Dental Tribune

The World's Dental Newspaper · United Kingdom Edition

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News in Brief

Heart Your Smile teams up with The Dentistry Show

The Dentistry Show returns for 2013 on 1st and 2nd March at Birmingham's NEC arena. From 6.30pm on Friday 1st March, The Dentistry Show will be teaming up with Heart Your Smile to put on the Big Heart Party, at The Palace Suit, Hilton Birmingham Metropole. "Heart Your Smile is excited to be launching the Big Heart Party at The Dentistry Show, as a celebration of all things great about the dental industry. Our Champions and Ambassadors will be acknowledged along with all the great work that they do. There is a raffle, charity auction, photo both and dancing until late," says James Goolnik, Founder of Heart Your Smile. Tickets for the Big Heart Party are available by emailing ellie@heartyoursmile.co.uk

Hundreds of dentists failed to renew registration

Over 700 dentists missed their annual registration renewal deadline with the General Dental Council (GDC). Figures from the GDC show that 723 dentists did not re-register and were removed, while 737 voluntarily removed themselves, and 96 applications have been made for restoration to the register. The number of dentists that did complete their registration renewal was 38,539. The deadline was 31 December 2012 and those who failed to pay the annual retention fee (ARF) will now have to apply to restore to the register, in order to work legally in the UK.

MI Paste reduces white spot lesions during ortho

A study, published in Evidence-Based Dentistry, has found that the use of MI Paste Plus prevents and reduces the number of white spot lesions during orthodontic treatment. Sixty patients undergoing orthodontic treatment were randomised to receive either MI Paste Plus (GC America, Alsip III) or a placebo paste. There was a 53.5 per cent in the enamel decalcification index score in the MI Paste Plus group but an increase of 91.1 per cent in the placebo group at the end of the 12 week period. ICDAS scores were added together to give an overall score for all teeth; the MI Paste Plus group score was 145 at baseline and 80 after 12 weeks, a 44.8 per cent reduction; in the placebo group, the scores were 116 and 166 respectively, an increase of 43 per cent. It was concluded that MI Paste Plus prevented and decreased the number of WSLs during orthodontic treatment, with the placebo paste group having an increase in the number of WSLs during the trial.

Use of dental amalgam to be 'phased down'

UN mercury treaty agreed by 140 countries

The result of a United Nations treaty will see a reduction in mercury pollution, as agreed by more than 140 countries at talks in Geneva on 20 January.

The treaty has been under negotiation for four years, and will be open for signature in October.

The treaty requires nations to "phase down the use of dental amalgam", and to set objectives aimed at minimising its use. Mercury-free alternatives will be promoted, and education on the use of mercury-free dental restoration encouraged.

Although mercury has long been a benefit in oral health care, it can be damaging to health on a whole.

The World Health Organisation (WHO) says: "Mercury is highly toxic to human health, posing a particular threat to the development of the (unborn) child and early in life.

"The inhalation of mercury vapour can produce harmful effects on the nervous, digestive and immune systems, lungs and kidneys, and may be fatal.

"The inorganic salts of mercury are corrosive to the skin, eyes and gastrointestinal tract, and may induce kidney toxicity if ingested."

The impact of mercury pollution was famously seen in Japan during the 1950s and 60s. Following mercury waste pollution in the waters, residents near to Minamata bay developed nerve disorders, resulting in more than 900 deaths.

The British Dental Association (BDA) has welcomed the treaty. Dr Stuart Johnson, member of the BDA's Principal Executive Committee, and leader of the FDI World Dental Federation Dental Amalgam Task Team at the negotiations, said:

"Dentists in the UK recognise the environmental imperative to minimise mercury emissions, but it was important that this treaty took account not just of the environmental agenda, but also of the need for dentists to care for their patients.

'The final treaty strikes a sensible balance, clearly setting out an aim for reduced use of mercury, while recognising the unique contribution it makes to oral healthcare'

"We are pleased to see that this treaty has taken a pragmatic view, acknowledging that the phase-down approach advocated by the World Health Organisation is a sensible way to make progress. The final treaty strikes a sensible balance, clearly setting out an aim for reduced use of mercury, while recognising the unique contribution it makes to oral healthcare. It also recognises the important role that prevention can play in improving oral health and reducing demand for fillings." DT

Professor Andrew Eder appointed Associate Vice-Provost (Enterprise) at UCL

Professor Andrew Eder has been appointed Associate Vice-Provost (Enterprise) at UCL and Director of CPD and Short Course Development.

