those practices where there is a self-employed hygienist and, at the same practice there are employed hygienists, it is more than likely that the self-employed hygienist will also be classed as employed and therefore practices which are run in this way, are at high risk of there being a claim by HMRC and/or at the Employment Tribunal.

FACILITIES AND EQUIPMENT – A self-employed person should provide their own equipment and materials in order to perform the services.

FINANCIAL RISK – A self-employed person should be personally responsible for any losses arising from their work. The self-employed person should be required to correct any unsatisfactory work in their own time and at their own expense.

TAXATION – All self-employed individuals should be responsible for payment of their own income tax and National Insurance Contributions (NICs). Furthermore, there should always be a tax indemnity clause within the agreement, so that if HMRC ever decided that the 'self-employed' person was really in practice and an employee and therefore the practice owner had to pay back any tax, NICs including penalties, this payment can in turn be passed to the 'self-employed' individual.

What is the significance of the distinction?

Legal protections

Some core legal protections only apply to employees, for example the right:

- Not to be unfairly dismissed
- To receive a statutory redundancy payment.

Health and safety

Employers owe employees statutory health and safety protection. Self-employed individuals may not be covered under these duties, although they will be covered under an employer's occupier's liability.

Sales/Purchasers

Only employees will be automatically transferred to any purchaser of the employer's business.

Tax

An employer is responsible for deducting tax and national insurance at source (PAYE) from the salary paid to employees. Self-employed individuals are responsible for paying their own tax and national insurance under self-assessment.

Insurance

An employer must take out employer's liability insurance to cover the risk of employees injuring themselves at work. Self-employed contractors are unlikely to be covered by this type of insurance.

Liability

An employer is liable for acts done by an employee in the course of their employment. This type of liability is unlikely to extend to self-employed persons.

Legal status of volunteers

The legal status of volunteers is not clear cut, as there is a vast range of different types of relationships, from the purely voluntary to those that are clearly contractual and those in between, which are difficult to define. This ambiguity makes it difficult for organisations taking on volunteers to appreciate any legal obligations that they may owe them.

MYTH **Having a contract provides more flexibility**

It doesn't, it only provides for more ambiguity.

MYTH **I can deduct monies from an employee's wage without a contract**

You need to have the employee's authority to do so which would be best to be in writing, in the Contract of Employment.

MYTH **You don't have to pay workers annual leave**

Workers are entitled to be paid any accrued but untaken holiday pay.

**Sarah has a number of years' experience in this specialist field and works in the Dental Team at LCF Law which offers an array of services including buying and selling practices, expense share, partnership and shareholders agreements, incorporations, employment & HR, associate agreements, NHS disputes and regulatory issues.*

Please contact 0113 2010407 or sbuxton@lcf.co.uk for further information.

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LOCAL ANAESTHETIC MAY AFFECT DEVELOPMENT OF CHILDREN'S TEETH

A groundbreaking study published in *Cell Death Discovery* has found that the use of local anaesthetic may affect tooth cell growth and the development of children's teeth.

Using pig teeth and human young permanent tooth pulp cells, the research team, led by Dr Bing Hu, at Plymouth University Peninsula Schools of Medicine and Dentistry, with a team from China and Switzerland, discovered local anaesthetics commonly used in clinics can affect the proliferation of tooth cells. The longer the duration of exposure to high concentrations of local anaesthetic was most harmful because it interferes with the function of mitochondria, or the 'batteries' of the cell, and induce a cell death mechanism called 'autophagy'.

While the study has identified a potential harmful effect of local anaesthetic on developing teeth, the research team is keen to emphasise that further clinical studies are required before there is enough data to change clinical guidelines, and that parents should not be alarmed or withdraw their children from treatment if they need it.

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THEY WON'T LEAVE GUMS FEELING BLACK AND BLUE

New research has suggested that a treatment using wild blueberry extract can prevent the formation of the plaque which leads to gum disease, reducing the prevalence of the disease and the need for these antibiotics.

Publishing in the *Journal of Agricultural and Food Chemistry*, the team from Université Laval in Canada sought to see if blueberry polyphenols, which work against foodborne pathogens, could also help fight Fusobacterium nucleatum, one of the main species of bacteria associated with periodontitis.

In the lab, the researchers tested extracts from the wild lowbush blueberry, Vaccinium angustifolium Ait., against F. nucleatum. The polyphenol-rich extracts successfully inhibited the growth of F. nucleatum, as well as its ability to form biofilms. It also blocked a molecular pathway involved in inflammation. Researchers say they're developing an oral device that could slowly release the extract after deep cleaning to help treat periodontitis.

COULD THE HPV VACCINE TREAT WARTS?

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In a new report authored by Dr. John Stern, of the Division of Infectious Diseases at the University of Pennsylvania Health System, he believes the human papillomavirus (HPV) vaccination may actually work as a treatment, zapping warts in people already infected.

The report describes several cases of people who had persistent oral warts that went away soon after they received the HPV vaccine. It highlights the case of a man in his 60s who had recurrent warts on his lips, tongue and cheeks for 18 months. The man tried to have the warts removed, but they kept coming back. Doctors diagnosed the man with an HPV infection. The man received the quadrivalent HPV vaccine, which protects against four HPV strains, and a month after the patient received the first dose of the HPV vaccine, he showed significant improvement, and within three months, the warts went away.

While it's too early to say for certain whether the HPV vaccine treated the warts – and researchers are keen to stress anyone with the HPV should refrain from asking for the vaccination – the report should prompt researchers to try to understand why some people appear to benefit from getting the vaccine even after they have an HPV infection, while others don't.

TURNING BREATH INTO WORDS

A new device which transforms paralysis victims' breath into words – believed to be the first invention of its kind – has been developed by academics from Loughborough University.