The position, with a mandate to facilitate growth of this key area across the University, follows Professor Eder's recently completed ten year term as Director of Education and CPD at the UCL Eastman Dental Institute, for which he was recognised for his excellence and innovation in teaching and learning at UCL as a recipient of a Provost's Teaching Award in 2010. Professor Eder will also continue to be involved in postgraduate dental education at the Eastman.

"With a background in educational entrepreneurship and leadership, I am delighted to have been invited to play a leading role in this exciting initiative at UCL," said Professor Eder. "As the global demand for high quality lifelong learning continues to expand almost exponentially, UCL is superbly placed to be a leading provider."

As a Specialist in Restorative Dentistry and Prosthodontics, Professor Eder also maintains a multi-disciplinary referral practice in Central London. He has a special interest in the aetiology, demographics and clinical management of patients with tooth wear. He is Co-Editor of the British Dental Journal book on Tooth Surface Loss and Clinical Director of the London Tooth Wear Centre®.

Professor Eder's academic interests include innovative methodology and technology in teaching and learning and the impact of continuing education on patient outcomes in clinical practice. He is a past President of Alpha Omega, the British Society for Restorative Dentistry and the Royal Society of Medicine's Odontological Section, is an examiner at UCL and the Royal College of Surgeons and serves on the Editorial Boards of several international dental journals. DT

Prof Eder

COPDEND announce DF training places data

At the end of the first phase of this year's recruitment process, 85 per cent of applicants have been offered places on dental foundation training schemes in England, Northern Ireland and Wales that start in 2013.

Plans were agreed by a steering group comprising postgraduate dental deans and associate deans, together with representatives from the UK Dental Schools Council and British Dental Association and members of the London Deanery recruitment team.

The London Deanery, which has considerable expertise in medical and dental trainee recruitment, managed the process.

There were 1172 applications made online. 1153 eligible candidates, including 109 from European Dental Schools and 17 from other dental schools worldwide, were invited to one of six selection centres in November 2012. Of these, 1138 applicants attended for assessments that were carried out by experienced foundation trainers and training programme directors, who had undergone standardised training and calibration.

Each applicant was asked to state a preference order for each of the 78 training schemes and offers of a place were made on the basis of ranked scores achieved and stated preferences. Those who scored highest were offered a place on the scheme they most preferred. All 953 currently available places were allocated within a week of offers being made. 48 per cent of applicants secured their first choice, 68 per cent were offered a place on one of their top three schemes and 86 per cent on one of their top 10 schemes. The 968 highest ranked individuals have been offered places. Deaneries will be allocating those successful applicants who have accepted offers to individual training practices over the next few months.

Further training places are expected to become available later in the year and 161 candidates on a reserve list will be notified about these after 2013 BDS final examinations are concluded. Future offers of a place will be made on the same meritocratic basis as in this first round, using ranked scores and applicant preferences. Dental Foundation training places are fully funded by the NHS and the final number of places available for 2013 /14 has not yet been confirmed.

A follow up independent quality assurance of the entire process will be carried out to ensure the process is both transparent and fair. COPDEND and the London Deanery are also undertaking a thorough evaluation, including statistical analysis of the data from the selection centres.

Helen Falcon, Chair of COPDEND said, "I would like to congratulate all those who have been offered a training place for 2013 in the first round and to thank all the interviewers, assessors, administrators and the London Deanery recruitment team for working so hard to ensure a fair process.

I do understand that the uncertainty may be unsettling for those who are still waiting to hear about whether a training place will be offered to them later in the year and would like to wish all applicants success in their forthcoming final examinations." DT

Shortlist for new dental pilot practices announced

Pilot sites will trial new self-care plan

Dental practices across the country are preparing for an exciting new challenge as the shortlist of those chosen to continue shaping a new dental contract is announced.

The Department of Health has shortlisted an extra 29 new practices to join the existing 70 practices on the pilot scheme from April. The second stage of this programme has been expanded to help test how the different elements of the new contract work together.

The new pilot sites will see some of the inventive new techniques to improve dental care spreading to new areas of the country. The pilots focus more closely than ever on more preventive care and new ways to make both adults and children take a bit more care with their toothbrush.

One of the biggest changes being tested is exploring how dentists can be paid for the health results they produce and the number of patients they care for rather than the number of courses of treatment they perform.

Barry Cockcroft, Chief Dental Officer for England said: "I am delighted to welcome the new practices to the pilot scheme and know they will continue with the excellent work which has been carried out so far.

"We were inundated with applications and choosing the shortlist was very difficult but we were keen to make sure they represent a really broad spectrum of the profession. It is evidence of how positively the pilot programme has been received."

The pilot sites are also trialling a new self-care plan based on a traffic light system. A new care pathway is being tested which suggests methods of treatment for patients following a check up. This gives patients a rating of green, amber or red following an oral health assessment. They are then given advice on how to improve their dental health in the long term.