Billed as a tool to help bring back the art of conversation for sufferers of severe paralysis and loss of speech, the prototype analyses changes in breathing patterns and converts 'breath signals' into words using pattern recognition software and an analogue-to-digital converter. A speech synthesizer then reads the words aloud.

The Augmentative and Alternate Communication (AAC) device is designed for patients with complete or partial loss of voluntary muscle control who don't have the ability to make purposeful movements such as sniffing or blinking – gestures which previous AAC devices have come to rely upon.

Dr David Kerr, Senior Lecturer in the School of Mechanical and Manufacturing Engineering, and Dr Kaddour Bouazza-Marouf, Reader in Mechatronics in Medicine, said the device learns from its user, building up its knowledge as it goes. It allows the user to control how he or she wishes to communicate – effectively enabling them to create their own language by varying the speed of their breathing. The academics have been joined in the project by Dr Atul Gaur, Consultant Anaesthetist at Glenfield Hospital.

'What we are proposing is a system to form an effective vocabulary that the machine,' said Dr Kerr.

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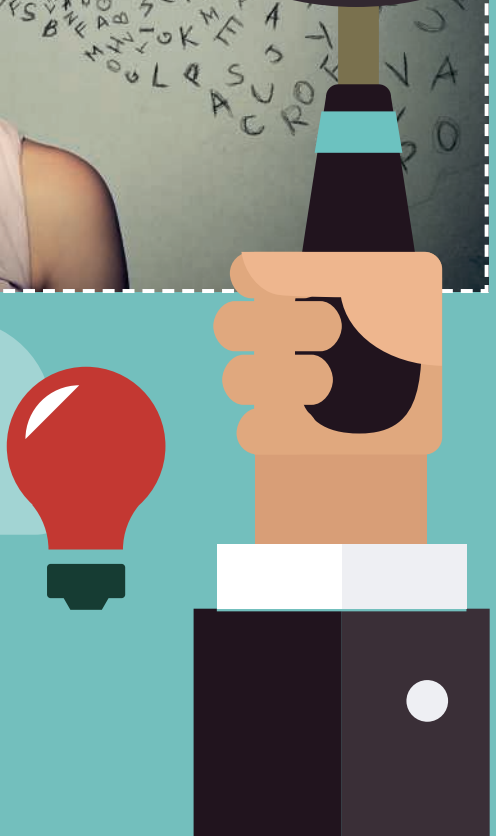

FIZZY DRINKS ARE POTENTIAL KILLERS

Carbonated beverages are associated with out-of-hospital cardiac arrests of cardiac origin, according to results from the All-Japan Utstein Registry presented for the first time today at a congress. The study in nearly 800 000 patients suggests that limiting consumption of carbonated beverages may be beneficial for health.

'Carbonated beverages, or sodas, have frequently been demonstrated to increase the risk of metabolic syndrome and cardiovascular disease (CVD), such as subclinical cardiac remodeling and stroke. However, until now the association between drinking large amounts of carbonated beverages and fatal CVD, or out-of-hospital cardiac arrests (OHCA) of cardiac origin, was unclear', said principal investigator Professor Keijiro Saku, Dean and professor of cardiology at Fukuoka University in Japan.

The analysis focused on the 785,591 OHCA cases that received resuscitation, of which 435,064 (55.4%) were of cardiac origin and 350,527 (44.6%) were of non-cardiac origin. Those of non-cardiac origin included cerebrovascular disease, respiratory disease, malignant tumour, and exogenous disease (4.8%, 6.1%, 3.5%, and 18.9%, respectively).

The researchers found that expenditures on carbonated beverages were significantly associated with OHCAs of cardiac (r=0.30, p=0.04), but not non-cardiac origin (r=-0.03, p=0.8).

Expenditures on other beverages, including green tea, black tea, coffee, cocoa, fruit or vegetable juice, fermented milk beverage, milk and mineral water were not significantly associated with OHCAs of cardiac origin.

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10 top tips SOOTHERS

With the Medical Team at MAM

For more than 35 years, MAM has been developing baby products with experts from medicine and research that are unique in function and design and support the individual development of every child, making everyday life with a baby, just a little easier.

It is clear that we still have a long way to go as an industry to persuade parents on the importance of good oral hygiene from an early age, as a recent report showed that a third of children don't brush their teeth every day.[1] Clearly if parents are coming to the dentist with a child who has problems then they will be more susceptible to advice about that child. However, if they are coming with younger siblings, then it presents the perfect opportunity to talk to the parent about the key early stages, to avoid problems developing. But, how is it best to approach these conversations?

Here MAM use their 35 years of expertise operating in the baby industry and with medical experts, to provide '10 top tips' on the emotional trigger points for parents with a baby and how to answer some of the pressing questions they might have about their baby's development, behaviour and oral hygiene.

1. Remain impartial

Parents always want the best for their growing baby, but time pressures and natural instincts can lead parents to ignore damaging behaviours, especially if they appear to be of comfort to their child. No parent wants to be made to feel that they are doing a bad job, or to feel preached to by experts who might not understand the pressures that they are under. It is important to present a parent with facts and clear sound bites of advice, while remaining impartial at all times. This will enable the parent to feel that they are researching options with a valued specialist, without being judged on their child's behaviour or choices.

2. Why sucking is important

Parents often ask about the drawbacks of non-nutritive sucking. Sucking is a natural need for babies and important for their development. Its effect on tooth placement and dental growth is certainly a current topic of discussion.

Soothers are a suitable alternative to a finger, thumb or toy because they are easier to wean off, and have been proven to reduce the risk of Sudden Infant Death Syndrome[2].

3. Teething: fact from fiction

Teething is a very emotive issue for parents as it has been allowed to be exaggerated to the point where, 'searing pain' and 'tiny shards of glass' have become common phrases associated with the experience. It is important to understand that many new parents fear teething, but you can manage these expectations, while providing safe advice on dealing with it. In the majority of cases, the sensations felt by the baby as their teeth come through are more likely to be tingles, presses and itching than serious pain. We would never recommend to parents that they turn to anaesthetic gels as they must not become a permanent solution. Chewing and rubbing the gums provides a suitable alternative as it not only provides some relief from the symptoms but is also part of the natural instinct of a young child and enables a baby to train their fine motor skills.

4. The role of a teether

The teether plays a key role in early oral hygiene, as well as its important as its role as a comforter.

Teethers are able to provide babies and toddlers with optimal and age-appropriate visual stimulation, textures and chewing surfaces. As the child is more able to hold and co-ordinate movement, there are products that supplement daily dental care, in a playful way while providing targeted relief in baby's mouth. Babies also train their fine motor skills by using a teether.

5. Routine will create a healthy start

Children thrive on routine and most parents will agree with this. By introducing daily dental care at a young age, the child will soon expect, and enjoy it. With young babies it is also important to add fun into the routine. Many parents in the UK will assume that they need to move immediately to using a tooth brush. This isn't necessary with very young children, and it can also become very messy as the parent and baby tackle over who will hold it! What's important is to educate parents that this should become a small part of the bedtime routine. Many parents follow the 'Bath, Bottle, Bed' mantra, so we like to suggest, Bath, Bottle, Brush, Bed. Just one extra minute in these early stages can make all the difference for a lifetime of good oral hygiene.

6. Getting ready for a brush

Most parents will not know that as soon as the first tooth comes through, a child must start with proper dental care and move to using a brush and that they should be helping their child to brush their teeth daily. There are many brushes on the market designed especially for young children that will help keep the experience enjoyable, such as those with very soft bristles, flashing lights and extra-long handles for parents to help guide the little hand. Again, many parents will search for advice, but may defer to a child's behaviour for a more peaceful bedtime. So, it is important at this stage to communicate to a parent in a succinct way. We suggest focussing on three key messages for any parent with a child who is developing their first teeth:

- Once a day until the age of 2;
- Replace a brush every 6-8 weeks;
- Regular dental check-ups.

If a parent is struggling to keep the baby focused, suggest lying them on the changing mat or sitting them on their lap and to carefully lift the upper lip with the index finger whilst cleaning.

7. Weaning from the bottle to a cup

Children should be encouraged to move from a bottle to a cup by the age of one and many manufacturers provide transition cups from the age of 4 months. However, many parents find this transition difficult as it represents that their baby is growing-up. Explain to the parent that eating and drinking like the grown-ups is not just an important development step from baby to toddler but is also good for teeth and jaw muscles. Furthermore, unchecked, continuous sucking on bottles increases the risk of damage. There is plenty of information about the importance of drinking only water and unsweetened teas from a baby cup but it is necessary to keep reminding your patients about this, as it continues to be an issue in our society.

'MANY PARENTS WILL SEARCH FOR ADVICE, BUT MAY DEFER TO A CHILD'S BEHAVIOUR FOR A MORE PEACEFUL BEDTIME'

8. Weaning off a soother

Weaning off a soother is often difficult. The international guidelines recommend stopping the use of soothers at three years of age.[3] This is to allow the child to perfect the various functions of the mouth. Clearly, the most important of these are mastication, phonation and deglutition. The presence of a soother beyond the age of two and a half coupled with prolonged use during the day can impede the tongue, teeth and maxilla from developing the correct rapport with one another during their different functional phases. Many children use their thumb in place of a soother, and the resulting negative effects on the teeth and jaw have been clearly shown in numerous studies.

An alternative to thumb and standard soother use, is to swap to a soother with a thinner teat neck. This provides a better option for parents as it will reduce the risk of misaligned teeth.

9. Weaning from a thumb

Thumb sucking provides comfort to children for a variety of reasons and can be a difficult habit to shift. As not all thumb-sucking is equally damaging, more aggressive sucking will create more damage inside the mouth, than passive suckers, it's important to start the conversation with the parent by asking about the technique. If the child is a vigorous sucker, then the advice is to start curbing the behaviour at around the age of 4 and by this age, many children will have stopped the habit. Starting school and peer pressure is also a common deterrent so it is worth advising the parent to wait till this point before exercising some alternative techniques.

Our advice for parents who need to intervene is to watch the child's behaviour and anticipate moments when it will happen. As it's usually at points when the child is looking for comfort, this is likely to be at bedtime, when they are relaxed, frustrated or fearful. Consider distracting the child in these scenarios with a substitute, such as a comforting blanket, a squishy ball or a teddy. The key is not to reprimand the child for doing it, as in most cases it will be a subconscious behaviour.

10. Take-away information

Busy mums are well known for being a little forgetful, with so much going on each day to remember. Consider using a leaflet which provides busy parents with key pieces of advice, which they can take away. They can then use them as prompts and checks at home, while keeping a record of any future appointments.

Parents will always want to talk about their baby with you. What stages they are at, what habits they are developing, what preferences they have. It provides a perfect opportunity to start a conversation with them about milestones and small changes that can be brought in to the everyday, which will give their child the very best start toward a lifetime of good oral hygiene.

MAM's Oral care information leaflet can be requested for use within your surgery. www.mambaby.com/uk

1. Denplan 2015: UK based survey of more than 2,000 parents of children aged 2-11
2. Use of a dummy (pacifier) during sleep and risk of sudden infant death syndrome (SIDS): population based case-control study. Division of Research, Kaiser Permanente Northern California, 2000 Broadway, Oakland, CA 94612, USA. dkl@dor.kaiser.org.
3. American Academy of Paediatrics Dentistry Guidelines.