The practices which have been shortlisted enjoyed their first taste of what life will be like if they join the pilot scheme as they took part in a training day held in Birmingham yesterday. The day was designed to make sure practices are confident to take on the challenges joining the programme will bring.

The list of shortlisted practices can be found at http://mediacentre.dh.gov.uk/2013/01/23/shortlist-for-new-dental-pilot-practices-announced/ DT

Editorial comment

Congratulations to the 29 new pilot practices gearing up to trial the new new new contract for NHS dentistry. According to the Department of Health's press release the second stage of this programme has been expanded to help test how the different elements of the new contract work together.

Up for testing includes different ways of remuneration; a new care pathway to tailor the treatment to a patient's oral health condition and the IT framework required to make sure the pilots work smoothly.

The practices are situated across England and aim to represent the varying needs of the communities they serve.

Piloting has been at best welcomed as a good thing and at worst distrusted as an exercise in the DH collecting data to prove whatever they want.

After all statistics can be made to prove whatever you need them to prove - 98 per cent of people know that!

But is cannot be denied that many of the issues with the 2006 contract were due to the profession trying to work within an untested system that did not take into consideration anyone's needs; and more than anything else no-one wants to go through that again.

Good luck to all the practices getting involved. DT

Do you have an opinion or something to say on any Dental Tribune UK article? Or would you like to write your own opinion for our guest comment page?

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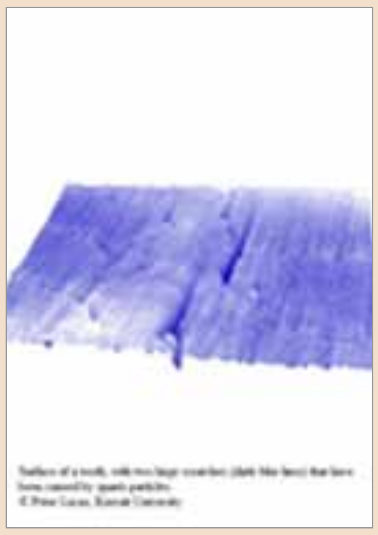
Dust wears away ancient tooth enamel

A new study published, in the *Journal of the Royal Society Interface*, has revealed that quartz dust plays a big part in wearing away tooth enamel.

This suggests that scientists will now have to review what microwear, the pattern of tiny white marks on worn tooth surfaces, can tell us about the diets of fossil mammals, as environmental factors may have had a large effect on teeth. This is particularly the case in East African hominins, who may have suffered during dust storms.

During their research, scientists at the Max Planck Institute for Evolutionary Anthropology found that quartz particles could remove pieces of tooth enamel at very low forces, meaning that these particles could abrade much of the surface of the tooth if they are present in numbers. DT



Surface of tooth with two large scratches covered by quartz particles

Sugar and calories cut in soft drinks

Leading soft drinks brands Lucozade and Ribena will reduce the amount of sugar and calories in their products by up to 10 per cent as part of the Government's drive to curb obesity levels, Public Health Minister Anna Soubry announced.

Speaking at the Food and Drink Federation's 'Delivering Healthy Growth' stakeholder event, the minister unveiled the latest brands to sign up to the Responsibility Deal's calorie reduction pledge. Ribena ready to drink and Lucozade Energy will reduce the amount of sugar and calories by up to 10 per cent; AG Barr, who produce IrnBru, will reduce the calorific content across their portfolio of drinks by five per cent; and J2O will launch two flavours in a new slim-line can which will represent a 10 per cent calorie reduction compared with their standard 275mL bottle.

The Public Health Responsibility Deal aims to tap into the potential for businesses and other influential organisations to make a significant contribution to improving public health by helping us to create this environment.

Public Health Minister Anna Soubry said "Being overweight and not eating well is bad for our health. To reverse the rising tide of obesity we have challenged the nation to reduce our calorie intake by five billion calories a day. On average that's just 100 calories less a day per person.

"Today's announcement will cut the calories and sugar by up to 10 per cent in leading brands like Lucozade and Ribena. Through the Responsibility Deal we are already achieving real progress in helping people reduce the calories and salt in their diet."

Chair of the Responsibility Deal Food Network Dr Susan Jebb said:

"I'm pleased to see the soft drinks manufacturers, like GSK, AG Barr and Britvic join Coca-Cola and PepsiCo to make some very real commitments to help consumers cut down on their calories as they take control of their weight."

"I hope we will now see others, including the out of home sector, taking a careful look at how they can build on this and come to the table with new commitments to encourage their customers choose smaller portions and swap to lower calorie options." DT

Teeth whitening could be damaging, say researchers

A new study, published in the *Journal of Dental Research*, has found that high concentrations of hydrogen peroxide can have a dramatic impact on dental hard and soft pulp tissue.

The Brazilian research team were interested in seeing the effect whitening products with high concentrations (35 per cent) of hydrogen peroxide (H_2O_2) would have on teeth.

The researchers studied 56 teeth that were extracted from 10 men and 10 women, who were not tobacco users, had not received whitening treatment, had no gingival recession or restorations, and needed two to four first premolars extracted.

Half of the extracted teeth were whitened using 35 per cent hydrogen peroxide, and half were left without whitening treatment. The teeth were then sectioned, had their pulp removed and the dental hard tissues were frozen.

With the teeth that had received the treatment, both the enamel and dentin were affected.

"The bleaching agent containing 35 per cent H_2O_2 induced a significant in vivo alteration in enamel and dentin, which could potentially trigger biological and/or mechanical responses of dental structures", the study authors wrote.

"Despite reports that the use of bleaching agents at low concentrations has been considered absolutely safe, analysis of our data shows that the use of 35 per cent H_2O_2 as a bleaching agent…can be clinically adverse in the long-term and/or after recurring bleaching treatments."

The researchers recommend that hydrogen peroxide concentration should be reduced, the time of each application should be reduced, and reaction catalysers such as lamps or lasers should not be used.

"[It] is important to say that bleaching is not at all a dangerous procedure, but the dentists and the patients should know that sometimes the price paid by a purely aesthetic treatment may be too high at the end if the dentist is not sufficiently cautious in applying the bleaching agents," they concluded. DT

Accuracy of technology for placing implants tested

A new study compares the results of technologies for locating and measuring the anterior loop of the mental nerve with actual anatomic measurements on human cadavers.

A study reported in the *Journal of Oral Implantology* used three methods to measure the anterior loop of the mental nerve on 12 human cadavers—cone beam computerised tomography (CBCT), a three-dimensional stereolithographic model (STL), and anatomy.

The mental nerve follows a looping course around the jaw, communicates with the facial nerve and provides sensory innervation to areas of the chin and lower lip. Injury to the anterior loop of the mental nerve can cause sensory disturbance, most notably numbness or altered sensory perception.

Reports on the length and location of the mental nerve vary widely between patients. One study found the anterior loop in 28 per cent of the patients. However, another study reported it to be present 88 per cent of the time. Some clinicians recommend maintaining a safety margin of 1mm between implants and the nerve, others suggest as much as a 6mm distance.

Because of conflicting reports, a variety of methods have been used to detect and measure the anterior loop. It has been determined that panoramic and periapical radiographs do not provide information about the loop that is reliable enough for clinicians to use in placing implants. This study seeks to determine the accuracy of CBCT and STL in identifying and measuring the anterior loop.

The CBCT was found to be accurate and reliable; however, the STL was found to significantly both overestimate and underestimate the anterior loop. Thus, the authors make the following recommendations:

• CBCT should be a prerequisite in identifying and measuring the anterior loop of the mental nerve for implant surgery.

• A fixed distance from the mental foramen (the point in the jaw where the nerve passes through) should not be used as a safety guideline; rather, the anterior loop itself should be located.

• A safety distance of at least 2mm from the anterior-most portion of the loop should be observed in implant placement.

• The STL model should be used with caution; at this time, the model has not been shown to be highly accurate in estimating the anterior loop DT

BDA to fight Northern Ireland cuts proposals

The British Dental Association (BDA) will strenuously oppose DHSSPS proposals for Health Service dental provision in Northern Ireland, it has said.

The proposals, published for consultation by the Department of Health, Social Services and Public Safety, will limit the Health Service care available to patients by moving to a core service of treatments, restricting the frequency of scaling and polishing, moving to IOTN 3.6 for orthodontic treatments, changing the eligibility for the Practice Allowance and removing Commitment payments to dentists.

Dr Peter Crooks, Chair of BDA Northern Ireland Dental Practice Committee, said: "These proposals fail patients, undermine businesses and strike at the heart of dentists improving oral health in Northern Ireland.

"BDA Northern Ireland Dental Practice Committee entirely rejects the proposals and we urge dentists across Northern Ireland to join us in defending the health service dental care that patients count on."

Further details of BDA Northern Ireland's campaign against the cuts, and how you can get involved, including details of what they could mean for practices and individual dentists are available at www.bda.org/nicuts DT

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Bike Mike raises £1K for charity

Mike has raised morethan £1k

Retired dental practitioner Mike Townsend cycled 140 miles in aid of the Benevolent Fund, which provides help to UK dentists who find themselves in financial difficulties.