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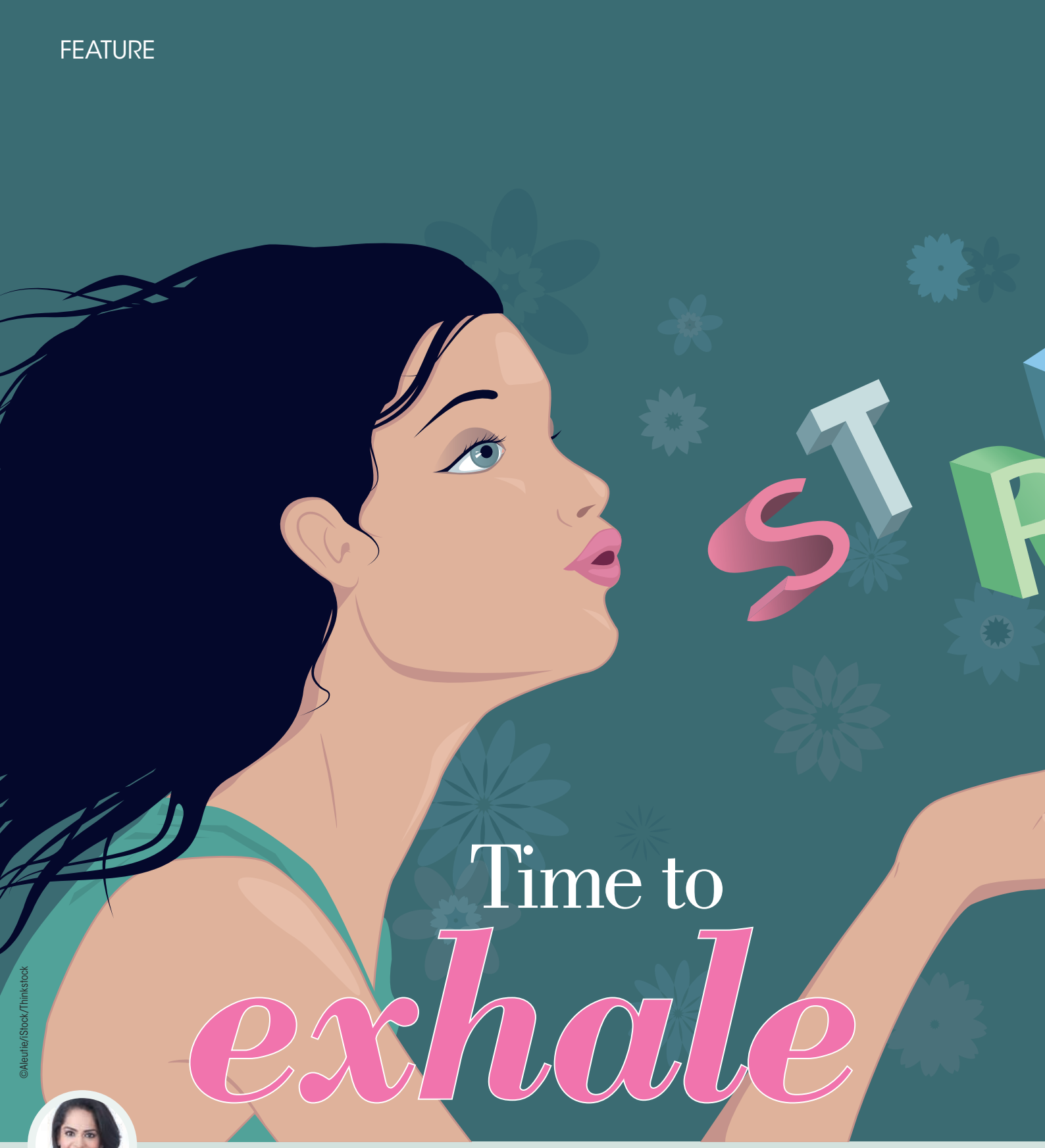


Time to exhale

by **Reena Wadia**[1]

I spend a lot of my time talking to young dentists and frequently there is a common theme to some of things I hear, such as:

'Reena, I am always hitting snooze in the mornings!'

'I know I shouldn't but I skip breakfast as I never have time anymore'

'I spend my lunch break catching up with patient notes'

'I don't go out in the evenings anymore as I'm just too tired after work'

'I really need a holiday!'

If this sounds at all familiar then don't worry, you're not the only one. I certainly recognise myself in those phrases. Four years ago, when I was just starting out in practice, I got to a point where I was mentally and physically drained every day. I used to come home with little energy for anything apart from sleep. Even after I had slept, I still felt exhausted.

After speaking to other young dentists I slowly realised our story wasn't uncommon. Even then, it somehow made it more acceptable and I remember thinking, 'maybe this was the life of a young dentist?' And so my vicious circle of 'work, home, sleep', repeat continued.

However, several months later, I remember a particular long week crammed with difficult

patients and the effects starting to take their toll. I started questioning my own treatment plans and I was regularly too drained to complete all the clinical work I had planned for each appointment, leading to frequently running late.

I was a victim of burnout. Priding myself on being hard working this was hard to admit but the potential compromise to patient care meant this was not acceptable and something had to change.

I googled 'solutions for burnout' and 'dentists' but the reading material was disappointing. This led me to question more experienced colleagues. 'Have you ever felt like this?' 'What did you do?' were common questions I asked just to try and find a way out of my situation.