Mike's cycle ride was part of the BDA Benevolent Fund's year-long campaign 'Be Active for the Ben Fund'. Along with a partner, Mike cycled the Great Glen Way, which runs alongside Scotland's Loch Ness in September 2012, and raised over £1,000 for the Fund.

Mike hopes that the 'Be Active' campaign will raise the profile of the BDA Benevolent Fund because dentists are no more protected from the problems of modern life than anyone else. They are just as likely to suffer from accidents, long-term illness and debilitating stress.

"Many dentists are at the end of their tether," he continues. "A lot of them have got stress problems, mental health issues; some of them are suffering from serious illness, and an increasing number of these are much younger than they used to be. An increasing number of these applications come from dentists in their 30s and 40s. It's worrying how young some of them are."

"You don't need to have been a member of the BDA to apply," he stresses. "You just need to have been GDC registered at some point, or be the dependent of a dentist who has been on the register."

A Guy's Dental School graduate of 1968, Mike Townsend is no stranger to cycling. "I've done 50 miles of cycling in a day before but this was quite strenuous," he says. "We took it easy and stayed in reasonable accommodation and just pedalled along enjoying the view - and the rain!"

Mike says they travelled light for the journey. "We took a small rucksack each with just a change of clothing, a toothbrush and a razor. If you've got to carry it, the last thing you want is too much kit, especially when you've got to pedal it uphill."

To make a donation, visit www.justgiving.com/Mike-TownsendCycle140 DT

Dentists set to inspire quitters in 30th No Smoking Day

Dentists are being urged to get involved in one of the UK's longest standing health campaigns as it celebrates its 30thsuccessful year.

The British Heart Foundation (BHF) is encouraging dentists to use the milestone anniversary of No Smoking Day as an opportunity to boost participation among patients by promoting quit aids in their practice and local support services available in their area.

The theme of the 2013 campaign will urge smokers to consider the financial benefits of quitting and 'swap fags for swag', on Wednesday 13 March.

No Smoking Day 2013 will officially launch on Wednesday 27 February giving smokers two weeks to see their GP or stop smoking adviser, tell their family and friends and stock up on quit aids such as patches and gum so they're ready to ditch the cigarettes for good on No Smoking Day on Wednesday 13 March.

Dr Mike Knapton, Associate Medical Director at the BHF, said: "Dentists have always played a huge role in spreading the word about this long running health campaign and year on year they inspire people to take the first steps to a smoke free life.

"From guiding those who want to quit to the right aids and resources, through to giving sensitive advice about the benefits of quitting, dentists are really well placed to make a real difference to the health of their patients.

"Whether it's a raffle, a poster competition or simply handing out flyers, the end result is bound to benefit many and hopefully help people ditch their cigarettes for good."

Dr Nigel

Carter, chief executive of the British Dental Health Foundation, said: "It would seem patients are fully aware of the risks involved with smoking, yet many remain unaware of how it affects their oral health. While stained or yellow teeth are visible consequences of smoking, gum disease, tooth loss and even mouth cancer are some of effects they do not know about.

"Dental professionals most likely see a bigger proportion of the general population than any other healthcare team and are in the best position to educate them on what smoking does to teeth and gums. Smoking is still the main cause of mouth cancer, and with two thirds of smokers wanting to give up, No Smoking Day is the perfect opportunity for health professionals to encourage smokers to do so."

Visit www.nosmokingday.org.uk for more information. DT

Link between depression and TMD

There is an on-going debate about the role of psychological disorder symptoms as risk factors for temporomandibular joint (TMJ) pain. Previous studies have associated depression and TMJ pain but large scale studies have not been performed. For a new study, published in *The Journal of Pain*, researchers evaluated more than 3,000 community subjects and found that those with depression and anxiety had increased risk for temporomandibular pain upon palpation.

Temporomandibular disorders (TMDs) are a subgroup of craniofacial problems and etiology is believed to be multifaceted. Tooth grinding, facial clenching and genetic factors may initiate TMD and bio-behavioural studies suggest an association between TMD pain and depression, anxiety and post-traumatic stress disorder.

In this study, the research team sought to estimate the relative risk of depressive symptoms and anxiety on TMD pain over five years. More than 4,000 subjects participated and underwent medical examinations, oral health assessments, health-check interviews, and completed a psychiatric risk factor questionnaire. TMD pain was assessed from the oral health exams according to guidelines from the Academy of Orofacial Pain.

The investigators found that depressive symptoms were more strongly related to joint pain than muscle pain, and that anxiety symptoms were linked with muscle pain. The authors explained that depressive and anxiety symptoms may initiate muscular hyperactivity followed by muscle abnormality and altered muscle mechanics, which can produce inflammation and cause muscle pain. They also suggested that TMD might be related to abnormal pain stimuli processing caused by imbalances in the neurotransmitters serotonin and catecholamines.

In support of previous published research, the authors concluded there is a strong to moderate relationship between symptoms of depression or anxiety and signs of TMD. DT

Half of Scottish children have tooth decay

Half of primary one school children in some of the poorest areas of Scotland have tooth decay. This is according to figures released by the government, which also state that in wealthier areas, this number is one in five children.

Tory MSP Alex Johnstone says that this high percentage of tooth decay among poorer children is down to lack of dental health education.

"It's a failure on the education side", he commented. "It is symptomatic of the way the SNP has tried to say it has put more resources into improving access to dentists, while at the same time neglecting other areas of public health."

Margie Taylor, Scotland's chief dental officer said: "Children develop their oral habits at a very young age. It is important that parents remember their healthful habits and practices…to ensure their children enjoy a lifetime of beautiful smiles." DT

Link between tooth loss and blindness in older men

Too much tooth loss makes you go blind?

Results of the study published in the *Journal of Periodontology* reveal men are more than four times as likely to suffer from age-related blindness if they have lost the bone supporting the teeth compared to the general population.

Although bone loss was seen more often in those suffering with age-related blindness, there was still a significant increase in the number of men affected once common risk factors between the disease and poor oral health had been taken into account. The study also showed the relationship was not seen in women.

Age-related macular degeneration (AMD) is a common eye condition among people age 50 and over, and is a leading cause of blindness. It gradually destroys the macula, the part of the eye that provides sharp, central vision needed for seeing objects clearly.

Chief Executive of the British Dental Health Foundation, Dr Nigel Carter OBE, discussed the possible implications for almost half a million people in the UK suffering from AMD.

Dr Carter said: "It is well-documented that you can reduce the risk of getting AMD by quitting smoking, moderating alcohol intake and having a healthy, balanced diet. These are all lifestyle factors that would be also lead to poor oral health, so the results of this study are particularly interesting, given they have all been accounted for.

"What the study does show is how important it is to maintain good gum health. More teeth are lost through long-standing gum disease than through tooth decay.

"Those who may be at risk of going blind may find their teeth are naturally looser than some of their younger counterparts, but ignoring the problem is not the answer. Untreated gum disease can lead to bacteria getting into the bloodstream and causing heart and respiratory problems. With the number of people over 60 set to increase, it is particularly important for older people to brush twice a day for two minutes at a time using a fluoride toothpaste and to clean in between the teeth at least once a day with interdental brushes or dental floss. Use of mouthwashes to help prevent plaque build-up or products specifically developed for dry mouth can also help them maintain optimum oral care and prevent problems." DT

Energy drinks serious health concern

A recent survey has shown that from 2007 to 2011, the number of people receiving emergency treatment following the consumption of energy drinks has doubled in the US, increasing from 10,068 to 20,783.

Due to the high amount of additives, such as caffeine, taurine, vitamins and sugars, high consumption of these drinks can lead to insomnia, migraines, seizures and heart problems.

Most of the cases were identified among patients aged 18 to 25, followed by those aged 26 to 39.

The authors of the report commented that: "Health professionals can discourage use of energy drinks by explaining that perceived health benefits are largely due to marketing techniques rather than scientific evidence. Because of the drinks' widespread use, it may be beneficial for Emergency Department staff to inquire about use of energy drinks when assessing each patient's use of medications or other drugs." DT

Energy drink consumptoin has doubled in the US

The London Tooth Wear Centre invites you to visit

The London Tooth Wear Centre is to open its doors to dental colleagues for a series of exclusive referral evenings.

Each evening provides an opportunity for just a few visitors to meet the team, gain an hour of verifiable CPD in an update on tooth wear and discuss how we can support you and your patients.

The London Tooth Wear Centre is a specialist referral practice in Central London offering an evidence-based approach to managing tooth surface loss.

Led by Professor Andrew Eder, Specialist in Restorative Dentistry and Prosthodontics, the Centre was established in response to an increasing number of patients presenting with tooth wear.

Professional help is available at The London Tooth Wear Centre® for consultation and treatment planning advice only or for comprehensive management of your patients' tooth wear.

Referral evenings are scheduled for: • Tuesday 12 February 2013 at 6.30pm • Tuesday 12 March 2013 at 6.30pm • Tuesday 9 April 2013 at 6.30pm

For further details and to book onto one of the referral evenings, visit www.toothwear.co.uk, email info@toothwear.co.uk or call 020 7486 7180. Spaces are offered on a first come, first served basis. DT

Xylitol lozenges ineffective in caries reduction

According to a study in the Journal of the American Dental Association, daily use of xylitol lozenges do not result in a reduction in caries among adults.