A reoccurring theme was the importance of downtime. Initially, downtime sounded like time wasted but it was useful to remember that we are not designed to work and expend energy continuously. We need time to recover too. Downtime is any activity that helps replenish our energy supplies. I began reading online articles on downtime and started implementing the tactics suggested by my colleagues. It wasn't as easy as it first appeared, but a few months later I began to feel the benefits. I didn't have to hit the snooze button every morning. I worked more efficiently and felt I was performing at my best for my patients. I was back on track and enjoying my career again.

'WE ALL UNDERSTAND THE IMPORTANCE OF HIGH QUALITY PATIENT CARE, BUT IT'S CLEAR THAT THE NECESSITY FOR DOWNTIME IS EQUALLY AS IMPERATIVE'

We all understand the importance of high quality patient care, but it's clear that the necessity for downtime is equally as imperative. Here are a few of the downtime techniques that have worked for me and may work for you too:

1. Scheduling

I wasn't naturally inclined to slowing down and taking a break so it was useful to create a schedule where I planned other activities besides work. Events on my schedule are colour-coded: red for 'work' and blue for 'play'. At a glance, this helps me to gauge if I'm giving myself enough time for 'play' or renewal to balance the performance demands of that particular day or week. Try this and then evaluate how you feel on a week or fortnightly basis.

2. Making time

Initially I struggled to squeeze in any downtime. I then re-evaluated my routine and re-prioritised. Activities that would give me the most energy were given highest priority. This also meant I had to say "no" to less important invitations, which wasn't easy at first.

3. Being disciplined

If I miss a downtime date, I make sure it's rescheduled in the same way as I would for another important meeting.

4. Incorporating different forms of downtime

Downtime activities vary between individuals. My optimal downtime mix includes: quick breaks, holidays, exercise, and socialising.

(a) Quick breaks – Even if I'm running a few minutes late during the day, I often have a quick stretch or close my eyes for a minute.

(b) Holidays – Time away from work, even for a few days, is a great way to unwind. I plan my holidays well in advance – I used to wait till the last minute to book time off when I was already drained and so I didn't feel the full benefits of the holiday.

(c) Exercise - Exercise burns up the excess adrenaline resulting from stress, allowing the body to return to a steady state. It also releases endorphins, which give us the 'feel good factor'. I find it helpful to pick exercises that I enjoy as this keeps me motivated.

(d) Socialising – Spending time with the most positive people I can find and supporting them too helps keep my energy levels high.

Let me know if any of the above work for you and I'd love to hear your tips too! It is a challenging time for dentists - young and senior alike - but we need to do everything we can to look after our patients and ourselves. So if you're feeling overwhelmed and a little like you're suffocating then remember to take time to exhale.

[1] *Specialty trainee in Periodontology at Guy's Hospital,*

Associate Dentist at Harley Street Dental Studio & Woodford Dental Care,

Clinical tutor at Barts & The London.

bdjteam2015131

BDJ Team

We want your views on BDJ Team CPD!

Everybody knows that this October ***BDIA Dental Showcase*** rolls into the NEC in Birmingham from 22 - 24 October.

What you won't know, is that the good folks here at *BDJ Team* are giving away an Apple Watch™ (yes, giving away!) in exchange for your opinion. Interested? Read on...

At stand G50 we are running a survey to find out more about your CPD habits.

- Where do you do it?
- How much time do you spend on it?
- Do you do it on the move or when you have some spare time?

And the best bit is you will be entered into a prize draw to win an Apple Watch™.

Pop over and say hello to us at BDIA Dental Showcase stand G50 and tell us about your CPD habits! You could win an Apple Watch™

If you subscribe to *BDJ Team* already, then you will know that once again in 2016 CPD is completely free – you just need to register your participation and then 10 more hours of verifiable CPD await you.

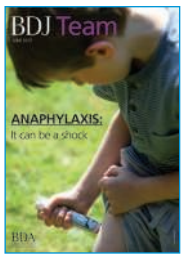
If you don't, then rest assured *BDJ Team* will provide you with a programme of verifiable CPD which will refresh and develop your knowledge from the convenience of your own practice or home.

If you are searching for core CPD, take a look at some of our recent and forthcoming articles:

- The role of saliva - September
- Recognition and treatment of anaphylaxis - June
- Patients with pacemakers - July

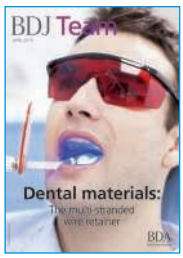
BDJ Team CPD will not only help you keep up-to-date in a broad spectrum of subject areas but it will also help to develop independent study skills and critical appraisal techniques in line with the GDC's aims and objectives.

Pacemakers



Anaphylaxis

Oral cancer



Dental materials

bdjteam2015132

BDJ Team continuing professional development

CPD: ONE HOUR

CPD questions – September 2015

CPD ARTICLE: Saliva

1. How many glands produce saliva?

A. Two paired salivary glands
B. Three paired salivary glands
C. Four paired salivary glands
D. Five paired salivary glands

2. What is the *normal* total stimulated salivary flow (SF) range in adults?

A. 0.7-1.0 mL/minute
B. <0.7mL/minute
C. 1.1-1.9mL/minute
D. 1-3mL/minute

3. To what degree does chewing sugar-free gum stimulate the salivary glands over unstimulated saliva?

A. 5 fold
B. 8 fold
C. 10 fold
D. 10-12 fold

4. According to the study authored by Billings RJ (1989), how many people suffer from xerostomia?

A. 1 in 2
B. 1 in 4
C. 1 in 8
D. 1 in 16

How do I take part in *BDJ Team* CPD?

BDJ Team is offering all readers **TEN hours of free CPD** in 2015 through our website. The ten free hours of free CPD that we offered in 2014 are also still available until the end of 2015.

Just go to www.nature.com/bdjteam/cpd to take part!

If for any reason you are unable to access CPD, please contact bdjteam@nature.com or subscriptions@nature.com

CORE CPD: ONE HOUR

Missed **core** CPD?

You can complete *BDJ Team* CPD through our website, any time in 2015.

Just go to www.nature.com/bdjteam/cpd to find out how!

Topics covered so far

➤ April 2014: **Disposing of clinical and dental waste**

➤ May 2014: **Emergency oxygen therapy in the dental practice**

➤ July 2014: **Needlestick and occupational exposure to infections**

➤ August 2014: **Medical emergencies: the drug box, equipment and basic principles**

➤ October 2014: **Radiation protection in dental X-ray surgeries**

BDJ Team CPD – through the post

Can I take part in *BDJ Team* CPD through the post?

YES! Just print off this page, complete the form and send it with your payment of £6, to cover administrative costs. **Send to: BDJ Team CPD, Nature Publishing Group, 4-6 Crinan Street, London, N1 9XW.** We will check your answers to the CPD questions, process your payment and send you a certificate through the post.

You can now participate in this *BDJ Team* CPD through the post until the end of December **2015**.

BDJ TEAM POSTAL CPD FORM

1. Please PRINT your details below:

First name: _____ Last name: _____ Title: _____

Address: _____

_____ Postcode: _____

Job title: _____

GDC registration no.: _____

2. Payment details – SUBMISSIONS SENT IN WITHOUT PAYMENT WILL NOT BE PROCESSED

I enclose a cheque for £6 made payable to Nature Publishing Group for **ONE** hour of CPD ☐

I would like to pay for more than one person and enclose a cheque for £_____ made payable to Nature Publishing Group (£6 per person for an hour of verifiable CPD).

Or

Please debit the sum of £6 or £_____ from the following credit/debit card (tick box):

Visa ☐ Mastercard ☐ Switch/Maestro ☐ Visa Debit ☐

Card number: _____

Expiry date: _____ Issue no. (Switch/Maestro): _____

Name of cardholder: _____

Address of cardholder (if different to above): _____

3. I am answering the CPD questions in the _____ issue (PLEASE ENTER MONTH):

	A	B	C	D
Q1	☐	☐	☐	☐
Q2	☐	☐	☐	☐
Q3	☐	☐	☐	☐
Q4	☐	☐	☐	☐

4. Please add any comments or feedback that you might have below or email bdjteam@nature.com.

Product news

Product news is provided as a service to readers using text and images from the manufacturer, supplier or distributor and does not imply endorsement by *BDJ Team*. Normal and prudent research should be exercised before purchase or use of any product mentioned.

GET IN THE KNOW AT BDIA DENTAL SHOWCASE 2015

Every member of the team at your practice will have their specialisms and particular areas of interest. That's why BDIA Dental Showcase is the must attend event of the year.

Taking place at the Birmingham NEC between 22-24 October 2015, Dental Showcase brings together the biggest and best names in the dental world and lets every member of the team meet with on-stand experts presenting the largest selection of equipment, technologies, products and services of any dental trade show.

BDIA Dental Showcase is the most established and best attended show in the dental calendar. Whether you're a dentist, practice manager, hygienist, therapist, dental nurse, lab owner, dental technician or dental receptionist, the show has something for everyone.

Along with the product and service innovations, BDIA Dental Showcase 2015 has an extensive programme of CPD mini lectures, presentations and interactive demonstrations where you can discover the latest thinking in a wide range of subjects. There will be over 350 exhibitors demonstrating the latest technologies, techniques and services, making it the ideal event to discuss with on-stand experts how the latest innovations can benefit you, your practice and your patients. Not only will the established global brands be attending, but also many specialist and overseas companies will be looking to share their knowledge and expertise with you.

This year, Dental Showcase is delighted to present an expanded series of free verifiable CPD mini lectures. These lectures and demonstrations are presented by leading industry experts and last around 20 minutes. There's a wide selection to choose from, with many of direct interest to dental nurses, and others that will help expand your knowledge of other aspects of the business of dentistry.

In addition to the lecture programme, there are dozens of on-stand presentations and practical demonstrations where you'll be able to learn about the latest products and techniques. This year there is also the new Dietary Zone, sponsored by The Dairy Council, in which you can discover more about the relationship between nutrition and oral health and how you can help patients by providing appropriate advice. Many recruiters and careers advisers will be present, allowing you the chance to discuss how you can enhance your career prospects and possibly find a new job.

As well as attending lectures and topping up your CPD, the Dental Showcase is the ideal place to catch up with old friends and meet new colleagues. Many associations will have stands and hosting events, including the British Association of Dental Nurses, the National Examining Board for Dental Nurses, and the Orthodontic Technicians Association.

BDIA Dental Showcase is all about sharing ideas and know-how. And you can share your thoughts with lots of your colleagues, because this year the British Society of Dental Hygiene and Therapy will feature a special member's day on the Friday of the show, located next to the Showcase entrance at Hall 5. Delegates will all receive fast track entry to Showcase and we look forward to welcoming them to the exhibition.

The lectures are on a strictly first come first served basis. So, make sure you plan ahead and take a look at the full programme by visiting www.dentalshowcase.com.

DEVICE PROVIDES DAYTIME TREATMENT FOR TMJ

Cerezen, a first-of-its-kind medical device that is a safe and effective aid in reducing Temporomandibular Joint Disorder (TMJD) pain and associated symptoms such as grinding of teeth and headaches, is available in the UK and Ireland, and will be on display at the BDIA, stand K5. The device consists of two custom-made, hollow ear canal inserts that allow full passage of sound and are practically invisible from the outside. Traditionally, TMJD has been treated with bite splints that are worn at night, and because the Cerezen device is comfortable and discreet, it makes daytime patient compliance easy.