The team conducted the research due to conflicting past studies: "Some conclude that there is evidence for a caries-preventive effect of xylitol, and others indicate that the evidence is inconclusive", they wrote.

For this trial, 691 participants aged 21 to 80 consumed five 1.0 gram xylitol or placebo lozenges daily for 33 months.

It was found that the xylitol lozenges reduced caries by 10 per cent, but the researchers concluded that this was not significant.

"The results of this clinical trial did not demonstrate a statistically significant reduction in 33-month caries incidence either in the primary analysis or in the secondary analysis that included all three sites", the study authors concluded. DT

Tooth whitening

An Update on Techniques and the New Legislation by Dr Trevor Bigg

The History
The bleaching of teeth has been practised from at least the 19th century utilizing many different chemicals, including chloride of lime, aluminium chloride, oxalic acid and sodium peroxide amongst others.[1]

The birth of modern bleaching techniques started in the late 1960s with Klusmier devising a successful technique for home bleaching, which used 10% carbamide peroxide in a custom-made mouth tray. Initially, the carbamide peroxide was often placed in removable orthodontic retainers to reduce gingival inflammation following the removal of fixed orthodontic appliances. It quickly became apparent that a side effect of the treatment was that it whitened the teeth.

Although Dr Klusmier presented several table-clinics at the meetings of the Arkansas State Dental and the South-western Orthodontic Societies, it wasn't until the publication of Heywood and Heymann's description of the technique in March 1989 that the dental profession became aware of a bleaching technique that was safe and relatively cheaper than previous options.[2]

Within a few years many products had appeared on the market, using carbamide or hydrogen peroxide and different modes of delivery that can be sub-divided into:

1 In-Office procedures

2 Nightguard vital bleaching using trays: Home Bleaching

3 'Over-the-counter' (OTC) products

While OTC products proved popular throughout most of the world, they were never used greatly in the European Union (EU), as their purchase was easier to monitor and subsequent prosecution was a real possibility.

In-Office procedures were extensively advertised and proved popular as they continued in the tradition of dentistry being led by the dentist treating the patient in his/her surgery or office. In many cases, In-Office bleaching increased patient compliance, which could be poor if Home Bleaching alone was used. Many utilised 'lasers' both real and 'apparent' and suggested modern, 'state-of-the-art' treatment modalities that appealed to the patient.

But wasn't bleaching illegal?
Until recently in the EU it was illegal to use hydrogen peroxide at a greater concentration than 0.1 per cent. However, the Dental Defence Societies were prepared to defend dentists who used bleaching techniques containing greater than 0.1 per cent hydrogen peroxide as their members were using a procedure that was safe, established and much less invasive than the alternatives. The General Dental Council (GDC) also recognised that the situation at that time was unsatisfactory for patients and dentists. Provided the dentists acted in the best interests of their patients and obtained fully informed consent, and that the dentist's defence organisation gave indemnity for bleaching, the GDC stated that they would not act against a dentist unless they were prosecuted by Inspectors from the Department of Trade and Industry.

'The new Regulations allow the use of hydrogen peroxide and other compounds or mixtures that release hydrogen peroxide, including carbamide peroxide and zinc peroxide to be used for tooth whitening'

New regulations from 1st November 2012
This anomalous situation continued for many years in the EU until the publication of an amendment to the EU Directive 76/768/EEC concerning cosmetic products. The amending Council Directive 2011/84/EU was published in September 2011 requiring the UK Government to amend the law.

The Cosmetic Products (Safety) (Amendment) Regulations 2012 (the Regulations) amended all previous regulations relating to tooth whitening and subsequently, the practice of bleaching in this country altered overnight.[3]

The new Regulations allow the use of hydrogen peroxide and other compounds or mixtures that release hydrogen peroxide, including carbamide peroxide and zinc peroxide to be used for tooth whitening.

However, the maximum concentration that may be used for tooth whitening under the Regulations is now six per cent hydrogen peroxide, which is approximately equivalent to 16 per cent to 18 per cent carbamide peroxide.

The Regulations have set out that products containing or releasing up to six per cent hydrogen peroxide can only be used, subject to the following conditions:

• To only be sold to dental practitioners

In practice this will mean that a dentist can only sell tooth-whitening products containing 6 per cent hydrogen peroxide to the public if they are patients at the practice.

• For each cycle of use, the first time the bleaching system is used it must be applied by a dental practitioner - The dentist should show the patient how much material should be used and how to load and seat the tray. This procedure should be noted in the patient's records.

• Under the dentist's direct supervision, if an equivalent level of safety is ensured - Hygienists and therapists can administer the first use of the tooth-whitening product, under the prescription of the dentist, if they are trained and competent.

It's uncertain at present, but a dentist probably needs to be present on the premises.

No other member of the dental team can dispense whitening products, for example nurses and receptionists

• Afterwards the products may be provided to the consumer to complete the cycle of use - After the first in-surgery application the patient can be provided with tooth-whitening products for home use and additional products can be dispensed by the dentist, hygienist or therapist.

• They are not to be used on a person under 18 years of age.

However there are occasions where it's in the best interests of a patient to use tooth whitening eg for a non-vital tooth.

In these cases Dental Protection suggests that the dentist discusses in detail with the patient (and their parents as they may be paying):

1 The risks and benefits of bleaching and more interventive alternatives

2 The legal status of tooth whitening for under 18s

3 Whether treatment could be delayed until after the age of 18

Document the consultation carefully in the patient's notes and be aware that the dentist may be vulnerable to prosecution!

How does this change the way we bleach our patients?
During October 2012 many manufacturers, such as Philips and Dentsply contacted their clients to say that their high concentration whitening products, like Zoom and In-Office Illumine, were being withdrawn from the market.

They were aware that, as up to 6 per cent hydrogen peroxide is now a legal, the Defence Societies would no longer defend their members who used higher concentrations.

Conversations with advisers from Dental Protection have confirmed that the Defence Societies would have difficulty justifying the use of greater than 6 per cent concentrations of hydrogen peroxide and its equivalent of carbamide peroxide when there is a viable legal alternative. Particularly, in these days of Evidence Based Dentistry, when research has shown that higher bleach concentrations did not quicken the bleaching process and probably only increase tooth sensitivity and gum irritation.[4]

The good news and the bad news!
So the bad news is that those dentists who favoured In-Office procedures with 25 to 30 per cent hydrogen peroxide would be unwise to continue, even though their patients requested the treatment.

However, the good news is that we can now offer many 'Over-the-counter' products that we dare not use before. The use of bleaching systems utilizing whitening strips and pre-formed trays will help make the bleaching process cheaper and more accessible to our patients.

Conclusion
The recent changes in whitening legislation should be welcomed by the dental profession. By amending the EU Directive, dentists and their patients alike will benefit as:

1 The threat of prosecution has now been lifted and Dentists will be free to advertise, provided they follow GDC guidelines

2 Dentists will be encouraged to use lower, safer and effective concentrations of hydrogen peroxide

3 OTC preparations can now be sold by practitioners, providing a successful and cheaper whitening process

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About the author

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All you need to know about tooth whitening

Nick Torlot, DDU dento-legal adviser, looks at some questions from dental practitioners

I've heard the law on tooth whitening has changed, what is the latest legal position?

Under new regulations which came into effect on 31 October 2012, dental professionals can legally treat patients over 18 years of age with tooth whitening treatments which contain or release up to six per cent hydrogen peroxide.[1] This is provided that:

- The treatments are sold to dental practitioners
- For each cycle, the treatment is first administered by a dental practitioner or under their direct supervision. It can then be completed by the patient at home.

There are times when I think a patient would benefit from a product containing 10 per cent hydrogen peroxide. Is it legal to provide the patient with a bleaching kit containing a higher level of hydrogen peroxide than six per cent to use at home?

'The new regulations are informed by scientific advice that compounds containing or releasing up to six per cent hydrogen peroxide are safe.'

No, it is illegal to use tooth bleaching compounds containing or releasing more than six per cent hydrogen peroxide. The new regulations make no distinction between in-surgery bleaching and at-home bleaching products provided by dental professionals, in terms of the permitted concentration of hydrogen peroxide. This means patients can only be provided with bleaching kits containing up to six per cent hydrogen peroxide after they have been examined by a dentist and have received their first cycle of treatment in the surgery.

The new regulations are informed by scientific advice that compounds containing or releasing up to six per cent hydrogen peroxide are safe.

The six per cent hydrogen peroxide limit applies to any compound, whether used externally or internally eg on a root-canal treated tooth.

If you were to use or supply a bleaching compound containing 10 per cent hydrogen peroxide, you could face a criminal prosecution by Trading Standards and a GDC investigation. In the worst case scenario, you may be imprisoned and/or fined up to £5,000 under the Consumer Protection Act 1987.

I am a dental hygienist. Can I offer tooth whitening treatments to my patients?

Yes, provided a dentist has examined the patient, prescribed the treatment and is present on the premises during the first treatment cycle. As with any treatment you must be trained and competent to carry out the treatment, so the level of safety is equivalent to a dentist carrying out the treatment.

The GDC's guidance, Prin-

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