The Cerezen device takes a different approach in treating TMJD. The ear canal is located very close to the temporomandibular joint (TMJ) and the volume of the ear canal increases when the jaw is opened through movements such as chewing, smiling, and speaking. The Cerezen device uses this anatomical change to provide a unique near field treatment for TMJD.

Patients wearing the device in a three month clinical study experienced a significant reduction in the pain and dysfunction associated with TMJD. In addition to the pain reduction, 100% of subjects indicated excellent (71%) or good (29%) overall satisfaction with the Cerezen device.

During a three month clinical study, patients wearing the Cerezen device did not report any unexpected or serious adverse events and a comparable safety profile to the stabilisation splint was observed. It is not recommended that patients wear the Cerezen device while bathing, swimming or in a moist environment such as a steam bath and sauna. It is recommended that the Cerezen device be removed when participating in contact sports.

For more information about the device, visit www.cerezen.eu.

ARE YOUR SENSITIVITY PATIENTS MAKING THE RIGHT CHOICES?

Sensodyne True White, a new ultra-low abrasion fluoride toothpaste specifically developed to be suitable for dentine hypersensitivity sufferers and to gently lift and prevent tooth stain with twice-daily brushing, is poised to help address this.[1-3]

The Sensodyne True White formulation actively lifts and prevents extrinsic dental stains and a study has shown it is as gentle on exposed dentine as brushing with water, after 10 days of brushing ($p>0.05$).[4] It contains 5% sodium tripolyphosphate to gently remove and prevent extrinsic tooth stains with twice daily brushing,[1-3] with minimal wear to sensitive areas of the teeth.[4]

An Ultra-low Abrasion Formula

Sensodyne True White is different to many other daily use whitening toothpastes currently available as it does not contain dental abrasives and has an ultra-low RDA of just 13, and is more than 10 times less abrasive than many everyday whitening toothpastes.[9] Dentine can be up to 10 times softer than enamel, and is more susceptible to abrasive wear.[10] Tooth brushing with higher abrasivity toothpastes, such as many daily-use whitening toothpastes, may result in further wear of the exposed dentine.

Find out more about Sensodyne True White by visiting www.gskdentalprofessionals.co.uk/TrueWhite.[1]

1. Shellis RP et al. J Dent 2005; 33: 313-324
2. GSK data on file, DOF: Z2860415
3. GSK data on file, DOF: Z2860416
4. GSK data on file, DOF: Z2860435
5. Addy M *Int Dent J* 2002 **52:** 367-375
6. West NX et al. *J Dent* 2013; **41:** 841-851
7. Joiner J. *Dentistry* 2010; **38:** 17–e24
8. Vallittu PK, *J Dent* 1996; **24:** 335-338
9. GSK data on file.
10. Pickles M J.Toothwear. In: *Duckworth* 2006; **19:** 86–104.

YOUR PARTNER IN ORAL HEALTH

Visit Colgate at this year's BDIA Dental Showcase on stand G95. Discover the latest in whole-mouth protection against dental plaque with Colgate Total toothpaste and its sustained release technology, helping to control plaque regrowth for 12 hours.[1] View the Colgate ProClinical electric toothbrush range to see how they can achieve superior[2] plaque removal and healthier teeth and gums for all your patients, and hear about the exclusive dental discounts you and your practice can enjoy across the Colgate ProClinical electric toothbrush range.

The professional team will also be on hand to demonstrate how you and your team can tap into a world of expertise by visiting the Colgate Professional website www.colgateprofessional.co.uk. Find out about the latest features and what's on offer to support your patients and professional practice, including requesting patient toothpaste samples. Put your plaque fighting skills to the test with the Colgate Total game and collect your complimentary personalised poster.*

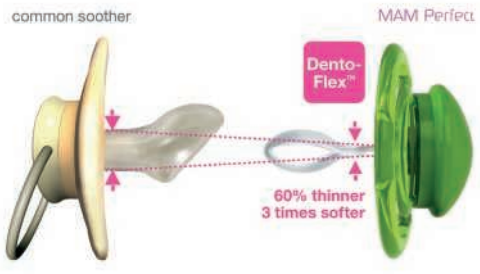
References:

1. Fine DH, Sreenivasan PK, McKiernan M, et al. *J Clin Periodontol.* 2012; **39:** 1056-1064.
2. Vs a manual, flat-trimmed toothbrush

*One poster per practice

Colgate®

REDUCING THE RISK OF MISALIGNED TEETH



Healthcare professionals working with parents of babies and toddlers who are using a soother can now introduce them to the MAM Perfect soother that supports healthy teeth and jaw development.

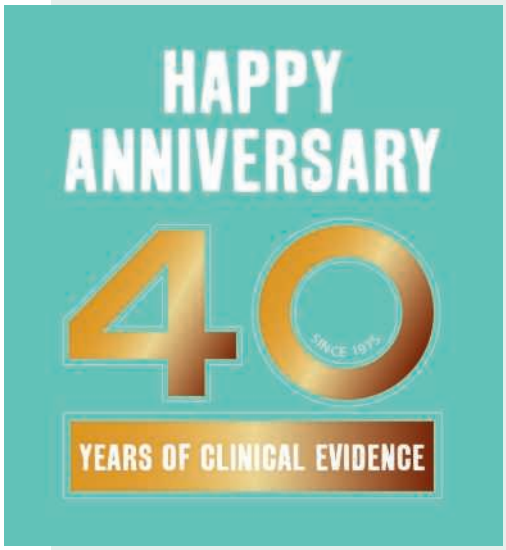
Those in the dental team know that many regular soothers can exert too much pressure on the teeth and jaws because of material drawbacks and sub-optimal shapes. Through intensive co-operation with medical experts and the latest findings from a longitudinal scientific study, it has been confirmed that the MAM Perfect pacifier positively supports healthy tooth and jaw development.

In the longitudinal study 86 children, ranging from 16 to 24 months of age, were randomly assigned into three groups. At the beginning of the test phase, group one switched from their previously used soothers to the MAM Perfect, which has a teat neck cross-section of approximately 2.78 millimetres and is considered the thinnest and most adaptable on the market.[1] The study concluded that, whilst weaning from a soother completely was best, switching to the MAM Perfect had less impact than continuing to use a conventional soother.

Healthcare professionals must consider that weaning off a soother is often difficult. Many children use their thumb in place of a soother, and the resulting negative effects on the teeth and jaw have been clearly shown in numerous studies.

1. The Austrian Research Institute (OFI) and the Vienna Dental University Clinic. 37 models in three testing groups in comparison.

CELEBRATING 40 YEARS OF CLINICAL EVIDENCE FOR CHLORHEXIDINE DIGLUCONATE



GSK, manufacturer of Corsodyl mouthwash, is celebrating the anniversary of the first clinical evidence for dental application of the chlorhexidine digluconate formulation.

Corsodyl can be recommended for a range of dental treatment needs including:

- Treating gingivitis[1-3]
- Supporting oral health in compromised patients – where toothbrushing cannot be adequately employed
- Supporting effective gum healing after surgery
- Helping to resolve denture stomatitis[4]
- Helping to aid to healing in acute candidiasis

This is why Corsodyl remains the most recommended medicated mouthwash by dental experts in the UK.[5]

Corsodyl mouthwash has a proven heritage in treating gum problems. Chlorhexidine digluconate is a double positive charged molecule enabling it to bind to negatively charged surfaces including teeth, mucous membranes and bacteria. Once on the surface, chlorhexidine repels bacteria by creating a protective shield over the teeth and gums. This substantively means chlorhexidine is available for up to 12 hours post-rinsing for around the clock protection against bacteria.[6]

Information about this product, including adverse reactions, precautions, contra-indications and method of use can be found at:
https://www.medicines.org.uk/emc/medicine/21648
https://www.medicines.org.uk/emc/medicine/21647
https://www.medicines.org.uk/emc/medicine/23034

References:

1. Löe H & Schiott CR. The effect of mouthrinses and topical application of chlorhexidine on the development of dental plaque and gingivitis in man. *J Periodontol Res* 1970; **5:** 79-83
2. Löe H et al. Two years use of chlorhexidine in man. *J Periodontal Res* 1976; **11:** 135-144
3. Van Strydonck DA et al. Effect of chlorhexidine mouthrinse on plaque, gingival inflammation and staining in gingivitis patients: a systematic review. *J Clin Periodontol* 2012; **39:** 1042-1055
4. Olsen I. Denture Stomatitis. Effects of chlorhexidine and amphotericin B on the mycotic ora. *Acta Odontol Scand* 1975; **22:** 41-46
5. GSK Data on File. MMR Research, 2013
6. Jones CG. Chlorhexidine: is it still the gold standard? *Periodontol* 2000 1997; **15:** 55-62.

INTRODUCING LISA

W&H look forward to welcoming you on Stand G115 at BDIA Dental Showcase for the latest news and special offers on handpieces, surgical and decontamination products with options available to suit individual budgets and requirements. W&H is pleased to launch the all new Lisa vacuum B Steriliser which is even more intuitive and easier to use, thanks to a new user interface and user orientated menu. Lisa is now faster than ever, offering the fastest B cycle for average loads and will increase the life of your handpieces thanks to its enhanced 'ECO dry' system. Lisa is synonymous with speed, efficiency and great value. Also being launched are the exciting new MS and Lina sterilisers offering improved cycle times, excellent ergonomics and great value. Information will be available on the full range of decontamination equipment including the ThermoKlenz washer disinfector dryer.

Also available to view, a world first, the award winning Synea Vision range of top quality turbines with 5 x ring LED optics, giving unique 100% shadow-free daylight quality illumination of the treatment area. With Synea Vision 5 x ring LED optics your whole treatment area is clearly illuminated with daylight quality LED light. The Synea Vision Short edition contra-angle handpieces are lighter and shorter for perfect balance especially for those with smaller hands. Also on display will be the Alegra handpiece range offering vibration free, quiet operation and improved spray function and the exciting range of air motors which do not require a coupling for 360 degree flexibility.

W&H are delighted to be showing the Assistina range offering the most efficient concept in handpiece cleaning and lubrication. The Assistina 3X3 sets a new standard in handpiece hygiene and maintenance being the ideal device for internal and external cleaning and lubrication of all handpieces.

W&H also offers an exciting range of surgical units and handpieces which will be on promotion at amazingly low prices, including the Implantmed surgical system which offers unbeatable precision, ease of use and reliability. Piezomed is the new force in bone surgery. This device from W&H puts all the advantages of innovative ultrasound technology at the surgeon's fingertips: high-frequency microvibrations allow cutting with incredible precision and the cavitation effect ensures an almost blood-free surgical site. Minimally invasive, maximally effective!

For more information visit W&H on Stand G115 or call 01727 874990.

BDA
British Dental Association

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Online course for DCPs

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40 hrs CPD VERIFIABLE

Online course for DCPs

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Over 600 dental nurses have used BDA Education's Oral Health Education course to boost their career. Why not join them and gain the BDA qualification in oral health education.

"My OHE qualification has opened up so many opportunities for me."

For more information
visit **www.bda.org/ohecourse** or call **020 7563 4551**

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